

**M.MED.FAMILY MEDICINE**

**SECOND YEAR THEORY EXAM– AUG 2013**

**PAPER I - MEDICINE AND ALLIED SCIENCES**

**TIME: THREE HOURS**

**MAXIMUM MARKS: 100**

**INSTRUCTIONS**

- The paper will be for a total of **100 marks**.
- Answer **all** the Questions.
- The Paper has 2 parts – **Part A & Part B**.
- **Part A** will be **descriptive type questions** based on case scenarios (**40 marks**).
- **Part B** will have Objective type EMQs **extended matching questions (60 marks)**.
  - ✓ This will have 10 sets of these questions.
  - ✓ Each set will have 6 questions.
  - ✓ Each question will carry 1 mark.
  - ✓ Each set has a **theme** on the top. In each set there are **some options** given on the top followed by some **questions**. The options are lettered using the English Alphabets A, B, C, D and so on.

Example:

**3. THEME –COMMON PSYCHIATRIC PROBLEMS [QUESTIONS. 3(i) – 3(vi)] (6marks)**

**From the options ‘A to H’ given below, choose the best answer for the questions 3(i) – 3(vi)**

**Options:**

- A.** Inj. Haloperidol
- B.** Amitriptyline + counseling
- C.** Tab. Chlorpromazine
- D.** Tab. Trihexyphenidyl
- E.** Tab. Diazepam
- F.** Tab. Lithium
- G.** Inj. Fluphenazine deconoate
- H.** Tab. Risperidone

**Questions: What is your treatment option in the following cases?**

3(i) What is the drug of choice for Acute Psychosis?

3(ii) What is the drug of choice for Bipolar illness?

**PART – A**  
**DESCRIPTIVE QUESTIONS**

(ANSWER ALL QUESTIONS)

1. 34 year old Mr. Durai, a clerk, comes to you with history of acute onset of difficulty in breathing for one day. He is smoker for the past 17 years and smokes around 10-12 cigarettes per day. He is not a known diabetic or hypertensive. On examination, he is afebrile. Pulse rate is 120 /min. Blood pressure -100 /85 mmHg.

(TOTAL: 20 MARKS)

- A. What are the differential diagnoses for an adult presenting with acute onset of difficulty in breathing? (5 Marks)
- B. On examination, there is shift of trachea and mediastinum to opposite side and breath sounds absent on the left hemithorax. (look also at his recorded vital signs) What are the additional findings you can have in this patient? (6 Marks)
- C. What could be the most likely diagnosis what are the subtypes? (2 marks)
- D. What are the possible radiological findings? (4 Marks)
- E. How will you treat Mr. Durai? (3 Marks)

2. 35 year old Mrs. Kalavathy, a house wife has come with joint pain for the past 2 months. The joint involvement is bilateral and symmetrical and involves all the fingers and wrist joint. There is history of morning stiffness. (TOTAL: 20 MARKS)

- A. How will you elicit history for a patient coming with joint pain and what is the significance of each question? (7 Marks)
- B. What is the diagnosis for Mrs. Kalavathy? What are the ARA criteria for making this diagnosis? (3 Marks)
- C. How will you investigate this patient? (5 Marks)
- D. What are the pharmacological and non pharmacological methods of managing this patient? (5 Marks)

**PART – B**  
**EXTENDED MATCHING QUESTIONS**

(ANSWER ALL QUESTIONS)

**1. THEME: SLEEP DISORDERS [QUESTIONS. 1(i) - 1(vi)] (TOTAL: 6 MARKS)**

**From the options 'A to L' given below , choose the best answers for the questions '1(i) – 1(vi)' :**

**Options :**

- |                         |                          |
|-------------------------|--------------------------|
| A. Diazepam             | G. 2/3 <sup>rd</sup>     |
| B. 1/3 <sup>rd</sup>    | H. Primary Parasomnia    |
| C. Clonazepam           | I. Memory loss           |
| D. REM sleep            | J. Stages 5 & 6 of sleep |
| E. Secondary Parasomnia | K. Seizures              |
| F. Stage 2 of sleep     | L. Learning difficulties |

**Questions :**

1. (i). \_\_\_\_\_ of the population has a sleep disorder.
1. (ii). “K” complexes are findings seen in the \_\_\_\_\_ of sleep.
1. (iii). Bruxism, nocturnal enuresis, painful erections during sleep is termed as \_\_\_\_\_.
1. (iv). The drug of choice for Periodic limb movement is \_\_\_\_\_.
1. (v). Light sleep is also called \_\_\_\_\_.
1. (vi). Deep sleep occurs in \_\_\_\_\_.

**2. THEME: DIAGNOSIS OF JOINT PAIN [ QUESTIONS 2(i) – 2(vi)] (TOTAL: 6 MARKS)**

**From the options ‘A to L’ given below , choose the best answers for the questions ‘2(i) – 2(vi)’:**

**Options :**

- |  |                                  |
|--|----------------------------------|
| <b>A.</b> Rheumatoid Arthritis         | <b>G.</b> Enthesitis             |
| <b>B.</b> Osteoarthritis               | <b>H.</b> Gonococcal arthritis   |
| <b>C.</b> Gout                         | <b>I.</b> Rheumatic Fever        |
| <b>D.</b> Ankylosing Spondylitis       | <b>J.</b> Polymyalgia Rheumatica |
| <b>E.</b> Systemic Lupus Erythematosus | <b>K.</b> Hypermobility Joint    |
| <b>F.</b> Septic arthritis             | <b>L.</b> Syphilitic Arthritis   |

**Questions:**

2. (i). 55 year old with severe pain in right big toe.
2. (ii). 67 year old lady with bilateral knee joint pain
2. (iii). 46 year old lady with joint pains of bilateral knees, elbows, wrists and PIP joints.
2. (iv). 14 year brought to emergency with severe pain around left knee. Patient looks toxic and is febrile.
2. (v). 27 year old male with diffuse back pain, early morning stiffness relieved by exercise.
2. (vi). 24 year old lady with fever, fatigue, joint pain facial skin rash and renal involvement

**3. THEME: BITES AND STINGS [ QUESTIONS 3(i) – 3(vi)] (TOTAL: 6 MARKS)**

**From the options ‘A to L’ given below , choose the best answers for the questions ‘3(i) – 3(vi)’:**

**Options :**

- |                   |                    |
|-------------------|--------------------|
| A. Cobra bite     | G. Prazosin        |
| B. Dry bite       | H. Adrenalin       |
| C. Viper bite     | I. Krait bite      |
| D. Hemotoxicity   | J. Hydrocortisone  |
| E. Neurotoxicity  | K. Centipede bite  |
| F. Scorpion sting | L. Local xylocaine |

**Questions:**

*When Murugan brought his wife with the snake bite, he also brought the killed snake with him. The snake was about 4-5 feet long, have a brown body with three rows of dark blotches. He said that his wife was working alone in the house. There is no mark on the hood of the snake and the fangs are anteriorly placed.*

3. (i). What bite is this?  
3. (ii). What is type of toxicity you expect with this snake?

*Anuradha was bitten by a snake .She presented to the hospital after 4 hours with pain at the bite site; she also had hazy vision, drooping of eyelids, dysarthria, dysphagia, paresthesia, and somnolence.*

3. (iii). What bite is this?

*Dinesh was bitten by a snake. He reported to the hospital after 6 hours of the bite with a history of painful swelling of the back of his left hand. On examination, he was afebrile, vital signs were normal, and there were no abnormal neurological signs. His hemoglobin was 13g/dl, clotting time was 10 mins, PT INR 1.2, Blood urea/creatinine – within normal limits and the urine was clear.*

3. (iv). This bite is most probably a \_\_\_\_\_.

*15 year old Sunil is brought with vomiting, salivation, sweating, priapism and history of unknown bite. His blood pressure is 140/ 98 mm Hg.*

3. (v). What could be the possible bite?  
3. (vi). The most important agent for treating Sunil is \_\_\_\_\_.

**4. THEME: DIAGNOSIS OF COMMON SKIN INFECTIONS (QUESTIONS 4(i) – 4 (vi))**  
**(TOTAL: 6 MARKS)**

**From the options ‘A to J’ given below , choose the best answers for the questions ‘4(i) – 4 (vi)’:**

**Options :**

- |                  |                                      |
|------------------|--------------------------------------|
| A. Impetigo      | F. Pityriasis Versicolor             |
| B. Candidiasis   | G. Tinea Corporis                    |
| C. Scabies       | H. Common Wart                       |
| D. Herpes Zoster | I. Herpes Simplex gingivo stomatitis |
| E. Oral Thrush   | J. Condyloma acuminata               |

**Questions:**

4. (i).”Burrow” is characteristic of this infection which you found in the finger webs of 7 year old Suresh, who came with the complaint of itching.
4. (ii). 30 year old man presents with skin lesions on his hands which are smooth skin coloured papules with a hyperkeratotic surface.
4. (iii). 5 year old Usha comes to you with lesions over her face, which has golden-yellow crusts on them.
4. (iv). 15 year old Mala presents with a 2 day history of fever and painful oral lesions.
4. (v). 50 year old Mr. Ram, a diabetic, presents with vesicular eruptions which have a dermatomal distribution.
4. (vi). 10 year old Babu who lives in a school hostel presents with a hypo-pigmented coalesced macules over his chest and upper back. He says that many of his hostel-mates also have similar lesions.

**5. THEME: TREATMENT OF COMMON SKIN INFECTIONS (QUESTIONS 5(i) –5(vi))**  
**(TOTAL: 6 MARKS)**

**From the options ‘A to L’ given below , choose the best answers for the questions ‘5(i) –5(vi)’:**

**Options :**

- |  |  |
|--|--|
| <b>A.</b> Systemic antifungals                               | <b>G.</b> Topical tretinoin 1%           |
| <b>B.</b> Cryotherapy with liquid nitrogen or carbon dioxide | <b>H.</b> 20% salicylic acid             |
| <b>C.</b> Permethrin   | <b>I.</b> Clindamycin                    |
| <b>D.</b> Acyclovir  | <b>J.</b> Coal Tar                       |
| <b>E.</b> Topical antifungals                                | <b>K.</b> Anti streptococcal antibiotics |
| <b>F.</b> Amitriptyline                                      | <b>L.</b> Anti pseudomonas antibiotics   |

**Questions:**

**5 (i).** Scabies

**5 (ii).** Herpes Simplex

**5 (iii).** Tinea unguium

**5 (iv).** Common warts

**5 (v).** Dermatophytosis

**5 (vi).** Impetigo

**6.THEME: HIV RELATED INFECTIONS (QUESTIONS 6(i) –6 (vi) ) (TOTAL: 6 MARKS)**

**From the options ‘A to N’ given below , choose the best answers for the questions “6(i) –6(vi)” :**

**Options :**

- |                                   |                                   |
|-----------------------------------|-----------------------------------|
| A. Cerebral Lymphoma              | H. Tuberculosis                   |
| B. Cerebral Toxoplasmosis         | I. Streptococcal angina           |
| C. Antibiotic associated diarrhea | J. Pneumocystis carinii infection |
| D. Esophageal Candidiasis         | K. Cryptococcal Meningitis        |
| E. Herpes Zoster                  | L. Norwegian Scabies              |
| F. Lymphoma                       | M. Seborrhoeic Dermatitis         |
| G. Streptococcal skin infection   | N. Kaposi’s Sarcoma               |

**Questions:**

- 6 (i).**35 year old man with HIV presents with dysphagia and weight loss. What is he likely to have?
- 6 (ii).**29 year old diagnosed with HIV 2 years back with several large cervical lymph nodes. Aspiration of lymph node is negative for Acid Fast Bacilli. Lymph node biopsy shows caseation. What’s your diagnosis?
- 6 (iii).**33 year old Mrs. Kala with HIV presents with left thoracic pain. On examination, she has a few vesicular lesions where she is feeling the pain. What does she have?
- 6 (iv).**18 year old, diagnosed to be HIV positive presented with high fever and protracted headache. What will be your first differential diagnosis in this case?
- 6 (v).** 25 year old who was diagnosed to have HIV infection 2 years back did not come for regular follow-up. He presents now with seizure. After recovering from seizures, he was noticed to have left hemiparesis. What could he probably have?
- 6(vi).**26 year old HIV positive patient presents with dry cough and progressively increasing breathlessness. On examination, he is tachypnoeic disproportionate to the X-ray findings and his SPO2 is 86%. What is your diagnosis?

**7. THEME: GERIATRICS – DIAGNOSIS (QUESTIONS 7(i) –7(vi) ) (TOTAL: 6 MARKS)**

**From the options ‘A to k’ given below , choose the best answers for the questions ‘7 (i) –7(vi)’:**

**Options :**

- |                                      |   |
|--------------------------------------|---|
| <b>A.</b> Urge incontinence          | <b>G.</b> Dementia  |
| <b>B.</b> Stress incontinence        | <b>H.</b> Atrophic vaginitis  |
| <b>C.</b> Osteoporosis               | <b>I.</b> Decreased response of hypothalamic-pituitary-adrenal axis |
| <b>D.</b> Osteoarthritis             | <b>J.</b> Decreased testosterone                                    |
| <b>E.</b> Age associated memory loss | <b>K.</b> Parkinsonism  |
| <b>F.</b> Delirium                   |   |

**Questions:**

- 7 (i).**Mr. Raju, 67 year old, a retired engineer is distressed because he could not remember the name of a friend he met that morning. He has no other functional impairment. What is his problem?
- 7 (ii).**Mr. Krishnan, 75 year old has been fit till 6 months back when his relatives found him difficult to manage. He repeats the same questions several times, he goes to visit friends and cannot find his way back. He becomes angry when cautioned and becomes restless and is unable to sleep. What does he have?
- 7 (iii).**An 87 year old presents with urinary incontinence which occurs while at sleep (2 or 3 AM).She also leaks 3-4 times during the day. The post void volume is 20ml.What does she have?
- 7 (iv).**84 year old Savithri had a trivial fall in the house last month and sustained a fracture neck of femur which required surgery. What is she likely to have?
- 7 (v).** A 60 year old post-menopausal woman complains of dyspareunia and dysuria. What is she likely to have?
- 7(vi).** 72 year old Mr.Rangasamy presents with resting tremor, rigidity, bradykinesia, postural instability and cognitive impairment.

**8.THEME: POISONING (QUESTIONS ‘8 (i) – 8 (vi) (TOTAL: 6 MARKS)**

**From the options ‘A to I’ given below , choose the best answers for the questions ‘8 (i) – 8 (vi)’:**

**Options :**

- |                          |                                    |
|--------------------------|------------------------------------|
| <b>A.</b> Flumanezil     | <b>F.</b> Forced alkaline diuresis |
| <b>B.</b> Atropine       | <b>G.</b> Orciprnaline             |
| <b>C.</b> Ethanol        | <b>H.</b> N acetyl cysteine        |
| <b>D.</b> Naloxone       | <b>I.</b> Specific Fab fragments   |
| <b>E.</b> Zinc carbonate |                                    |

**Questions:**

**8 (i).** Antidote for an alcoholic who has attempted suicide by taking around 20 tablets of Paracetamol.

**8 (ii).** Antidote for overdose of diazepam.

**8 (iii).** Munna is brought to casualty with history of ingestion of poison. The container that is brought along with reads ‘carbarnates’ .What is the antidote?

**8 (iv).** 6 men are brought to emergency after drinking illicitly brewed alcohol containing methanol. What is the antidote?

**8 (v).** 4 year old Sheila has taken 12 tablets of her grandfather’s digoxin tablets. What is the antidote?

**8 (vi).** A habitual drug user is brought to the casualty with overdose of barbiturates. What is the antidote?

**9. THEME: REACTIONS AND INDICES IN LEPROSY (QUESTIONS 9 (i) – 9(vi))**  
**(TOTAL: 6 MARKS)**

**From the options ‘A to H’ given below , choose the best answers for the questions ‘9 (i) – 9(vi)’ ”:**

**Options :**

- |                                  |                              |
|----------------------------------|------------------------------|
| <b>A.</b> TYPE I Lepra Reaction  | <b>E.</b> Lepromin test      |
| <b>B.</b> TYPE II Lepra Reaction | <b>F.</b> Fernandez Reaction |
| <b>C.</b> Bacteriological Index  | <b>G.</b> Mitsuda Reaction.  |
| <b>D.</b> Morphological Index    | <b>H.</b> Upgrading reaction |

**Questions:**

**9 (i).** An intradermal prognostic test that helps one to know about the immunity status of the individual.

**9 (ii).** In this reaction, there is change in the cell mediated immunity which is a Type IV hypersensitivity reaction.

**9 (iii).** This test is read after 21 days.

**9 (iv).** A diagnostic test which measures the density of AFB present in the site.

**9 (v)** . 22 year old lady, who is on treatment with MDT, develops high swinging temperature, malaise and myalgia. She also had erythematous, tender, painful, subcutaneous nodules.

**9 (vi).** A prognostic test to monitor response to treatment.

**10.THEME: OBESITY (QUESTIONS 10 (i) – 10 (vi) (TOTAL: 6 MARKS)**

**From the options ‘A to N’ given below , choose the best answers for the questions’10 (i) – 10 (vi)’ :**

**Options :**

- |            |              |
|------------|--------------|
| A. 40      | H. 0.9       |
| B. 0.7     | I. 40 inches |
| C. 30      | J. < 50mg/dl |
| D. 0.85    | K. >150mg/dl |
| E. 35 inch | L. < 40mg/dl |
| F. Apple   | M. >200mg/dl |
| G. Pear    | N. 42 inches |

**Questions:**

*Mr. Raja is at severe risk of complications due to obesity. His parameters will be as follows:*

- 10 (i). BMI more than\_\_\_\_\_.
- 10 (ii). Waist hip ratio more than\_\_\_\_\_.
- 10 (iii). He will have \_\_\_\_\_ shaped body.

*Mrs. Seetha has Metabolic Syndrome. The constituents of this syndrome include:*

- 10 (vi). Absolute waist circumference more than \_\_\_\_\_.
- 10 (v). HDL \_\_\_\_\_.
- 10 (vi). Triglycerides\_\_\_\_\_.

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M.MED.FAMILY MEDICINE

Sub. Code: 4011

SECOND YEAR THEORY EXAM– FEB 2014

PAPER I - MEDICINE AND ALLIED SCIENCES

*Q.P. CODE: 434011*

TIME: THREE HOURS

MAXIMUM MARKS: 100

**INSTRUCTIONS**

- The paper will be for a total of **100 marks**.
- Answer **all** the Questions.
- The Paper has 2 parts – **Part A & Part B**.
- **Part A** will be **descriptive type questions** based on case scenarios (**40 marks**).
- **Part B** will have Objective type EMQs **extended matching questions (60 marks)**.
  - ✓ This will have 10 sets of these questions.
  - ✓ Each set will have 6 questions.
  - ✓ Each question will carry 1 mark.
  - ✓ Each set has a **theme** on the top. In each set there are **some options** given on the top followed by some **questions**. The options are lettered using the English Alphabets A, B, C, D and so on.

Example:

**3. THEME –COMMON PSYCHIATRIC PROBLEMS [QUESTIONS. 3(i) – 3(vi)] (6marks)**

**From the options ‘A to H’ given below, choose the best answer for the questions 3(i) – 3(vi)**

**Options:**

- A. Inj. Haloperidol
- B. Amitriptyline + counseling
- C. Tab. Chlorpromazine
- D. Tab. Trihexyphenidyl
- E. Tab. Diazepam
- F. Tab. Lithium
- G. Inj. Fluphenazine deconoate
- H. Tab. Risperidone

**Questions: What is your treatment option in the following cases?**

3(i) What is the drug of choice for Acute Psychosis?

3(ii) What is the drug of choice for Bipolar illness?

**PART – A**  
**DESCRIPTIVE QUESTIONS**

**(ANSWER ALL QUESTIONS)**

1. 28 year old Madhavi , a mother of two children has come with complaints of excessive tiredness, breathlessness on exertion, palpitations and dizziness. On examination, she is pale.

**(TOTAL: 20 MARKS)**

- A. How do you elicit the history in a patient with anemia? **(5 Marks )**
- B. What are the clinical features you look for in a patient with anemia? **(5 Marks )**
- C. How will you investigate a patient with anemia? **(6 Marks )**
- D. How will you treat a patient with iron deficiency anemia? **( 2 marks)**
- E. How will you treat a patient with B12 deficiency anemia? **( 2 marks)**

2. 75 year old Mr. Rajan, a retired teacher, has come with complaints of tremor, rigidity, paucity of movement and speech which is worsening for the past 6 months. You are suspecting Parkinson's disease.

**(TOTAL: 20 MARKS)**

- A. What are the clinical features of Parkinson's disease? **( 5 Marks )**
- B. What are the drug options available for a patient with Parkinson's disease? **(5 Marks )**
- C. Considering the age of Mr. Rajan, discuss the treatment options for him. **(5 Marks )**
- D. What are the indications for referral to a specialist in a patient with Parkinsonism? **(5 Marks )**

**PART – B**  
**EXTENDED MATCHING QUESTIONS**  
**(ANSWER ALL QUESTIONS)**

**1. THEME: DYSPNEA [QUESTIONS. 1(i) - 1(vi)] (TOTAL: 6 MARKS)**

**From the options 'A to S' given below, choose the best answers for the questions '1(i) – 1(vi)':**

**Options :**

- |   |   |
|---|---|
| <b>A.</b> One major and 2 minor criteria                                  | <b>J.</b> Bronchial breath sounds & bronchophony heard below the angle of the left scapula. |
| <b>B.</b> Viral fever   | <b>K.</b> Moderate VSD  |
| <b>C.</b> Mild VSD  | <b>L.</b> Valve area < 1.5 cm <sup>2</sup> in symptomatic patients                          |
| <b>D.</b> Aortic Stenosis   | <b>M.</b> Insert a needle in the 2 <sup>nd</sup> space                                      |
| <b>E.</b> Valve area < 1.0 cm <sup>2</sup> in symptomatic patients        | <b>N.</b> ACE inhibitors  |
| <b>F.</b> Follow up with Echo every 12 months & endocarditis prophylaxis. | <b>O.</b> Probable myocarditis  |
| <b>G.</b> Pulmonary Hypertension  | <b>P.</b> Digitalis & endocarditis prophylaxis  |
| <b>H.</b> Aortic regurgitation  | <b>Q.</b> Digoxin & loop diuretics  |
| <b>I.</b> Two major and 1 minor criteria                                  | <b>R.</b> Refer to a higher centre  |
|   | <b>S.</b> Paradoxical increase in venous distension and pressure during inspiration.        |

**Questions 1(i) – 1(vi)**

*Mr. Kaushal, a known patient of chronic kidney disease on regular dialysis came to you with sudden onset of breathlessness on exertion. On examination, he has tachycardia, tachypnea and Ewart's sign is positive.*

- 1(i)** What is Ewart's sign?  
**1(ii)** How will you treat Mr.Kaushal's condition?

*Mrs. Fathima, a multiparous mother developed breathing difficulty 1 month after delivery of her twin babies. On clinical evaluation, she is found to be in cardiac failure.*

- 1(iii)** How will you treat her?

*74 year old Mr. Karthik comes to you with a history of breathing difficulty on walking which has been increasing in severity for the past 2 months. On cardiac examination, you hear an ejection systolic murmur at the 2nd right intercostal space.*

- 1(iv)** What is your diagnosis?  
**1(v)** What is the indication for surgery in this condition?

*Four year old Rahul had a 4-5 day history of fever and some nasal discharge. He was feeling very weak & was brought to you for evaluation. On examination, his heart rate was 152/min, B.P was normal with slightly increased respiratory rate. Rest of the examination was normal.*

- 1(vi)** What do you suspect?

**2. THEME: SYNOVIAL FLUID FINDINGS IN JOINT PAIN [ QUESTIONS 2 (i) TO 2 (vi) ]**

**(TOTAL: 6 MARKS)**

**From the options 'A to F' given below , choose the best answers for the questions ' 2 (i) – 2 (vi) ':**

**Options :**

- A. Trauma
- B. Crystal arthropathy
- C. Septic arthritis
- D. Rheumatoid arthritis
- E. Non inflammatory arthritis (e.g. Osteoarthritis)
- F. Normal

**Questions: Choose the correct diagnosis from the options above for each of the synovial fluid analysis results given below:**

- 2 (i) Synovial fluid turbid, yellow, WBC-2000 to 100,000, culture sterile.
- 2 (ii) Synovial fluid bloody, red-brown, clot present, WBC- 50 to 10,000, culture sterile.
- 2 (iii) Synovial fluid slightly turbid, yellow, WBC- 0 to 2000, culture sterile.
- 2 (iv) Synovial fluid turbid, yellow-milky, WBC- 500 to 200,000, culture sterile, crystals present.
- 2 (v) Synovial fluid turbid, gray-green, WBC-50,000 to 200,000, culture positive.
- 2 (vi) Synovial fluid clear, yellow, WBC-0 to 200, culture sterile.

**3.THEME: TESTS FOR HIV[(QUESTIONS 3 (i)to 3 (vi)] (TOTAL: 6 MARKS)**

**From the options 'A to I' given below, choose the best answers for the questions '3 (i) to 3 (vi)':**

**Options : you can use the options more than once.**

A.ELISA

F. Urine test

B. Salivary test

G. MBC culture

C. Particle Agglutination

H. DNA PCR assay

D. Western blot

I. HIV RNA detection

E. P24 assay

**Questions: Choose from the options given above , the answers for the questions related to tests for HIV given below**

3 (i). This test is useful during early stage of disease

3 (ii). This is used as a confirmatory test

3 (iii). This test is used in microtitre plate format

3 (iv). This is a rapid test

3 (v). This is a non-serological test

3 (vi). This is a readily available and inexpensive test. Sensitivity and specificity >99.9%

**4.THEME: DIAGNOSIS OF COMMON SKIN INFECTIONS [(QUESTIONS 4 (i) TO 4 (vi)]**  
**(TOTAL: 6 MARKS)**

**From the options 'A to M' given below , choose the best answers for the questions 4 (i) to 4 (vi):**

**Options :**

- |                          |                                      |
|--------------------------|--------------------------------------|
| A. Impetigo              | H. Herpes Simplex gingivo stomatitis |
| B. Candidiasis           | I. Condyloma acuminata               |
| C. Scabies               | J. Tinea capitis                     |
| D. Herpes Zoster         | K. Tinea cruris                      |
| E. Pityriasis Versicolor | L. Erythrasma                        |
| F. Tinea Corporis        | M. Trichomyces axillaris             |
| G. Common Wart           |                                      |

**Questions: Choose the correct diagnosis from the options above for the case scenarios given below:**

4 ( i ). 7 year old Sukumar has come with the complaint of itching interdigital regions of both hands and genital area which is more in the night.

4 ( ii ). 30 year old Mr. Balu presents with oral lesions which are more on the hard palate and resemble curdy precipitates.

4 ( iii ). 18 year old Mr. Faizal has come with itchy circular lesions in the back which have a central clear area.

4 ( iv ). 72 year old Govind is presenting with vesicular lesions on one sided chest wall, which are burning and intensely painful.

4 ( v ). 21 year old Mr. Subhan has asymptomatic , brown scaly well defined macules in both axillae

4 ( vi ). 10 year old Babu who lives in a school hostel presents with a hypo-pigmented coalesced macules over his chest and upper back. He says that many of his hostel-mates also have similar lesions.

**5.THEME: TREATMENT OF COMMON SKIN INFECTIONS [QUESTIONS 5 (i)TO 5 (vi)] (TOTAL: 6 MARKS)**

**From the options 'A to M' given below , choose the best answers for the questions '5 (i) to 5 (vi)**

**Options :**

A.Terbinafine

B.Cryotherapy with liquid nitrogen or carbon dioxide

C.Permethrin

D.Acyclovir

E.Topical antifungals

F.Amitriptyline

G.Topical tretinoin 1%

H.20% salicylic acid

I.Clindamycin

J.Coal Tar

K.Oral macrolides or tetracyclines

ZPenicillin

M.Fluconazole

**Questions: Choose from the list of options given above, the correct treatment for the conditions listed below**

**5 ( i )** Pediculosis

**5 ( ii )** Recurrent episodes of erythrasma

**5 ( iii )** Herpes zoster

**5 ( iv )** Tinea faciei

**5 ( v )** Erysipelas

**5 ( vi )** Pityriasis Versicolor

**6. THEME: EFFECTS OF AGEING ON THE HUMAN BODY [(QUESTIONS 6 (i) TO 6 (vi) ](TOTAL: 6 MARKS)**

**From the options ‘A to L’ given below , choose the best answers for the questions ‘6 (i) TO 6 (vi )’:**

**Options :**

- |   |                                |
|---|--------------------------------|
| A.Diastolic dysfunction                 | G.Closed angle glaucoma        |
| B.GFR declines to nearly 40%            | H.Small sulci and widened gyri |
| C.Open angle glaucoma                   | I.Systolic dysfunction         |
| D.Widened sulci and small gyri          | J.GFR declines to nearly 50%   |
| E.BMD of < 2.5 SD below the young adult | K.Atrophic vaginitis           |
| F.BMD of < 1.5 SD below the young adult | L.Urethral curuncle            |

**Questions:**

*Mrs. Sahana, a 70 year old retired teacher comes to your clinic for a routine checkup.*

1. At what ‘Bone mass’ will you make a diagnosis of osteoporosis on Mrs. Sahana?
2. What changes do you expect to happen in her renal system?
3. If she has cardiovascular changes, what kind of dysfunction will she have?
4. If she has eye changes, what kind of dysfunction will she have?
5. What changes do you expect to see in her Central Nervous System?
6. If she complains of dyspareunia and dysuria, what is she likely to have?

**7.THEME: CHEST X-RAY FINDINGS [QUESTIONS 7 (i) to 7 (vi)] (TOTAL: 6 MARKS)**

**From the options 'A to I' given below , choose the best answers for the questions '7 (i) to 7 (vi)':**

**Options :**

- |                       |                      |
|-----------------------|----------------------|
| A.Pneumo thorax       | F.Pleural effusion   |
| B.Pulmonary fibrosis  | G.Lung abscess       |
| C.Tuberculous cavity  | H.Bronchiectasis     |
| D.hyperventilation    | I. Broncho pneumonia |
| E.Hydro pneumo thorax |                      |

**Questions: Choose the correct diagnosis from the above options for each of the Xray findings given below:**

(7 i) . Homogenous opacity in the left lower zone with 'Ellis curve' pattern.

(7 ii) . Homogenous opacity with the straight upper border.

(7 iii). Hypertranslucent lung with absent normal broncho-vascular markings; mediastinal shift to the contra lateral side.

(7 iv) .Bilateral diffuse reticulo nodular pattern.

(7 v ) .Lungs with normal landmarks and translucency bilaterally

(7 vi). Translucent area within the lung parenchyma, with irregular margins that is surrounded by an area of nodular or fibrotic densities

**8.THEME: TYPES OF ANEMIA [QUESTIONS 8 (i)to 8 (vi)](TOTAL: 6 MARKS)**

**From the options 'A to C' given below , choose the best answers for questions '8 (i)to 8 (vi)' given below:**

**Options :**

- A. Iron deficiency anemia
- B. Megaloblastic anemia
- C. Hemolytic anemia

**Questions:**

**8 (i)** 5 year old Sundar with Malnutrition and anemia.

**8 (ii)** Pamela has anemia and pigmentation over knuckle and tongue.

**8 (iii)** Pratap has anemia with icterus and frontal bossing.

**8 (iv)** Mannar is brought to you sick and anemic and he lives in a malaria-prone area.

**8 (v)** Christina is suffering from Rheumatoid arthritis for many years.

**8 ( vi )** Swati with Plummer Vinson syndrome.

**9.THEME: INVESTIGATIONS IN ANEMIA [QUESTIONS 9 (i) TO 9 (vi)](TOTAL: 6 MARKS)**

**From the options 'A to H' given below, choose the best answers for questions 9 (i) to 9 (vi) given below:**

**Options :**

- |                             |                               |
|-----------------------------|-------------------------------|
| A.Iron deficiency anemia    | G.Anemia in Hypothyroidism    |
| B.B12 Deficiency            | H.Autoimmune Hemolytic anemia |
| C.Anemia of Chronic disease | I.G6PD deficiency             |
| D.Sickle cell anemia        | J.Elliptocytosis              |
| E.Thalassemia               | H.Pyruvate kinase deficiency  |
| F.Spherocytosis             |                               |

**Questions: Choose the correct diagnosis from the above options for each of the LAB RESULT SETS given below:**

- 9 (i)** MCV normal, Serum Iron low, Ferritin normal, TIBC low, Electrophoresis normal.
- 9 (ii)** MCV low, Serum Iron low, Ferritin normal, TIBC high, Electrophoresis normal.
- 9 (iii)** MCV low, Serum Iron normal, Ferritin normal, TIBC normal, Electrophoresis abnormal.
- 9 (iv)** MCV high, Reticulocyte count normal, B12, folate levels low, Intrinsic factor low.
- 9 (v)** MCV high, Reticulocyte count high, B12, folate levels normal, Intrinsic factor normal.
- 9 (vi)** Reticulocyte count high, Osmotic Fragility test positive.

**10.THEME: IDENTIFICATION OF TYPE OF BLEEDING DISORDER [QUESTIONS 10 ( i) to 10 (vi)] (TOTAL: 6 MARKS)**

**From the options 'A to C' given below , choose the best answers for the questions 10 ( i) to 10 (vi) :**

**Options:**

- A. Platelet disorder
- B. Clotting factor disorder
- C. Vessel wall disorder

**Questions**

**10 (i)** . 5 year old Jeevan has come with complaints of pain left hip following a trivial fall from his play cycle. On examination, the clinical features are suggestive of hemarthrosis. On questioning, his minor injuries like small cuts he had before never used to bleed profusely.

**10 (ii)** . 3 year old Samuel fell down and dislodged her teeth and had to be removed by the dentist. On the first day there was no bleeding, but on the second day the bleeding started which was not controllable.

**10 (iii)** . 7 year old Gautham is brought with history of continuous bleeding from the dental extraction site. The bleeding started immediately after the extraction.

**10 (iv)** . 10 year old Mala is brought to you with complaints of frequent episodes of nose bleeds and profuse bleeds if cut. On examination, there are few petechiae and purpura in the body.

**10 ( v)** . 17 year old Meena has come with history of two days duration of fever which was followed by tender palpable purpuric rashes in the lower limbs.

**10 (vi)** . Mala has come with hemetemesis. In the disorders listed above, in which disorder ,GI bleeding is uncommon?

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(LF 0214)

M.MED. FAMILY MEDICINE  
SECOND YEAR THEORY EXAM – AUGUST 2014  
PAPER I - MEDICINE AND ALLIED SCIENCES

Sub Code: 4011

*Q.P. CODE: 434011*

**INSTRUCTIONS**

**Time: Three hours**

**Maximum Marks: 100**

- The paper will be for a total of **100 marks**.
- Answer **all** the Questions.
- The Paper has 2 parts – **Part A & Part B**.
- **Part A** will be **descriptive type questions** based on case scenarios (**40 marks**).
- **Part B** will have Objective type EMQs [**Extended Matching Questions**](**60 marks**).
  - ✓ This will have 10 sets of these questions.
  - ✓ Each set will have 6 questions.
  - ✓ Each question will carry 1 mark.
  - ✓ Each set has a **theme** on the top. Below this, some **options** are given followed by some **questions**. The options are lettered using the English Alphabets **A, B, C, D** and so on.

Example:

**3. THEME –COMMON PSYCHIATRIC PROBLEMS [QUESTIONS. 3(i) – 3(vi)] (6marks)**

**From the options ‘A to H’ given below, choose the best answer for the questions 3(i) – 3(vi)**

**Options:**

- A.** Inj. Haloperidol
- B.** Amitriptyline + counseling
- C.** Tab. Chlorpromazine
- D.** Tab. Trihexyphenidyl
- E.** Tab. Diazepam
- F.** Tab. Lithium
- G.** Inj. Fluphenazine deconoate
- H.** Tab. Risperidone

**Questions: What is your treatment option in the following cases?**

3(i) What is the drug of choice for Acute Psychosis?

3(ii) What is the drug of choice for Bipolar illness?

- ✓ Match each question to a **single best option** and write it in your paper in the column provided like this:

3 (i)	
3 (ii)	
3 (iii)	
3 (iv)	
3 (v)	
3 (vi)	

- ✓ Each option may be used more than once. Some options may not be used at all.

**PART – A**  
**DESCRIPTIVE QUESTIONS**  
**(ANSWER ALL QUESTIONS)**

1. 72years old Mr. Subhash has come to your clinic. He has clinical features of Parkinsonism. **(Total: 20 Marks)**
- A. What are the clinical features of Parkinsonism? Explain the cardinal features of Parkinsonism. **(5 Marks)**
  - B. How will you treat Mr. Subhash? Draw a stepwise algorithm for the pharmacological management. **(5 Marks)**
  - C. Discuss the side effects of any three drugs used in Parkinsonism. **(3 Marks)**
  - D. How will you explain Mr. Subhash family about the illness? **(5 Marks)**
  - E. What are the indications of surgery in a patient with Parkinsonism? **(2 Marks)**
2. 56 year old Mrs. Sujatha has come with acute onset of difficulty in breathing. **(Total: 20 Marks)**
- A. What are the causes of acute new onset dyspnea? **(4 Marks)**
  - B. What are the clinical features of acute pulmonary edema? **(4 Marks)**
  - C. Describe the characteristic radiology findings in acute pulmonary edema. **(4 Marks)**
  - D. If the history and clinical features in Mrs. Sujatha are consistent with acute pulmonary edema, how will you manage her? **(8 Marks)**

**PART – B**  
**EXTENDED MATCHING QUESTIONS**  
**(ANSWER ALL QUESTIONS)**

1. **THEME: BLEEDING DISORDERS IN FAMILY PRACTICE [1(i) – 1(vi)]**  
**(Total: 6 Marks)**

From the options 'A to D' given below, choose the best answer for the questions 1(i) – 1(vi):

**Options:**

- |                         |                                     |
|-------------------------|-------------------------------------|
| A. Platelet disorder    | C. Clotting factor deficiency       |
| B. Vessel wall disorder | D. Disorders of the Red Blood Cells |

**Questions: Choose the correct mechanism for bleeding from the options above for each of the case scenarios given below:**

1. (i) 9 year old Murugan has developed purpura, which are tender, following a history of

throat pain for 2 days.

1. (ii) 52 year old Mr. Somu, a known asthmatic who is not on Multi-Dose Inhalers (MDI) has come with ecchymosis.
1. (iii) 17 year old Ms. Geetha has come with congestion of eyes with short history of fever joint pain and hematemesis.
1. (iv) Mr. Faizal, a 12 year old student has history of hyper-flexible joints , scoliosis and redundant skin folds comes with frequent episodes of bruising.
1. (v) Mr. Hiralalal with chronic pancreatitis presents with subcutaneous bleeding.
1. (vi) 8 year old Devi has come with history of repeated mucosal bleeds.

**2. THEME: ANTI DOTES FOR POISONING [2 (i) – 2(vi)] (Total: 6 Marks)**

**From the options ‘A to O’ given below, choosethe best answer for the questions2 (i) – 2 (vi):**

**Options:**

- |                          |                        |
|--------------------------|------------------------|
| A. Benzathine Penicillin | H. Prazosin            |
| B. Atropine              | I. Acetyl cysteine     |
| C. Dopamine              | J. Calcium gluconate   |
| D. DMSA                  | K. Magnesium sulphate  |
| E. Flumenazil            | L. Cholestyramine      |
| F. Naloxone              | M. Epinephrine         |
| G. Pyridoxine            | N. Diazepam            |
|                          | O. Diphenhydramine Hcl |

**Questions**

2. (i) Antidote for 3 year old Ram who has come with Paracetamol poisoning.
2. (ii) Antidote for Mr. Hithesh who has come with Organochlorines.
2. (iii) Antidote for Ms. Hema who has come with history of mercury poisoning.
2. (iv) Antidote for Mr. Victor who has come with history of diazepam poisoning.
2. (v) Antidote for 17 year old Muthu who has come with history of opium poisoning.
2. (vi) Antidote for Ms. Shalini who has come with history of isoniazid poisoning.

**3. THEME: COMMON TOXIC SYNDROMES (TOXIDROMES) [3(i) – 3(vi)] (Total: 6 Marks)**

**From the options ‘A to H’ given below, choose the best answer for the questions 3(i) – 3(vi):**

**Options:**

- |                            |                                |
|----------------------------|--------------------------------|
| <b>A.</b> Methadone        | <b>E.</b> Belladonna alkaloids |
| <b>B.</b> Valproic acid    | <b>F.</b> Nicotine             |
| <b>C.</b> Benzodiazepines  | <b>G.</b> Lithium              |
| <b>D.</b> Organophosphates | <b>H.</b> Amphetamines         |

**Questions: Which of the drug listed in the options above is responsible for the toxidromes described in the questions below**

3. (i) Mr. Hari Krishnan who has consumed this drug presents with delirium, mydriasis, tachycardia, hyperthermia, dry skin, urinary retention and ileus.
3. (ii) Mrs. Sumitra who has consumed this drug presents with increased salivation, lacrimation, urination, GI cramps, miosis, bronchorrhea, bradycardia and difficulty in breathing.
3. (iii) Mr. Sethu who has consumed this drug presents with hypertension, fasciculations, abdominal pain and paresis.
3. (iv) Mr. Gopalan who has consumed this drug presents with hypoventilation, hypotension, miosis, sedation and possibly hypothermia.
3. (v) Mr. Jillani who has consumed this drug presents with tachycardia, hypertension, mydriasis, agitation, seizures, diaphoresis and hyperthermia.
3. (vi) Mr. Lal presents with continuous yawning, tachycardia, hypertension, mydriasis, diaphoresis, agitation, restlessness, seizures, abdominal cramps, increased lacrimation, and hallucinations after stopping this drug.

**4. THEME: MOVEMENT DISORDERS [4 (i) –4(vi)] (Total: 6 Marks)**

**From options 'A to J' given below, choose the best answer for questions 4 (i) –4 (vi):**

**Options:**

- |                                    |                                 |
|------------------------------------|---------------------------------|
| <b>A.</b> Dopamine agonist         | <b>F.</b> Diethyl carbamazepine |
| <b>B.</b> Carbamazepine            | <b>G.</b> Benztropine           |
| <b>C.</b> Primidone                | <b>H.</b> Atenolol              |
| <b>D.</b> MAO- B inhibitors        | <b>I.</b> Propranolol           |
| <b>E.</b> Pyridoxine in high doses | <b>J.</b> Tetrabenazine         |

**Questions Choose the correct Treatment from the options above for the patients described below:**

4. (i) First line of drug for 40 years old Mr. Suresh who presents with features of Parkinsonism.
4. (ii) Mrs. Geetha presents with generalised dystonia.
4. (iii) 8 year old Ravi presents with severe Sydenham's chorea.
4. (iv) Mrs. Leela presents with essential tremor which interferes with her normal activity.

4. (v) Drug of choice for Mrs. Leela if she is an asthmatic.
4. (vi) Drug that can be used in 7 year old Hari who presents with persistent tics.

**THEME: 5. DIAGNOSIS OF SKIN INFECTIONS [5 (i) – 5 (vi)] (Total: 6 Marks)**

**From options 'A to J' given below, choose the best answer for questions 5 (i) – 5 (vi):**

**Options:**

- |                               |                          |
|-------------------------------|--------------------------|
| A. Trichomycosis axillaris    | F. Verrucosa cutis       |
| B. Erythrasma                 | G. Lupus vulgaris        |
| C. Acne conglobata            | H. Scrofuloderma         |
| D. Gram negative folliculitis | I. Pityriasis Versicolor |
| E. Chloracne                  | J. Tinea Versicolor      |

**Questions: Choose the correct Diagnosis from the options above for the case scenarios below:**

5. (i) Mr. Mani has come with brown scaly well-defined macules seen in axillae and groins. The lesions are otherwise asymptomatic.
5. (ii) 20 years old Giri who was on oral doxycycline for the past two months for acne has developed folliculitis on the face.
5. (iii) 30 years old Mrs. Jalaja has come with a lesion in the foot. The lesion shows central involution with an atrophic scar or form massive papillary excrescence with fissures.
5. (iv) Mr. Lal has come with yellow, brown or black concretions on hair shafts in axillae, causing yellow-brown staining of clothes in the area of arm pits.
5. (v) 6 year old Karthik has come with multiple annular erythematous plaques which spread centrifugally with clearing in the center and edge showing papulovesiculation with itching.
5. (vi) 12 year old Kala has come with multiple hypopigmented lesions with coalescing scaly perifollicular macules in the back.

**THEME: 6 .TREATMENT OF CHOICE FOR SKIN INFECTIONS [6(i) – 6(vi)]**

**(Total: 6 Marks)**

**From the options 'A to I' given below, choose the best answer for the questions 6 (i) –6**

**(vi):**

**Options:**

- A. Oral erythromycin
- B. Surgical removal
- C. Oral terbinafine for 12-16 weeks
- D. Oral terbinafine for 2weeks
- E. Oral terbinafine for 6 weeks
- F. Topical imidazole
- G. Sodium fusidate topical application
- H. Oral Cloxacillin
- I. Electrocautery

**Questions: Choose the correct Treatment from the options above for the case scenarios below:**

6. (i) Mr. Tilak has come with swelling and redness of nail folds and there are transverse greenish brown discolorations in the nails. He is a flower vendor.
6. (ii) 6 years old Krithika presents with greyish patch of alopecia in the scalp with scaling. There is severe itching.
6. (iii) Mrs. Ramani presents with brown scaly well defined macules in the axillary flexures
6. (vi) Mr. Sultan presents with fine punched out lesions which coalesce to give a cribriform pattern over the soles.
6. (v) 8 year old Geetha has come with multiple shallow ulcers in the gluteal region with raised, indurated and violaceous margins. She has constitutional symptoms.
6. (vi) Mr. Kannan, a 47 year old driver has come with complaints of an angry red mass in the back which is discharging through multiple openings.

**7. THEME: TREATMENT OF JOINT PAIN [7(i) –7(vi)] (Total: 6 Marks)**

**From the options ‘A to L’ given below, choose the best answer for the questions 7 (i) – 7(vi).**

**Options:**

- |                       |                  |
|-----------------------|------------------|
| A. Hydroxychloroquine | G. Oxycodone     |
| B. Methotrexate       | H. Amitriptyline |
| C. Azathioprine       | I. Amlodipine    |
| D. Sulphasalazine     | J. Probenicid    |
| E. Cyclosporine       | K. Infliximab    |
| F. Cyclophosphamide   | L. allopurinol   |

**Questions**

*Mrs. Parvathi has come with complaints of bilaterally symmetrical joint pain involving the proximal interphalangeal joints. The pain involves more than three joints; there is morning stiffness more than one hour. X-ray shows involvement of subchondral bone.*

7. (i) The first line DMARD\* for Mrs. Parvathi
7. (ii) If Mrs. Parvathi has failed to respond first and second line DMARDs, and the illness is severe, the DMARD that can be used
7. (iii) 54years old Mrs. Lakshmi has come with bilateral knee pain which worsens with use of the joints. The oral pharmacologic agent that is used if the first line non opioids fail to control the pain

7. (iv) Mr. Jonas has come with pain both great toes, right ankle and heel. The pain is severe, burning and the overlying skin is red. He has had three or four similar episodes in the past. He has evidence renal stones in USG. The drug of choice for him will be
7. (v) 24 years old Ram has come with low grade fever, fatigue, early morning stiffness of extremities and severe pain and stiffness of back. On examination the movements of spine and sacroiliac joints are restricted. After confirmation with investigations, the ideal drug for Ram is
7. (vi) Ms. Kala, a 24 year old primary grade teacher has presented with fatigue, fever, joint pain, malar rash and discoid lesions. The DMARD of choice if there is evidence of severe glomerulonephritis is

\*DMARD – Disease Modifying Anti – Rheumatic Drugs

**8. THEME: SLEEP DISORDERS [8(i) –8 (vi)] (Total: 6 Marks)**

**From the options ‘A to M’ given below, choose the best answer for the questions 8 (i) – 8 (vi):**

**Options:**

- |                                     |                         |
|-------------------------------------|-------------------------|
| A. Psychophysiological insomnia     | H. Confusional arousals |
| B. REM related myoclonus            | I. Night terrors        |
| C. Periodic limb movements of sleep | J. Hypersomnia          |
| D. Restless leg syndrome            | K. Narcolepsy           |
| E. Akathisia                        | L. Somnambulism         |
| F. Night mares                      | M. Behavioral insomnia  |
| G. Circadian rhythm disorders       |                         |

**Questions: Choose the correct Diagnosis from the options above for the case scenarios below:**

8. (i) Mrs. Sujatha has episodes of sudden jerky movements which involve the extension of big toe and partial flexion of ankle, knee and hip during sleep. It is observed by her husband and she is not aware of the movements. The frequency of movements is around 15 times per a period of sleep.
8. (ii) Mr. Nageshwaran, a diabetic for 12 years comes with complaints of urge to move legs and unpleasant sensation in the legs which increases in the night which is relieved by walking. He does not have any other complaints
8. (iii) Mrs. Parvathi has episodes of excessive daytime sleepiness with a tendency to fall asleep uncontrollably even when talking to her children. She says that they occur

without warning and sometimes she has even very vivid 'dreams' during that period.

8. (iv) 12 year old Radha has complaints of very vivid dreams and she refuses to sleep and starts crying when the night approaches
8. (v) Mrs. Geetha has brought her husband saying that she is finding him in the night walking around the house, opening and closing the cupboards. He has no memory of it in the morning.
8. (vi) 8 years old Heera has complaints of prolonged night time arousals and goes back to sleep only when her mother comes and comforts her

**9. THEME: OPPURTUNISTIC INFECTIONS IN HIV INFECTION 9 (i) –9 (vi)]**  
**(Total: 6 Marks)**

**From the options 'A to L' given below, choose the best answer for the questions 9 (i) –9 (vi):**

**Options:**

- A. Co-Trimoxazole
- B. Erythromycin
- C. Fluconazole 200 mg daily for 14 days
- D. Fluconazole 400 mg daily for 14 days
- E. Co-Trimoxazole with Prednisolone
- F. IV Amphotericin B for 2 weeks followed by Itraconazole 200 mg 2 times daily for 8 weeks
- G. IV Acyclovir
- H. Anti-Retroviral Therapy(ART)
- I. IV Amphotericin B for 2 weeks followed by Itraconazole 400 mg orally daily for 8–10 weeks
- J. Erythromycin 14 days
- K. Co-Trimoxazole with Prednisolone
- L. Cloxacillin

**Questions: Choose the correct Treatment from the options above for the case scenarios below:**

9. (i) HIV positive Mr. S, develops dry cough, shortness of breath, fever, night sweats over a month; chest x ray shows bilateral interstitial infiltrates. The drug of choice is
9. (ii) HIV positive Mrs. K presents with oral candidiasis, dysphagia and retrosternal chest pain. The drug of choice is
9. (iii) HIV positive with presents with severe headache, meningeal irritation, photophobia, fever, confusion with papulonecrotic skin lesions resembling molluscum contagiosum associated with fever and pulmonary infiltrates. The drug of choice is
9. (iv) HIV positive Mr. H presents with meningeal irritation with clusters of typical blisters in face. Which drug would you choose to treat him?

9. (v) HIV positive Mr. L presents with chronic diarrhea, cramps, vomiting, right upper quadrant pain and stool specimen stained with modified AFB stain shows typical protozoa. Which drug would you choose to treat him?
9. (vi) HIV positive Mrs. D presents with papulo necrotic skin lesions associated with systemic features of fever, lung involvement, cough, weight loss, anemia and lymphadenopathy. Typical organism is demonstrated with wright or cotton blue stain. The drug of choice is

**THEME: 10. CHANGES IN ELDERLY [10 (i) –10 (vi)] (Total: 6 Marks)**

**From the options 'A to K' given below, choose the best answer for the questions 10 (i) – 10 (vi):**

**Options:**

- |                          |                                  |
|--------------------------|----------------------------------|
| A. Stress Incontinence   | G. Urinary Retention             |
| B. Urge Incontinence     | H. Psychosomatic illness         |
| C. Depression            | I. Anxiety                       |
| D. Overflow Incontinence | J. Obsessive Compulsive disorder |
| E. Dementia              | K. Schizophrenia                 |
| F. Delirium              |                                  |

**Questions: Choose the correct Diagnosis from the options above for the case scenarios below:**

10. (i) 72 year old Mr. Somu, comes with complaints of sudden urge to urinate but is often not able to inhibit the passing of urine long enough to get to the toilet.
10. (ii) 68 year old Mrs. D complains leaking of urine as a result of maneuvers such as coughing, sneezing or laughing.
10. (iii) 75 year old Mr. Abdul complains of difficulty in passing urine but has dribbling of urine on which he is not able to control.
10. (iv) Mr. Sinha presents with memory disturbances; progressively severe loss, more so for recent events; attention is impaired; progressive downhill course over months to years; not much response to drugs; depression may be superimposed; there is change in psycho motor status.
10. (v) Mrs. Sujatha presents with memory disturbances; fluctuating loss, attention is normal; fluctuating over hours and days; resolves once the precipitating factors are treated; mood is agitated or calm; there is no change in psycho motor status.
10. (vi) Mr. Menon presents with memory disturbances; loss is often acute, attention is normal; mild memory loss; progressive course over weeks or months with Resolution with therapy; mood is depressed. There is no change in psychomotor status.

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(LG 0215)

M.MED.FAMILY MEDICINE

(Sub Code: 4011)

**SECOND YEAR THEORY EXAM- FEBRUARY 2015**

**PAPER I - MEDICINE AND ALLIED SCIENCES**

*QP .CODE: 434011*

**Time: Three hours**

**Maximum Marks: 100**

**INSTRUCTIONS**

- The paper will be for a total of **100 marks**.
- Answer **all** the Questions.
- The Paper has 2 parts – **Part A & Part B**.
- **Part A** will be **descriptive type questions** based on case scenarios **(40 marks)**
- **Part B** will have Objective type EMQs **Extended Matching Questions** **(60 marks)**
  - ✓ This will have 10 sets of these questions.
  - ✓ Each set will have 6 questions.
  - ✓ Each question will carry 1 mark.
  - ✓ Each set has a **theme** on the top. In each set there are **some options** given on the top followed by some **questions**. The options are lettered using the English Alphabets A, B, C, D and so on.

Example:

**3. THEME –COMMON PSYCHIATRIC PROBLEMS [QUESTIONS. 3(i) – 3(vi)] (6Marks)**

**From the options ‘A to H’ given below, choose the best answer for the questions 3(i) – 3(vi)**

**Options:**

- A.** Inj. Haloperidol
- B.** Amitriptyline + counseling
- C.** Tab. Chlorpromazine
- D.** Tab. Trihexyphenidyl
- E.** Tab. Diazepam
- F.** Tab. Lithium
- G.** Inj. Fluphenazine deconoate
- H.** Tab. Risperidone

**Questions: What is your treatment option in the following cases?**

3(i) What is the drug of choice for Acute Psychosis?

3(ii) What is the drug of choice for Bipolar illness?

- ❖ Match each question to a **single best option** and write it in your paper in the column provided like this:

3(i)	
3(ii)	
3(iii)	
3(iv)	
3(v)	
3(vi)	

- ❖ Each option may be used more than once. Some options may not be used at all.

**PART – A**  
**DESCRIPTIVE QUESTIONS**  
**(ANSWER ALL QUESTIONS)**

1. Mr. Subbu 40 year old farm labourer was admitted to an emergency clinic complaining of mild abdominal pain and vomiting. He stated that he had had a bout of watery diarrhea shortly after eating his lunch. He was feeling dizzy and weak. He gave no history of ingesting any medicines. He said that he was working all morning in the farm spraying some insecticide. **(Total: 20 Marks)**
- A.** List any 5 common poisons that are used accidentally or intentionally in India. Write the specific antidote for each of the poisons you listed. **(5 Marks)**
- B.** Name the causative agents and describe the symptoms of each of the following *toxic syndromes*: **(10 Marks)**
- i.** Anticholinergic
  - ii.** SLUDGE syndrome
  - iii.** Opioid
  - iv.** Sympathomimetic
  - v.** Withdrawal
- C.** What are the key principles involved in managing acute poisoning? **(5 Marks)**
2. 63 year old Mr. Raman was brought to you with hemiplegia on the right side. **(Total: 20 Marks)**
- A.** Mention any 4 risk factors for a stroke in him? **(2 Marks)**
- B.** Classify strokes according to vascular pathology and list possible causes. **(6 Marks)**
- C.** Discuss how you will diagnose the possible cause of stroke in Mr. Raman. **(5 Marks)**
- D.** Mention any 4 common *stroke mimics* **(2 Marks)**
- E.** How will you manage Mr. Raman? **(5 Marks)**

**PART – B**  
**EXTENDED MATCHING QUESTIONS**  
**(ANSWER ALL QUESTIONS)**

1. **THEME: BITES AND STINGS [QUESTIONS. 1(i) - 1(vi)]** **(Total: 6 Marks)**  
From the options 'A to N' given below, choose the best answers for the questions '1(i) – 1(vi)':

**Options:**

- |                      |                          |
|----------------------|--------------------------|
| <b>A.</b> Viper bite | <b>E.</b> Sea snake bite |
| <b>B.</b> Dry bite   | <b>F.</b> Prazosin       |
| <b>C.</b> Cobra bite | <b>G.</b> Adrenaline     |
| <b>D.</b> Krait Bite | <b>H.</b> Hydrocortisone |

- I. Neostigmine
- J. Deriphylline
- K. Clonidine

- L. Immunomodulators
- M. Atropine
- N. Naloxone

**Questions:**

*While cleaning up the backyard of her home in the evening, 18 year old Sandhya was bitten by a snake in the left lower limb. Due to poor visibility she was unable to identify the snake. She was taken to a hospital which was one hour distance from her village. She developed ptosis, paralysis but there were no signs of local envenomation.*

1(i) What kind of snake bite has occurred in this patient?

*Mona was bitten by a snake and she developed generalized pain, tenderness, stiffness of muscles and trismus within 30 minutes of the bite.*

1(ii) What kind of snake bite did Mona sustain?

*22 year old Anbu was bitten by a snake on the left middle finger. He presented to the hospital after 4 hours with pain at the bite site; he also had hazy vision, drooping of eyelids, dysarthria, dysphagia, paraesthesia, and somnolence. On examination, you find that his right arm was swollen and there was necrosis of the wound area.*

1(iii) What kind of snake bite did Anbu sustain?

1(iv) What drug you will give him in addition to antivenom therapy?

1(v) In which snake bite is a '20 minute whole blood clotting test (WBCT)' useful?

*Mrs. Gomathi came to your clinic with her child saying that the child had a scorpion sting.*

1(vi) Which drug is useful to neutralize the effects of an autonomic storm in scorpion sting?

**2. THEME: JOINT PAIN [ QUESTIONS 2 (i) TO 2 (vi )] (Total: 6 Marks)**

**From the options 'A to N' given below, choose the best answers for the questions '2 (i) – 2 (vi)':**

**Options**

- |                        |                         |
|------------------------|-------------------------|
| A. Adriamycin          | H. Prednisolone         |
| B. Paracetamol         | I. Allopurinol          |
| C. Hydroxy chloroquine | J. Rheumatoid arthritis |
| D. Osteoarthritis      | K. Cyclosporine         |
| E. Probenicid          | L. Methotrexate         |
| F. Ibuprofen           | M. Gout                 |
| G. Indomethacin        | N. Rheumatic arthritis  |

**Questions:**

*35-year-old Radha gradually developed joint pain and swelling of both the wrists over a 3 month period; she had early morning stiffness and could not do her daily cooking chores. On examination, both her PIP (proximal inter-phalangeal joint) and wrists were slightly swollen and tender.*

2(i) What could be the possible diagnosis?

*58 year old Dinesh comes to you with ache in the knee joint on both sides. On examination there is pain on passive movement of the joint. A crepitus can be also felt on flexion.*

**2(ii)** What could be the possible diagnosis?

**2(iii)** What is the first drug of choice for him?

*59 year old Pandian a rickshaw driver comes to you with severe pain of the right big toe that started while he was sleeping. He is writhing in pain and has low grade fever. On examination the whole foot seems to be tender and red but the swelling around the big toe is maximal.*

**2(iv)** What could be the possible diagnosis?

*You have started treatment for 38 years old Savithri with rheumatoid arthritis.*

**2(v)** Which drug will need monitoring of LFT?

**2(vi)** Name the drug which is not an immune-suppressant and used as a disease modifying drug in 19 year old Suma diagnosed with SLE.

**3. THEME: MOVEMENT DISORDERS [(QUESTIONS 3(i) to 3 (vi) ] (Total: 6 Marks)**  
**From the options 'A to N' given below, choose the best answer for the questions '3(i) to 3 (vi)':**

**Options**

- |   |                                    |
|---|------------------------------------|
| <b>A.</b> Myoclonus                     | <b>H.</b> Delirium                 |
| <b>B.</b> Low levels of dopamine        | <b>I.</b> Sydenham's Chorea        |
| <b>C.</b> Thyrotoxicosis                | <b>J.</b> Essential Tremor         |
| <b>D.</b> Obsessive Compulsive Disorder | <b>K.</b> Athetosis                |
| <b>E.</b> Parkinsonism                  | <b>L.</b> Cerebellar lesion        |
| <b>F.</b> Low levels of serotonin       | <b>M.</b> High levels of dopamine  |
| <b>G.</b> Tardive dyskinesia            | <b>N.</b> High levels of serotonin |

**Questions:**

*Mr. Natarajan, a 60 year old man came to you with "shaking movements" of the hand for the past 2 months which has been progressively increasing in nature. On examination, he has pill rolling movements of the hand, rigidity and bradykinesia.*

**3(i).** What is your diagnosis?

**3(ii).** What is the pathophysiology of the above condition?

*Mr. Pandian is brought to your clinic by his son with complaints of excessive shaking of both his hands which occurs when he tries to pick up something or do something, especially as the hand approaches the target.*

**3(iii).** What is the common cause of such tremors?

*Mr. Damodharan presented with a slow, sinuous writhing movement of the hands & feet.*

3(iv). What is this called?

*73 year old Mr. George is brought to you by his son with complaints of having a tremor of both his hands for past 2-3 months which has been progressively increasing in nature.*

*Mr. George's son says that the his hands shake most when Mr. George tries to pick up something or do something but disappears when he is not doing anything.*

3(v). What is your diagnosis?

*12 year old Karthik is brought to you by his mother with complaints of involuntary movements of the whole body. On further questioning, the mother gives a past history of Karthik having fever and sore throat.*

3(vi). What will you suspect?

**4. THEME: ANAEMIA [(QUESTIONS 4 (i) TO 4 (vi)] (Total:6 Marks)**

**From the options 'A to L' given below, choose the best answers for the questions 4 (i) to 4 (vi):**

**Options:**

- |                                    |  |
|------------------------------------|--|
| <b>A.</b> Blood Transfusion        | <b>G.</b> Autoimmune Hemolytic anaemia   |
| <b>B.</b> Cerebellar ataxia        | <b>H.</b> Cooley's anaemia               |
| <b>C.</b> Iron deficiency anaemia  | <b>I.</b> Sickle Cell anaemia            |
| <b>D.</b> Blood loss               | <b>J.</b> Thalassemia Trait              |
| <b>E.</b> Hookworm infestation     | <b>K.</b> Vitamin B12 deficiency         |
| <b>F.</b> Hereditary Spherocytosis | <b>L.</b> Subacute combined degeneration |

**Questions:**

*Mr. Ramakrishnan, a 40 year old came to your clinic with lethargy & weakness. He is not a diabetic or hypertensive. He is a non-smoker and is a pure vegetarian. On examination, he had pallor and angular stomatitis. His blood investigations revealed anaemia.*

4(i). What type of anaemia does he have?

4(ii). What is the long term complication of this condition if left untreated?

*Mr. Ramu is a 45 year old farmer with no significant past history comes to your clinic with complaints of weakness & lethargy of 1 month's duration. You do a complete blood count. He has decreased MCV, MCH, and MCHC.*

4(iii). What type of anaemia does he have?

4(iv). What could be the cause of this type of anaemia in Ramu's case?

*Mrs. Sangeetha came to you with a history of tiredness of 2 month's duration. Investigations showed low hemoglobin, normal MCHC but high MCH.*

4(v). What type of anaemia does Sangeetha have?

*Thirty eight year old Mr. Rahul came to you with generalized weakness. You did all the relevant blood tests on him which was reported as normal except for low hemoglobin. You ordered for a Coomb's Test. Direct Coomb's test was found to be positive.*

4(vi). What type of anaemia does Rahul have?

**5. THEME: PALLIATIVE CARE [QUESTIONS 5 (i) TO 5 (vi)] (Total: 6 Marks)**  
From the options 'A to M' given below, choose the best answers for the questions '5 (i) to 5 (vi)

**Options**

- |   |                          |
|---|--------------------------|
| A. Oral Morphine  | G. Step 3 analgesia      |
| B. Step 2 analgesia                                     | H. Nausea                |
| C. Haloperidol  | I. Hyoscine Butylbromide |
| D. Constipation   | J. Anaphylaxis           |
| E. Stop Morphine  | K. Fluoxetine            |
| F. Increase dose of<br>dextropropoxyphene & paracetamol | L. Lamotrigine           |
|   | M. Headache              |

**Questions:**

*Mrs. Saraswathi has carcinoma breast which was operated. She came back with severe bone pain due to bone secondaries. She went to the palliative clinic where she was started on a combination of paracetamol and dextropropoxyphene which she is taking once or twice a day. She comes to you with complaints that the pain has not subsided.*

5(i) How will you manage her?

*Mr. Dayalan has rhabdomyosarcoma of thigh which was operated. He was on chemotherapy. He has come back with lung secondaries with severe chest pain and cough. His pain is relieved only on taking Tab. Morphine.*

5(ii) What is the commonest side effect of morphine?

*Mrs. Leela, a known patient of long standing diabetes mellitus associated with hypertension and foot ulcers which are non-healing comes to you with severe pain of both feet not relieved on taking different types of medicines. You examine her and find her pain to be neuropathic.*

5(iii) What is the next step of analgesia you would recommend?

*Mr. Sridhar has large liver secondaries from an unknown primary. He has severe abdominal pain and was started on Tab. Morphine. This caused excessive nausea.*

5(iv) What is your next line of management?

*Mr. Chellappa has inoperable carcinoma of the urinary bladder which has spread to the lungs. He has developed breathlessness which has become frightening for him and his family.*

5(v) How will you treat him?

*Mrs. Parvathi has end stage carcinoma ovary with multiple metastasis. She is taken care of at home by her family. She is terminal now and produces a noise when she is breathing which is frightening for the family.*

5(vi) How will you treat this?

**6. THEME: HIV/AIDS [QUESTIONS 6 (i) TO 6 (vi)]**

**(Total: 6 Marks)**

From the options 'A to N' given below, choose the best answers for the questions '6 (i) to 6 (vi)

**Options**

- |   |  |
|---|--|
| <b>A.</b> Reverse transcriptase enzyme estimation | <b>H.</b> Low                              |
| <b>B.</b> Normal                                  | <b>I.</b> Western blot test after 1 month  |
| <b>C.</b> ELISA                                   | <b>J.</b> Indeterminate western blot       |
| <b>D.</b> 644 cells/mm                            | <b>K.</b> PCR                              |
| <b>E.</b> 1242 cells/mm                           | <b>L.</b> High                             |
| <b>F.</b> Positive                                | <b>M.</b> 428 cells/mm                     |
| <b>G.</b> Negative                                | <b>N.</b> Western Blot test after 6 months |

**Questions:**

**6(i)** 32 year old Ramu, a teacher, has been very worried about the possibility of acquiring HIV. So he had gone to a private Physician and got a battery of tests done. He has no risk factors. He has come to you with the results. His HIV ELISA and PCR are negative and his CD4 count is 820cells/mm<sup>3</sup>. What is your comment about his CD4 counts?

**6(ii)** You are called to do a screening test for HIV infection for a group of inmates in a jail. What will be your choice of investigation according to WHO strategy I?

**6(iii)** 25-year-old Murugan presents with chronic diarrhoea, weight loss, extra-pulmonary tuberculosis and oral candidiasis. He has sexual risk factors for acquiring HIV infection and past history of STDs. He was clinically diagnosed to have AIDS. But his ELISA test and repeat ELISA was reported as non-reactive. What is the next choice of investigation?

**6(iv)** Raghavan is found to have primary infection with Human Immuno-deficiency Virus. What is the median CD4 count for primary infection with Human Immune-deficiency virus?

**6(v)** A 30-year-old lady came for routine antenatal testing and was found to be ELISA reactive by one test and negative by the second ELISA. Her husband's ELISA was not reactive. She and her husband have not had any other sexual partners. What test will you order next?

**6(vi)** Mallika, who is a HIV positive mother, has delivered a baby. She likes to know as quickly as possible whether the child has HIV infection. She is not breast feeding the baby. What is the ideal test to confirm the presence or absence of HIV infection in this baby?

**7. THEME: COMMON CUTANEOUS INFECTIONS [QUESTIONS 7 (i) to 7 (vi)]**

**(Total: 6 marks)**

From the options 'A to L' given below, choose the best answers for the questions '7 (i) to 7 (vi)':

**Options**

- |  |                                 |
|--|---------------------------------|
| <b>A.</b> Tuberculosis verrucosa cutis | <b>E.</b> Lupus vulgaris        |
| <b>B.</b> Herpes zoster                | <b>F.</b> Herpes simplex        |
| <b>C.</b> Trichomycosis axillaris      | <b>G.</b> Pityriasis Versicolor |
| <b>D.</b> Superficial folliculitis     | <b>H.</b> Erythrasma            |

- I. Impetigo contagiosa
- J. Erysipelas

- K. Deep folliculitis
- L. Furuncles

**Questions: From the options given above, mark the most likely diagnosis for the following patients:**

**7(i)** 34 year old Murugan, diagnosed to have HIV infection and was started on anti-retroviral therapy, has developed a vesicular eruption confined to his left upper limb of two days duration.

**7(ii)** 32 year old Ramu presents with asymptomatic, brown scaly well defined macules seen in axillae, groins, and sub mammary area.

**7(iii)** 17 year old Mala presents with yellow, brown or black concretions on hair shafts in axillae, sometimes causing yellow-brown staining of clothes in the area of arm pits.

**7(iv)** Mrs. Subha brought her daughter with erythematous macule in her face that rapidly developed into a fragile vesicle with an erythematous areola and cluster of erosions that is capped with a thick adherent honey-yellow crust.

**7(v)** 64 year old Tina Williams, a tourist to India has developed acute erythematous warm tender indurated plaques in the face. The plaques are firm to hard and are spreading rapidly.

**7(vi)** 28 year old Bhavani has history of painless pustules that heals without scarring. The hair shaft will frequently be seen in the center of the pustules

**8. THEME: CARDIAC DYSPNEA [QUESTIONS 8 (i) to 8 (vi)] (Total: 6 Marks)**

**From the options 'A to M' given below, choose the best answers for questions '8 (i) to 8 (vi)' given below:**

**Options**

- |  |  |
|--|--|
| <b>A.</b> Mild Ventricular Septal Defect                                 | <b>G.</b> Moderate Ventricular Septal Defect                       |
| <b>B.</b> Aortic Stenosis  | <b>H.</b> Valve area < 1.0 cm <sup>2</sup> in symptomatic patients |
| <b>C.</b> Valve area < 1.5 cm <sup>2</sup> in symptomatic patients       | <b>I.</b> Insert a needle in the 2nd space                         |
| <b>D.</b> Follow up with Echo every 12 months & endocarditis prophylaxis | <b>J.</b> ACE inhibitors   |
| <b>E.</b> Pulmonary Hypertension   | <b>K.</b> Probable myocarditis                                     |
| <b>F.</b> Aortic regurgitation   | <b>L.</b> Digitalis & endocarditis prophylaxis                     |
|  | <b>M.</b> Digoxin & loop diuretics                                 |

**Questions:**

***Mrs. Fathima, a multiparous mother developed breathing difficulty 1 month after delivery of her twin babies. On clinical evaluation, she is found to be in cardiac failure.***

**8(i)** How will you treat her?

***74 year old Mr. Karthik comes to you with a history of breathing difficulty on walking which has been increasing in severity for the past 2 months. On cardiac examination, you hear an ejection systolic murmur at the 2nd right intercostal space.***

**8(ii)** What is your diagnosis?

**8(iii)** What is the indication for surgery in this condition?

*Mrs. Lakshmi, a 34 year old lady comes to you with a history of breathing difficulty of 1 month duration. She says that the breathing difficulty has worsened over time and now it is present even on doing normal activities. On clinical evaluation, pulse is irregularly irregular. You diagnose her to have Mitral Stenosis. You also hear Graham Steel's murmur.*

**8(iv)** What would the Graham Steel's murmur indicate?

*You have diagnosed 41 year old Mr. Gijo to have Aortic Regurgitation. An Echocardiogram shows Aortic Regurgitation with no change in cardiac size.*

**8(v)** How will you manage him?

*Four year old Rahul had a 4-5 day history of fever and some nasal discharge. He was feeling very weak & was brought to you for evaluation. On examination, his heart rate was 152/min, B.P was normal with slightly increased respiratory rate. Rest of the examination was normal.*

**8(vi)** What do you suspect?

**9. THEME: BLEEDING DISORDER [QUESTIONS 9 (i )TO 9 (vi )] (Total: 6 Marks)**  
From the options 'A to N' given below, choose the best answers for questions 9(i) to 9(vi) given below:

**Options:**

- |  |                                    |
|--|------------------------------------|
| <b>A.</b> Liver disease                          | <b>H.</b> Fibrinogen deficiency    |
| <b>B.</b> Warfarin therapy                       | <b>I.</b> Hematological malignancy |
| <b>C.</b> Drug reaction due to rifampicin        | <b>J.</b> Hemophilia               |
| <b>D.</b> Drug reaction due to pyrazinamide      | <b>K.</b> Easy bruising syndrome   |
| <b>E.</b> Heparin therapy                        | <b>L.</b> ITP                      |
| <b>F.</b> Von Willebrand's disease               | <b>M.</b> Henoch Schonlein Purpura |
| <b>G.</b> Disseminated intravascular coagulation | <b>N.</b> Disseminated TB          |

**Questions: Choose from the above options, the most likely cause of the bleeding disorder in the following scenarios**

**9(i)** 28 year old Mrs. Bhavani is a housewife, mother of two children. She was well two days ago and has developed a rash and heavy menstrual blood loss since yesterday. There is no past history of abnormal bleeding. The rash is generalized, purpuric. There was no pallor, lymphadenopathy or hepatosplenomegaly. Her platelet count is 19,000 / dl.

**9(ii)** Mr. Basker was diagnosed to have pulmonary TB and started on ATT, category I last week. He had taken three doses of the medications. He has come with epistaxis and purpuric rash over chest and extremities. His platelet count is 14,000/ mm<sup>3</sup>.

**9(iii)** 7 year old Hiram has swelling and ecchymoses over the right eye after a trivial fall while playing. His siblings have been diagnosed to have a bleeding diathesis. General examination is normal. His platelet count is 250,000/ mm<sup>3</sup>, Bleeding time is > 20 minutes. Clotting time and prothrombin time are normal.

**9(iv)** A 35-year-old woman presents with bruising of the upper thighs. She says that this kind of bruises occur often when she bumps into things. She denies menorrhagia or other bleeding symptoms. She reports two vaginal deliveries, an appendectomy, and a tubal ligation, all without any excessive bleeding. Her family history does not suggest a bleeding disorder and, except for the simple bruising, her physical examination is unremarkable.

**9(v)** A 52-year-old man gave a lifelong history of easy bruising and excessive bleeding following tooth extractions. After taking aspirin, he developed severe nosebleeds. Family history was remarkable for heavy vaginal bleeding in his mother and sister.

**9(vi)** 15 year old girl Miss. Parveen is studying in the school final, developed abdominal pain since morning. Her mother noticed a rash over the extremities, back and buttocks. Her physical exam was otherwise normal except the rash and arthritis of right knee. The Purpura is raised above the skin and palpable. Platelet count is  $2,40,000 / \text{mm}^3$ . Bleeding time is normal.

**10. THEME: OBESITY [QUESTIONS 10 (i) to 10 (vi)]**

**(Total: 6 Marks)**

**From the options 'A to Q' given below, choose the best answers for the questions 10 (i) to 10 (vi) :**

**Options:**

- |                     |                     |
|---------------------|---------------------|
| <b>A.</b> 40        | <b>J.</b> < 50mg/dl |
| <b>B.</b> 0.7       | <b>K.</b> >150mg/dl |
| <b>C.</b> 30        | <b>L.</b> < 40mg/dl |
| <b>D.</b> 0.85      | <b>M.</b> >200mg/dl |
| <b>E.</b> 35 inches | <b>N.</b> 42 inches |
| <b>F.</b> Apple     | <b>O.</b> Carrot    |
| <b>G.</b> Pear      | <b>P.</b> Orange    |
| <b>H.</b> 0.9       | <b>Q.</b> 35        |
| <b>I.</b> 40 inches |                     |

**Questions:**

*Mr. Raja is at severe risk of complications due to obesity. His parameters will be as follows*

**10(i).** BMI more than\_\_\_\_\_.

**10(ii).** Waist hip ratio more than\_\_\_\_\_.

**10(iii).** \_\_\_\_\_ shaped body.

*Mrs. Seetha has Metabolic Syndrome. The constituents of this syndrome include:*

**10 (iv).** Absolute waist circumference more than \_\_\_\_\_.

**10 (v).** HDL \_\_\_\_\_.

**10 (vi).** Triglycerides\_\_\_\_\_.

\*\*\*\*\*

**M.MED.FAMILY MEDICINE**  
**SECOND YEAR THEORY EXAM– AUGUST 2015**  
**PAPER I - MEDICAL AND ALLIED SCIENCES**

*Q.P. Code: 434011*

**TIME: THREE HOURS**

**MAXIMUM: 100 MARKS**

**INSTRUCTIONS**

- The paper will be for a total of **100 marks**.
- Answer **all** the Questions.
- The Paper has 2 parts – **Part A & Part B**.
- **Part A** will be **descriptive type questions** based on case scenarios(**40 marks**).
- **Part B** will have Objective type EMQs (**Extended Matching Questions**)(**60 marks**).
  - ❖ This will have 10 Extended Matching sets of questions.
  - ❖ Each set will have 6 questions.
  - ❖ Each question will carry 1 mark.
  - ❖ Each set has a **theme** on the top. In each set there are **some options** given on the top followed by some **questions**. The options are lettered using the English alphabets A, B, C, D and so on.

Example:

**3. THEME -COMMON PSYCHIATRIC PROBLEMS [QUESTIONS. 3(i) - 3(vi)] (6marks)**  
**From the options 'A to H' given below, choose the best answer for the questions 3(i) – 3(vi)**

**Options:**

- A. Inj. Haloperidol
- B. Amitriptyline + counseling
- C. Tab. Chlorpromazine
- D. Tab. Trihexyphenidyl
- E. Tab. Diazepam
- F. Tab. Lithium
- G. Inj. Fluphenazine deconate
- H. Tab. Risperidone

**Questions: What is your treatment option in the following cases?**

- 3(i) What is the drug of choice for Acute Psychosis?
- 3(ii) What is the drug of choice for Bipolar illness?

**PART – A**  
**DESCRIPTIVE QUESTIONS**

**(ANSWER ALL QUESTIONS)**

1. Mrs Sujatha, a 30 year old housewife is found to have impaired fasting glucose. Her height is 140 cm and her weight is 72 kg. **(TOTAL: 20 MARKS)**

- A. What are the goals of dieting in obesity? **(2 marks)**
- B. Define Basal Metabolic Rate (BMR). How will you calculate basal metabolic rate? What is the clinical use of BMR? **(5 marks)**
- C. What are the general exercise recommendations in obesity? **(4 marks)**
- D. What are the methods by which you will pace exercise? Explain. **(4 marks)**
- E. What are the drugs used in the pharmacotherapy of obesity? Briefly explain. **(5 marks)**

2. Mr Rajan is brought with a history of snake bite an hour ago. Mr Rajan is looking anxious, his pulse rate is 98/ minute and blood pressure is 120/80 mm of hg. There is no local oedema of the bite site. Systemic examination is normal. Mr.Rajan's relatives have brought the snake along with them. **(TOTAL: 20 MARKS)**

- A. What are the points that can help you differentiate a poisonous snake from a non-poisonous snake? **(2 marks)**
- B. What are the 4 syndromes of poisonous snake bite? **(4 marks)**
- C. What are the 'dos' and 'don'ts' of pre hospital care in snake bite? **(5 marks)**
- D. What are the indications for Anti Snake Venom(ASV) use? **(3 marks)**
- E. What are the three types of anaphylactic reactions associated with ASV? What is the treatment? **(6 marks)**

**PART – B**  
**EXTENDED MATCHING QUESTIONS**

**1. THEME: DIAGNOSIS – PAIN CONTROL [(QUESTIONS 1(i) TO 1(vi))]**

**(TOTAL: 6 MARKS)**

**From the options ‘A to P’ given below, choose the best answers for the questions 1(i) to 1(vi):**

**Options:**

- |                         |                          |
|-------------------------|--------------------------|
| A. Metoclopramide       | I. Nociceptive pain      |
| B. Morphine             | J. Central Sensitization |
| C. By the mouth         | K. Diclofenac            |
| D. By the ladder        | L. Pethidine             |
| E. Neuropathic pain     | M. Referred pain         |
| F. Bisacodyl            | N. By the clock          |
| G. Fentanyl             | O. Antacids              |
| H. High glycerine enema | P. H2 Receptor blockers  |

**Questions:**

***Mr. Ravi has long standing poorly controlled diabetes and is recently distressed by a burning pain in both his feet. On examination, he has markedly decreased sensation in both feet***

- (i)** What type of pain is he experiencing?
- (ii)** Over time, what can his chronic pain cause?

***Mr. Ahmed has chronic pain secondary to bony metastases. He takes Ibuprofen once or twice daily with minimal pain control***

- (iii)** For better pain control, which principle in the management of chronic pain must be applied here?

***Mrs. Prema has severe chronic pain for which her oral morphine dose has recently been increased. She complains of severe nausea which is not relieved even after vomiting***

- (iv)** What drug would be the best option to treat her nausea?

***Mr. Varghese needs an increase in his pain medication and his physician wishes to add an opioid to his current regimen.***

1. (v) What drug is the gold standard among strong opioids?

*Lakshmi has diabetes with several complications including partial blindness, hypertension, a small stroke and non-healing foot ulcers. She is looked after at home by her daughter-in-law. Her diabetes is under reasonable control now but she is complaining bitterly about pain in her feet. Initially you had put her on paracetamol and Amitryptaline, then you had added a mild opioid analgesic. Now you plan to upscale it to a stronger opioid.*

1. (vi) Which principle of pain management are you following?

**2.THEME: DIAGNOSIS – CNS DISORDERS IN THE ELDERLY[(QUESTIONS 2 (i)TO 2 (vi) ]**  
**(TOTAL: 6 MARKS)**

**From the options ‘A to O’ given below , choose the best answers for the questions 2 (i) to 2 (vi):**

**Options :**

- |                                      |                                    |
|--------------------------------------|------------------------------------|
| A. Delirium                          | H. Mild Cognitive Impairment (MCI) |
| B. Alzhiemers’s dementia             | I. Stroke in evolution             |
| C. Confusion Assessment Method (CAM) | J. Parkinson’s disease             |
| D. Incontinence                      | K. Falls Assessment                |
| E. Wilson’s disease                  | L. Parkinsonism                    |
| F. Mini Mental State Exam (MMSE)     | M. Late life depression            |
| G. Seizure disorder                  | N. ADL Assessment                  |
|                                      | O. Age-related memory loss         |

**Questions:**

*Mr. Gopal, an 80 year old otherwise healthy man developed right sided weakness for which he sought medical attention only after 48 hours. On examination, he was found to have mild right hemeparesis.*

2. (i) What is the diagnosis of concern in this patient?

*Mr. Santosh, a 74 year old gentleman has been brought to the clinic by his family as they are concerned about overall health. The family reports that his walk and talk have changed. On exam, he has a blank facial expression and slow voluntary movements. When asked to walk, he had difficulty rising from his chair and his gait was characteristic of small, shuffling steps.*

2. (ii) What is your diagnosis?

*Mrs. Shanthi, an 84 year old lady was admitted to the hospital with severe cellulitis of the left lower limb. On day 3 of admission, she became agitated, pulled out her IV line and was trying to leave the ward. She became very angry with the nurse who tried to help her and said that she was trying to hurt her.*

2. (iii) What is the likely diagnosis?

*Mrs. Pramila, a 76 year old lady was brought to the clinic by her daughter with complaints of forgetfulness. The patient denied being forgetful and was angry with her daughter for bringing up this topic. The daughter reported that in the past few weeks, on few occasions, her mother has left the gas stove on after cooking and left the kitchen. Mrs. Pramila also has difficulty recalling the names of her grandchildren whom she sees regularly*

2. (iv) What is the likely diagnosis?

2. (v) What is regarded as the “gold standard” assessment for this condition?

*Mr. Raju, 67 year old, a retired engineer is distressed because he could not remember the name of a friend he met that morning. He has no other functional impairment.*

2. (vi) What is his problem?

**3. THEME: DIAGNOSIS - SKIN INFECTIONS [(QUESTIONS 3 (i) TO 3 (vi) ]**

**(TOTAL: 6 MARKS)**

**From the options ‘A to N’ given below , choose the best answers for the questions 3 (i) to 3 (vi):**

**Options :**

- |                         |                                      |
|-------------------------|--------------------------------------|
| A. Herpes Zoster        | H. Herpes Simplex gingivo stomatitis |
| B. Oral Candidiasis     | I. Condylomaacuminata                |
| C. Scabies              | J. Tineacapitis                      |
| D. Impetigo             | K. Tineacruris                       |
| E. PityriasisVersicolor | L. Erythrasma                        |
| F. TineaCorporis        | M.Trichomycosisaxillaris             |
| G. Perineal Warts       | N. Leucoplakia                       |

**Questions: Choose the correct diagnosis from the options above for the case scenarios given below:**

**3 ( i ).** 6 year old Arun is brought by his mother with crusted skin lesions on chest, arm, neck and face for the past week. He is otherwise doing well except for the pruritus which makes him scratch and leads to exacerbation of the lesions. The lesions are multiple superficial erosions with adherent golden yellow crust.

**3 ( ii ).** 45 year old Mrs. Vani was undergoing chemotherapy for lymphoma when she developed whitish lesions in her mouth associated with burning when she ate spicy food. What has she developed?

**3 ( iii ).** 8 year old Priya has an itchy lesion on her scalp behind her left ear for the past 2 weeks. This is associated with hair loss. What is the diagnosis?

**3 ( iv ).** 29 year old Kumar, a lorry driver, has painless cauliflower like growths in his perianal area for the past 6 months and has been slowly increasing in size. He appears to be otherwise healthy. What is the likely diagnosis?

**3 ( v ).** 23 year old Hamid who lives in the military barracks presents with hypo-pigmented coalesced macules over his chest and upper back. He reported that many of his fellow soldiers also have similar lesions. What is your diagnosis?

**3 ( vi ).** 40 year old Madhavan was diagnosed to have HIV infection and was started on anti-retroviral therapy. Three months after initiation of treatment, he developed painful lesions confined to the right upper limb of two days duration. What is this condition?

**4.THEME: ANAEMIA [(QUESTIONS 4 (i) TO 4 (vi)]**

**(TOTAL: 6 MARKS)**

**From the options ‘A to N’ given below, choose the best answers for the questions 4 (i) to 4 (vi):**

**Options:**

- |  |  |
|--|--|
| <b>A.</b> Blood Transfusion            | <b>H.</b> Cooley’s anaemia               |
| <b>B.</b> Cerebellar ataxia            | <b>I.</b> Sickle Cell anaemia            |
| <b>C.</b> Iron deficiency anaemia      | <b>J.</b> Thalassemia Trait              |
| <b>D.</b> Blood loss                   | <b>K.</b> Vitamin B12 deficiency         |
| <b>E.</b> Hookworm infestation         | <b>L.</b> Subacute combined degeneration |
| <b>F.</b> Hereditary Spherocytosis     | <b>M.</b> Cerebral edema                 |
| <b>G.</b> Autoimmune Hemolytic anaemia | <b>N.</b> Cerebellar atrophy             |

**Questions:**

*Mrs. Sarala came to you with a history of tiredness of 3 months duration. Investigations showed low hemoglobin, normal MCHC but high MCH.*

4 (i). What type of anaemia does Sarala have?

*35 year old Mr. Roy came to you with generalized weakness. You did all the relevant blood tests on him, which was reported as normal except for low hemoglobin. You ordered for a Coomb's Test. Direct Coomb's test was found to be positive.*

4 (ii). What type of anaemia does Mr. Roy have?

*Mr. Krishnan, a 42 year old man came to your clinic with lethargy & weakness. He is not a diabetic and has no history of hypertension. He is a non-smoker and is a pure vegetarian. On examination, he had pallor and angular stomatitis. His blood investigations revealed anaemia.*

4 (iii). What type of anaemia does he have?

4 (iv). What is the long-term complication of this condition if left untreated?

*Mr. Suresh is a 45 year old farmer with no significant past history comes to your clinic with complaints of weakness & lethargy of 1 month's duration. You do a complete blood count. He has decreased MCV, MCH, and MCHC.*

4 (v). What type of anaemia does he have?

4 (vi). What could be the cause of this type of anaemia in Suresh's case?

**5. THEME: BLEEDING DISORDERS [ QUESTIONS 5 (i) – 5 (vi)]**

**(TOTAL: 6 MARKS)**

**From the options 'A to D' given below, choose the best answer for the questions 5 (i) – 5 (vi)]**

**Options:**

A. Platelet disorder

C. Vessel wall disorder

B. Clotting factor disorder

D. Haemoglobinopathy

**Questions: What could be possible cause for the scenarios given below?**

5.(i). 4 year old Sonia fell down and knocked out her teeth. On the first day there was no bleeding, but on the second day the bleeding started which was not controllable.

5.(ii). 7 year old Suresh is referred by a dentist with history of continuous bleeding from the dental extraction site. The bleeding started immediately after the extraction.

5.(iii). 21 year old Faizal has come with complaints of tender palpable purpuric rashes in both the legs and gluteal region. He gives history of a viral URI before 2 days.

5.(iv). 45 year old Mr. Balu has come with complaints of hematemesis. On examination, there are features of decompensated cirrhosis.

5.(v). 6 year old Girish has been brought to you with a very painful knee following a trivial trauma. On examination, the clinical features are suggestive of hemarthrosis. On questioning, he never used to have bleeding from minor cuts.

5.(vi). 10 year old Suseela is brought to you with complaints epistaxis. On questioning, you find that there is past history of frequent episodes of nose bleeds and profuse bleeding with minor cuts. On examination, there are few petechiae and purpura in the body.

**6. THEME – DIABETES MELLITUS [QUESTIONS. 6(i) – 6(vi)]**

**(TOTAL: 6 MARKS)**

**From the options ‘A to F’ given below, choose the best answer for the questions 6(i) – 6(vi)**

**Options:**

A. Focal neuropathy

D. Large fibre neuropathy

B. Sub clinical neuropathy

E. Small fibre neuropathy

C. Proximal neuropathy

F. Autonomic neuropathy

**Questions: What type of neuropathy is described in each of the scenarios?**

6(i).Mr. Kannan, a 40 year old Teacher and a diabetic for 5 years has come for his annual screening. On examination you find that his touch and vibration sense is impaired. However, he has no symptoms. He says that he feels absolutely fine.

6(ii).Mrs. Leela, a 50 year old house wife and a diabetic for 10 years has come with complaints of dull aching deep seated pain in both lower limbs. On examination, you notice small muscle wasting and deformity of toes and fingers. In addition, there is impaired vibration sense, depressed tendon reflexes and sensory ataxia.

6(iii).Mr. Suresh, a 63 year old retired bus driver and a diabetic for 12 years has come with complaints of burning, superficial pain of both lower limbs and hyperesthesia. On examination, there is a small ulcer in the big toe.

6(iv).68 year old Mrs.Latha is a diabetic for almost 20 years now. She has come with complaints of pain in both the thighs. She tells you that in the beginning, she had pain only in the right thigh but now she is having pain in both the thighs. She is quite worried because she found that she is not able to rise from sitting position without help for the past two weeks.

6(v).Mr. Krishnan is 40 years old and he is diagnosed to have diabetes when he was 30 years old. Today he has come with complaints of double vision and blurred vision. On examination, there is ptosis and divergent squint. Pupillary reaction is normal and equal in both the eyes.

6(vi).52 year old Mrs. Saraswathy has come with complaints of nocturnal diarrhea. She has been a diabetic for the past 10 years. She very reluctantly tells you there these nocturnal stools are often accompanied by urgency and incontinence of stools. On examination, resting pulse rate is 100/ minute. Her supine blood pressure is 130/ 90 mm of hg and blood pressure on standing is 100/ 80 mm of hg.

**7. THEME – MANAGEMENT OF EMERGENCIES [QUESTIONS. 7(i) – 7(vi)]  
(TOTAL: 6 MARKS)**

**From the options ‘A to J’ given below, choose the best answer for the questions 7(i) – 7(vi)**

**Options:**

- |  |  |
|--|--|
| <b>A.</b> Back blows                                 | <b>G.</b> Skip the ABCDE approach and try to urgently warm the patient up. |
| <b>B.</b> Abdominal thrusts                          | <b>H.</b> 5 back blows and then 5 abdominal thrusts                        |
| <b>C.</b> Inj adrenaline 0.5 ml of 1: 1000 dilution  | <b>I.</b> Adrenaline nebulization  |
| <b>D.</b> Inj hydrocortisone 200 mg iv stat          | <b>J.</b> InjAtropine  |
| <b>E.</b> Inj adrenaline 0.5 ml of 1: 10000 dilution |  |
| <b>F.</b> ABCDE approach of basic life support       |  |

**Questions: What is the first and most important intervention?**

**7(i)** 17 year old Dominic has developed an anaphylactic reaction following a penicillin test dose.

**7(ii)** 6 month old Harini has just aspirated a foreign body. The baby started to cough and is trying to cry, but there is no sound. Her lips are turning blue.

**7(iii)** 18 year old Goutham is just rescued from a lake. He is hypothermic, he is not breathing and there is a very weak pulse.

**7(iv)** 30 year old Mr. Salim suddenly choked on the food when he was laughing at his friends joke. In few seconds he is unconscious.

**7(v)** Mr. Das has come to the emergency with complaints of sudden onset of swelling of his tongue and lips after eating fish curry. On examination he is breathing noisily, and looks pale and clammy. On examination, his heart rate of 120/minute, BP is 90/40 and SPO<sub>2</sub> is 90% in air.

**7(vi)** Mr. Govind has just choked on food and he is not able to talk, but he is conscious.

**8. THEME: POISONING [QUESTIONS. 8(i) – 8(vi)] (TOTAL: 6 MARKS)**

**From the options ‘A to J’ given below, choose the best answer for the questions 8(i) – 8(vi)]**

**Options:**

- |                                 |  |
|---------------------------------|--|
| <b>A.</b> Atropine              | <b>D.</b> InjCalcium gluconate           |
| <b>B.</b> Metoprolol            | <b>E.</b> Airway and circulatory support |
| <b>C.</b> InjSodium bicarbonate | <b>F.</b> IV Hydrocortisone              |

G. N acetyl cysteine

H. Silymarin

I. Inj adrenaline

J. Inj Phenergan

**Questions: What is the antidote for the following patients?**

**8 (i)** 20 year old Mr. Johnson is brought to casualty with history of ingestion of a poisonous substance. On arrival, he is drowsy with frothy secretions in his mouth. His heart rate is 48/min and BP 100/60 mmHg. His pupils are constricted. There is smell of insecticide on his dress.

**8 (ii)** 34 year old Mrs. Kosala is brought with history of ingestion of a plant poison following a quarrel with her husband. On arrival, she complains of pain abdomen and giddiness. Her heart rate is 42 per minute and BP 110/70 mmHg. Cardiac examination reveals no murmurs with normal heart sounds. The size of the pupils is normal and they are reacting normally and equally.

**8 (iii)** 18 year old Fiona is brought with history of consumption of some tablets. The semester results were published yesterday. On arrival, she is comatose, with a BP of 90/52 mmHg; pulse is 120beats per minute and is irregular; respiratory rate is 30/minute and temperature of 102°F. Her mother is being treated for depression.

**8 (iv)** 22 year old Kumar has taken 20 tablets of phenytoin 5 hours back. He is drowsy, his respiratory rate is 8/minute. His blood pressure is 80/60 mm of Hg.

**8 (v)** 5 year old Shobana has accidentally consumed a full bottle of fever medicine before 12 hours. She is brought today because she has pain abdomen and severe vomiting. She is looking icteric and her liver enzymes are elevated.

**8 (vi)** Mrs. Laila has come with complaints of diarrhea, diplopia and inability to move her legs following consumption of a plant poison. On examination, her pulse is 112/ minute and her blood pressure is 70/40 mm of hg.

**9. THEME: TREATMENT OF SKIN CONDITIONS [QUESTIONS. 9(i) – 9(vi)]**

**(TOTAL: 6 MARKS)**

**From the options ‘A to K’ given below, choose the best answer for the questions 9(i) – 9(vi)**

**Options:**

A. Betnovate ointment

B. Hydrocortisone ointment

C. Salicylic acid and steroid

D. Oral prednisolone

E. Hydroquinone 4%

F. Inj hydrocortisone

G. Oral cyclophosphamide

H. Tacrolimus

I. Retinoid/ clindamycin combination

J. Oral retinoids

K. Topical retinoids

**Questions: What is the pharmacological treatment for the following patients?**

9(i) Mrs. Jhansi has developed dry scaly itchy lesions of both the eyelids after changing her brand of eye shadow.

9(ii) Mr. Yuvaraj has come with complaints of thick scaly lesion in the scalp for the past 3 years. The scales are silvery and they are well within the hairline. There are no lesions on the face but there are very few lesions on the elbow and knee.

9(iii) Mrs. Kala has come with complaints of itchy, purple, polygonal, papular lesions in the sun exposed areas. The lesions started 4 months ago and she has been treated with various topical steroid ointments.

9 (iv) 18 year old Banu has come with complaints of vitiligo on her lips. There are no other lesions in the body.

9 (v) 16 year old Ravi has come with mild pustular acne. This is the first time he has developed acne.

9 (vi) Mrs. Shanthi who delivered her first baby 2 months ago has come with complaints of hyper pigmented lesions on both her cheeks. She says that they appeared when she was around three months pregnant.

**10. THEME – SEXUALLY TRANSMITTED DISEASES [QUESTIONS. 10 (i) – 10 (vi)]  
(TOTAL: 6 MARKS)**

**From the options ‘A to J’ given below, choose the best answer for the questions 10 (i) – 10 (vi)**

**Options:**

- A. Acyclovir 400 mg PO five times daily for 7 days
- B. Cap. Doxycycline 100 mg bd for 14 days
- C. Cefixime 400 mg orally single dose Plus Doxycycline 100mg bd for 10 days
- D. Inj. Benzathine penicillin G, 2.4 million units IM
- E. Azithromycin 1g bd for 5 days
- F. Azithromycin 1 g orally in a single dose
- G. Inj. Benzathine penicillin G, 1.2 million units IM
- H. Cap. Doxycycline 100 mg bd for 21 days
- I. Metronidazole 2 G orally single dose
- J. Acyclovir 200 mg PO five times daily for 5 days

**Questions: What is the pharmacological treatment for the following patients?**

10 (i) Mrs. R has come with complaints of genital ulcers. The ulcers are on the labia majora, labia minor, the thighs, and the perineum. They are multiple, painful with undermined edges. The inguinal nodes are tender and warm.

**10 (ii)** Mr. L reluctantly tells you that he has a genital ulcer. The ulcer started as a painless papule that became eroded and indurated rapidly. On examination, you found discrete, firm, mobile, and painless inguinal lymph nodes without overlying skin changes.

**10 (iii)** Mr. K has come with the complaints of tender enlarged inguinal lymphadenopathy. On examination you find a painless shallow erosion in the penis on the penile shaft.

**10 (iv)** Mr. A has come severe pain in the scrotum. On taking history, you understand that he also has with dysuria and urethral discharge. His scrotum is warm and tender.

**10 (v)** Mrs. H has complaints of pain abdomen and vaginal discharge. The discharge is greenish and frothy and has a strong odor. There is severe itching in the perineum. There is no history suggestive of high risk behaviour.

**10 (vi)** Mrs. P has come with complaints of recurrent painful genital lesions. The lesions are in the labia majora, labia minora, vaginal vestibule and introitus. Some of the lesions have ruptured and those lesions are small, moist ulcers and very painful.

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(LI 0216)

M.MED.FAMILY MEDICINE

(Sub Code: 4011)

SECOND YEAR THEORY EXAM– FEBRUARY 2016

PAPER I - MEDICINE AND ALLIED SCIENCES

QP .CODE: 434011

Time: Three hours

Maximum Marks: 100

**INSTRUCTIONS**

- The paper will be for a total of **100 marks**.
- Answer **all** the Questions.
- The Paper has 2 parts – **Part A & Part B**.
- **Part A** will be **descriptive type questions** based on case scenarios. **(40 marks)**
- **Part B** will have Objective type EMQs (**Extended Matching Questions**). **(60 marks)**
  - ❖ This will have 10 Extended Matching sets of questions.
  - ❖ Each set will have 6 questions.
  - ❖ Each question will carry 1 mark.
  - ❖ Each set has a **theme** on the top. Below this, some **options** are given followed by some **questions**. The options are lettered using the English Alphabets **A, B, C, D** and so on.

Example:

**3. THEME –COMMON PSYCHIATRIC PROBLEMS [QUESTIONS. 3(i) – 3(vi)] (6marks)**

**From the options ‘A to H’ given below, choose the best answer for the questions 3(i) – 3(vi)**

**Options:**

- A. Inj. Haloperidol
- B. Amitriptyline + counseling
- C. Tab. Chlorpromazine
- D. Tab. Trihexyphenidyl
- E. Tab. Diazepam
- F. Tab. Lithium
- G. Inj. Fluphenazine deconoate
- H. Tab. Risperidone

**Questions: What is your treatment option in the following cases?**

- 3(i) What is the drug of choice for Acute Psychosis?
- 3(ii) What is the drug of choice for Bipolar illness?

- ❖ Match each question to a **single best option** and write it in your paper in the column provided like this.

3(i)	A
3(ii)	F
3(iii)	
3(iv)	
3(v)	
3(vi)	

- ❖ Each option may be used more than once. Some options may not be used at all.

**PART – A**  
**DESCRIPTIVE QUESTIONS**  
**(ANSWER ALL QUESTIONS)**

1. Ms Kantha, a 30 year IT Executive is found to have impaired fasting glucose. Her height is 140 cm and her weight is 72 kg. **(Total = 20 Marks)**
- A. Define Basal Metabolic Rate (BMR). How will you calculate BMR? What is Ms. Kantha's BMR and what is the clinical use of BMR?
  - B. What are the goals of dieting in obesity?
  - C. What are the general exercise recommendations in obesity? What are the methods by which you will pace exercise? Explain?
  - D. What are the drugs used in the pharmacotherapy of obesity? Briefly explain.
2. Mr. Shankar, a 40-year-old farm labourer was admitted to an emergency clinic complaining of mild abdominal pain and vomiting. He stated that he had a bout of watery diarrhea shortly after eating his lunch. He was feeling dizzy and weak. He gave no history of ingesting any medicines. He said that he was working all morning in the farm spraying some insecticide. **(Total: 20 Marks)**
- A. List any 5 common poisons that are used accidentally or intentionally in India. Write the specific antidote for each of the poisons you listed. **(5 Marks)**
  - B. Name the causative agents and describe the symptoms of each of the following *toxic syndromes*: **(10 Marks)**
    - 1. Opioid
    - 2. Anticholinergic
    - 3. SLUDGE syndrome
    - 4. Withdrawal
    - 5. Sympathomimetic
  - C. What are the key principles involved in managing acute poisoning? **(5 Marks)**

**PART – B**  
**EXTENDED MATCHING QUESTIONS**  
**(ANSWER ALL QUESTIONS)**

1. **THEME: ANAEMIA [(QUESTIONS 1 (i) TO 1 (vi)]** **(Total: 6 Marks)**  
From the options 'A to L' given below, choose the best answers for the questions 1 (i) to 1 (vi):  
**Options:**

- A. Blood Transfusion
- B. Cerebellar ataxia
- C. Iron deficiency anaemia
- D. Blood loss

- |  |  |
|--|--|
| <b>E.</b> Hookworm infestation         | <b>I.</b> Sickle Cell anaemia            |
| <b>F.</b> Hereditary Spherocytosis     | <b>J.</b> Thalassemia Trait              |
| <b>G.</b> Autoimmune Hemolytic anaemia | <b>K.</b> Vitamin B12 deficiency         |
| <b>H.</b> Cooley's anaemia             | <b>L.</b> Subacute combined degeneration |

**Questions:**

*Mr. Manoj, a 45 year old man came to your clinic with lethargy & weakness. He is not a diabetic or hypertensive. He is a non-smoker and is a pure vegetarian. On examination, he had pallor and angular stomatitis. His blood investigations revealed anaemia.*

- 1 (i). What type of anaemia does he have?  
 1 (ii). What is the long term complication of this condition if left untreated?

*Mr. Raj is a 53 year old farmer with no significant past history comes to your clinic with complaints of weakness & lethargy of 1 month's duration. You do a complete blood count. He has decreased MCV, MCH, and MCHC.*

- 1 (iii). What type of anaemia does he have?  
 1 (iv). What could be the cause of this type of anaemia in this patient?

*Mrs. Anita came to you with a history of tiredness of 2 month's duration. Investigations showed low hemoglobin, normal MCHC but high MCH.*

- 1 (v). What type of anaemia does this patient have?

*Thirty eight year old Mr. Kapoor came to you with generalized weakness. You did all the relevant blood tests on him which were reported as normal except for low hemoglobin. You ordered a Coomb's Test. Direct Coomb's test was found to be positive.*

- 1 (vi). What type of anaemia does Mr. Kapoor have?

**2. THEME: SEXUALLY TRANSMITTED INFECTIONS [(QUESTIONS 2 (i) TO 2 (vi)]**  
**(Total: 6 Marks)**

**From the options 'A to O' given below, choose the best answers for questions 2 (i) to 2 (vi):**

**Options:**

- |  |  |
|--|--|
| <b>A.</b> Primary Syphilis               | <b>I.</b> Filariasis                         |
| <b>B.</b> Provide and promote condom use | <b>J.</b> Neisseria gonorrhoeae              |
| <b>C.</b> Trichomonas vaginalis          | <b>K.</b> Treponema pallidum                 |
| <b>D.</b> Pelvic Inflammatory Disease    | <b>L.</b> Tertiary Syphilis                  |
| <b>E.</b> Mumps                          | <b>M.</b> Chlamydia trachomatis              |
| <b>F.</b> Epididymo-Orchitis             | <b>N.</b> Treat all members of the household |
| <b>G.</b> Secondary Syphilis             | <b>O.</b> Refer to higher centre             |
| <b>H.</b> Bacterial Vaginosis            |  |

**Questions:**

*Mr. Ramu is a 38 year old man who was seen in the clinic with a flu-like illness for 2 weeks. He complains of feeling tired all the time along with decreased appetite. On examination he is afebrile and his vital signs are stable. He has a non-itchy maculopapular rash all over his body including his palms and soles. He also has generalized lymphadenopathy. He is sexually active and does not use any protection.*

- 2 (i) What is Mr. Ramu's likely diagnosis?
- 2 (ii) What is the causative organism?

*27 year old Mrs. Latha presents with vaginal discharge associated with lower abdominal pain and fever of 3 days duration. She also complains of nausea and a few episodes of vomiting. On further inquiry, she says she has dysuria. On examination, she is febrile but other vital signs are normal. Examination reveals significant cervical motion tenderness.*

- 2 (iii) What is the diagnosis?

*30 year old Mr. Ravi was seen in the clinic with a 4 day history of penile discharge and diagnosed with gonococcal urethritis. He was started on the appropriate treatment and sent home.*

- 2 (iv) What is a serious complication of this condition?
- 2 (v) What is an important component of the treatment plan?

*35 year old Geetha went to see her Family Physician with symptoms of vaginal itching associated with a frothy yellowish-green discharge. A wet mount preparation was done which revealed "cork screw" motility of the protozoan parasite.*

- 2 (vi) What is the likely diagnosis?

**3. THEME: MANAGEMENT OF TYPE 2 DIABETES [(QUESTIONS 3 (i) TO 3 (vi)]**  
**(Total: 6 Marks)**

**From the options 'A to T' given below, choose the best answers for questions 3 (i) to 3 (vi):**

**Options:**

- |                             |                             |
|-----------------------------|-----------------------------|
| <b>A.</b> Hypoglycemia      | <b>I.</b> Glargine          |
| <b>B.</b> Balanced diet     | <b>J.</b> BMI of 16 -18     |
| <b>C.</b> Metformin         | <b>K.</b> Exercise          |
| <b>D.</b> 0.5 units /kg/day | <b>L.</b> 0.15 units/kg/day |
| <b>E.</b> Aspart            | <b>M.</b> Glipizide         |
| <b>F.</b> BMI of 20 - 23    | <b>N.</b> Hyperglycemia     |
| <b>G.</b> Pioglitazone      | <b>O.</b> BMI of 25 - 30    |
| <b>H.</b> Acarbose          | <b>P.</b> Lispro            |

- Q. 1 unit /kg/day
- R. 1.5 units /kg/day

- S. Insulin resistance
- T. Autoimmunity

**Questions:**

*Mr. Sagar is a newly diagnosed diabetic and during his initial visit with his Family Physician, his physician is discussing life style modifications.*

- 3 (i) What is the ideal Body Mass Index (BMI) that Mr. Sagar must achieve and maintain?
- 3 (ii) What is the best insulin sensitizer for a diabetic?

*Mrs. Renu, a 52 year old newly diagnosed diabetic patient has poorly controlled blood sugars. She is not very compliant with lifestyle modifications. Her most recent HbA1C is 7.5 mg% and her physician is recommending an oral hypoglycemic agent for her.*

- 3 (iii) What is the first line treatment to be initiated for this patient?

*Mr. Gopal has had type 2 Diabetes mellitus for 12 years and more recently his blood sugars have been sub-optimal even with maximum doses of metformin and glipzide. His physician counsels him about augmenting the treatment with insulin and he is willing for the same. However he would like to take the insulin only once a day.*

- 3 (iv) Which is the best insulin option for this patient?
- 3 (v) What is the starting dose of insulin for this patient?

*Mr. Anup is diagnosed with type 2 Diabetes mellitus and needs to be started on an oral hypoglycemic agent. He has a history of increased alcohol use on a daily basis. He has never been on any regular medications in the past.*

- 3 (vi) Which side effect of oral hypoglycemic agents is enhanced by the use of alcohol?

**4. THEME: ACHES, PAINS AND FATIGUE [(QUESTIONS 4 (i) TO 4 (vi)]**

**(Total: 6 Marks)**

**From the options 'A to N' given below, choose the best answers for the questions 4 (i) to 4 (vi):**

**Options:**

- A. Osteoporosis
- B. Giant Cell Arteritis
- C. Calcium level
- D. Osteomalacia
- E. Takayasu's Arteritis
- F. Psoriasis
- G. Corticosteroids
- H. Vitamin D level
- I. Amitryptiline
- J. Alkaline phosphatase
- K. Tramadol
- L. Fibromyalgia
- M. Crohns disease
- N. Carpal Tunnel syndrome

**Questions:**

*60 year old Mrs. Singh is seen in the clinic with complaints of severe headache, jaw pain and blurry vision of 2 days duration. On examination she has scalp tenderness. Visual acuity and eye movements are normal on today's examination.*

- 4. (i) What is the likely diagnosis?
- 4. (ii) What is the treatment to be started?

*32 year old Mrs. Shanthi complains of "pain all over" for the past several months. She is tired all the time, feels "dull in her head" and is unable to sleep at nights. Her examination reveals multiple tender points all over her body.*

- 4. (iii) What is the likely diagnosis?
- 4. (iv) What treatment is not recommended in this condition?

*Mr. Balu is a 68 year old man who feels very weak and tired. He complains of pain in all the bones of his body and says that his hips hurt the worst. His pains have been progressively worsening over the last several months. The Family physician who examines him notes that he has proximal muscle weakness and parasthesia.*

- 4. (v) What condition does Mr. Balu have?
- 4. (vi) An elevation in which blood test may help confirm the diagnosis

**5. THEME: GERIATRICS [(QUESTIONS 5 (i) TO 5 (vi) ] (Total: 6 Marks)**  
**From the options 'A to P' given below, choose the best answers for questions 5 (i) to 5 (vi):**

**Options:**

- |                         |                            |
|-------------------------|----------------------------|
| A. Lewy Body dementia   | I. Vascular dementia       |
| B. Alzheimer's dementia | J. Parkinson's disease     |
| C. Haloperidol          | K. Wilson's disease        |
| D. Delirium             | L. Amantadine              |
| E. Anxiety              | M. Frontotemporal dementia |
| F. Bromocriptine        | N. Clonazepam              |
| G. Levodopa             | O. Olanzapine              |
| H. Depression           | P. Carbamazepine           |

**Questions:**

*Mr. Francis, a 74 year old gentleman has been brought to the clinic by his family as they are concerned about overall health. The family reports that his walk and talk have changed. On*

*exam, he has a blank facial expression and slow voluntary movements. When asked to walk, he had difficulty rising from his chair and his gait was characteristic of small, shuffling steps.*

- 5. (i) What is the likely diagnosis?
- 5. (ii) Which is the most effective drug to treat motor complications in this condition?

*Mr. Amir, a 78 year old gentleman with progressively worsening memory problems associated with poor functional status, has been diagnosed to have dementia.*

- 5. (iii) What is the commonest type of dementia?
- 5. (iv) In which type of dementia should neuroleptics be avoided?

*Mrs. Devi was admitted to the hospital for surgery after sustaining a fall. On post-operative day 3, she was found to be very confused. She did not recognize family members. She pulled out her IV line and was trying to get out of her hospital bed.*

- 5. (v) What is her likely diagnosis?

*Several non-pharmacological interventions were tried for Mrs. Devi but she continued to remain confused and agitated. Therefore, pharmacological intervention was planned for this patient.*

- 5. (vi) What is the drug of choice for her?

**6. THEME: PALLIATIVE CARE [QUESTIONS 6 (i) TO 6 (vi)] (Total: 6 Marks)**

**From the options 'A to P' given below, choose the best answers for questions 6 (i) to 6 (vi):**

**Options**

- |  |                                 |
|--|---------------------------------|
| <b>A.</b> Oral Morphine  | <b>I.</b> Hyoscine Butylbromide |
| <b>B.</b> Step 3 analgesia                                     | <b>J.</b> Anaphylaxis           |
| <b>C.</b> Lamotrigine  | <b>K.</b> Fluoxetine            |
| <b>D.</b> Constipation   | <b>L.</b> Metoclopramide        |
| <b>E.</b> Stop Morphine  | <b>M.</b> Headache              |
| <b>F.</b> Increase dose of<br>dextropropoxyphene & paracetamol | <b>N.</b> Drowsiness            |
| <b>G.</b> Step 2 analgesia                                     | <b>O.</b> Step 1 analgesia      |
| <b>H.</b> Nausea   | <b>P.</b> Paralysis             |

**Questions:**

**6. (i)** Mr. Sridhar, a 55 year old man has rhabdomyosarcoma of thigh which was operated on a few months ago. He was on chemotherapy following the surgery. He has come back with lung secondaries with severe chest pain and cough. His pain is relieved only on taking Tab. Morphine. What is the commonest side effect of morphine?

6. (ii) Mrs. Padma, a known patient of long standing diabetes mellitus associated with hypertension and foot ulcers which are non-healing, comes to you with severe pain of both feet not relieved on taking different types of medicines. You examine her and find her pain to be neuropathic. What is the next step for pain control that you would recommend?

6. (iii) Mrs. Sheela has carcinoma breast which was operated. She has returned with severe bone pain due to bone secondaries. She was seen in the palliative care clinic where she was started on a combination of paracetamol and dextropropoxyphene which she is taking once or twice a day. She comes to you with complaints that the pain has not subsided. What is the next step in the management of this patient?

6. (iv) Mr. Sridhar has large liver secondaries from an unknown primary. He has severe abdominal pain and was started on oral Morphine. This caused excessive nausea. What is your next line of management?

6. (v) Mr. Khan has inoperable carcinoma of the urinary bladder which has spread to the lungs. He has developed breathlessness which has become frightening for him and his family. How will you treat him?

6. (vi) Mrs. Parvathi has end stage carcinoma ovary with multiple metastasis. She is cared for at home by her family. She is terminal now and produces a noise when she breathes. The family is very concerned about this sound and asks what can be done about this as they cannot bear to watch their loved one go through this at the terminal stage. What can be used to help mitigate this symptom?

## 7. THEME: NON-INFECTIOUS SKIN CONDITIONS [QUESTIONS 7 (i) TO 7 (vi)]

(Total: 6 Marks)

From the options 'A to R' given below, choose the best answers for questions 7 (i) to 7 (vi):

### Options

- |                            |                               |
|----------------------------|-------------------------------|
| A. Dermatofibroma          | J. Light therapy              |
| B. Pityriasis versicolor   | K. 50%                        |
| C. Nummular eczema         | L. Seborrhoeic keratosis      |
| D. 75%                     | M. Cryotherapy                |
| E. Pityriasis rosea        | N. Hand and Foot eczema       |
| F. Regular use of steroids | O. Gravitational eczema       |
| G. Actinic keratosis       | P. 25%                        |
| H. Pityriasis alba         | Q. Frequent washing with soap |
| I. Vitiligo                | R. Generous use of emollients |

### Questions:

*42 year old Mrs. Priya is in the clinic to see her physician with concerns about new skin lesions on her face and neck. On exam, there are several brownish lesions on the face and*

*trunk. The lesions are varying in size and have a 'stuck on' appearance. They are non-itchy but the patient is concerned about the cosmetic appearance.*

7. (i) What are these lesions?

7. (ii) What treatment can be offered for the removal of these lesions?

*18 year old Reena has developed a rash on her hands and legs. She states that she first noticed a single patch and about a week later developed the existing more diffuse rash. On examination, the rash has a 'christmas tree' distribution.*

7. (iii) What is your diagnosis?

*17 year old Gopal was seen by his Family physician for symptoms of a skin rash. After a detailed history and thorough physical examination, his physician diagnosed the rash be psoriasis.*

7. (iv) What is the chance that he has a family history of psoriasis?

*63 year old Mrs. Dass has a rash on her lower extremity that has been present for many months. She is frustrated by the itching which bothers her all day long. On exam she has some varicosities and brownish discoloration of both the lower extremities. The rash is red and mildly weepy.*

7. (v) What is the likely diagnosis?

7. (vi) What treatment strategy would be useful for this patient?

**8. THEME: BITES AND STINGS [QUESTIONS 8 (i) TO 8 (vi)] (Total: 6 Marks)**  
**From the options 'A to R' given below, choose the best answers for questions 8 (i) to 8 (vi):**

**Options**

- A. Hump-nosed viper
- B. Unopposed beta receptor stimulation
- C. Prazosin
- D. Russells viper
- E. Using the rabies vaccine alone
- F. Proptosis
- G. Scorpion Antivenom
- H. Choosing route of administration of RIG
- I. Ptosis

- J. 1:20,000
- K. Propranolol
- L. Non-reactive pupils
- M. Unopposed alpha receptor stimulation
- N. Saw-scaled viper
- O. 1:10,000
- P. Stimulation of C - Fibres
- Q. 1:1000
- R. Infiltration of the wound with RIG

**Questions:**

*Mr. Shankar sustained a snake bite while working in the field and was brought to the clinic. The snake was identified as a cobra.*

8. (i) What is the earliest sign of neurotoxicity in this situation?

*Sandhya was walking home after dark and sustained a snake bite. The snake was not caught. She was brought to the casualty with signs of envenomation and was administered the appropriate dose of ASV. Following the ASV, there was no clinical improvement in her condition.*

8. (ii) What is the most likely species of snake that bit Sandhya?

*20 year old Bala sustained a scorpion bite in the middle of the night while he was sleeping on the floor. He had excruciating pain at the bite site and was brought to the hospital for emergency care.*

8. (iii) What is the pathophysiology for most of the clinical manifestations following a scorpion bite?

8. (iv) Following pain relief and fluid management, what is the next most important step in the treatment plan?

*Mr. Velu sustained a dog bite from an unknown dog on the street. He presented with a wound on his left lower extremity that was classified as a Category 3 exposure.*

8. (v) What is of utmost importance in the administration of Rabies Immunoglobulin (RIG) for this patient?

*After being stung by several bees while chopping a tree, Mr. Murthy was brought to the casualty where he was found to be in shock and respiratory failure.*

8. (vi) What dilution of epinephrine needs to be administered for this patient?

**9. THEME: LIFESTYLE MODIFICATIONS [QUESTIONS 9 (i) TO 9 (vi)]**

**(Total:6 Marks)**

**From the options 'A to R' given below, choose the best answers for questions 9 (i) to 9 (vi):**

**Options**

- |   |   |
|---|---|
| A. Polysaccharides                            | E. Complex Carbohydrates                  |
| B. 150 minutes of moderate-intensity exercise | F. Lower birth order                      |
| C. 210 minutes of high-intensity exercise     | G. 150 minutes of high-intensity exercise |
| D. Bupropion                                  | H. Complete abstinence from alcohol       |
|   | I. Venlafaxine                            |

- |   |  |
|---|--|
| J. 30 minutes daily                           | O. 20 minutes once a week                      |
| K. Anaemia in the mother                      | P. Periodic measurement of blood alcohol level |
| L. Simple Carbohydrates                       | Q. Lower Socioeconomic status                  |
| M. Varenicline                                | R. 20 minutes three times a week               |
| N. 210 minutes of moderate-intensity exercise |  |

**Questions:**

*Mrs. Lakshmi is seeing her physician for a yearly health check and is worried about the risk of developing diabetes since she has a family history of diabetes. She has no known medical conditions. Her BMI is 28. Her physician has discussed lifestyle modifications to help her achieve a healthier lifestyle.*

9. (i) What type and duration of exercise per week is recommended to reduce the risk of diabetes?

9. (ii) What type of carbohydrates should she avoid in her diet?

9. (iii) Mr. Anthony is a chronic smoker who was seen in the clinic today and has expressed a desire to quit smoking. He has tried to quit in the past but has relapsed on many occasions. In addition to behavioural support, you decide to start him on a medication to help him quit smoking. He is a known epileptic, on treatment. What would be drug of choice for Mr. Anthony?

9. (iv) Dr. John is working in a community where more than 70% of the children below the age of five are malnourished. He is looking at the reasons why the rate of malnutrition is this high in this particular village. All of these factors are likely to result in more malnutrition EXCEPT.

9. (v) Mr. Parikh has been seeing his physician for alcohol dependence. He has decided that he would like to quit drinking alcohol and asks for a medication to help him stop. His physician after discussing with the patient, decides to start him on disulfiram. What is an important advice to give the patient once the medication is started?

9. (vi) Mrs. Ruby works in a corporate setting and has a sedentary lifestyle. She wishes to change some of her dietary habits and include some outdoor activities. She has heard that exposure to sunlight can be good for you and wants to know more about this. How much is sufficient exposure to sunlight?

**10. THEME: HIV/ AIDS [QUESTIONS 10 (i) TO 10 (vi)] (Total: 6 Marks)**  
**From the options 'A to N' given below, choose the best answers for questions '6 (i) to 6 (vi)**

### Options

- A. Reverse transcriptase enzyme estimation
- B. Normal
- C. ELISA
- D. 644 cells/mm
- E. 1242 cells/mm
- F. Positive
- G. Negative
- H. Low
- I. Western blot test after 1 month
- J. Indeterminate western blot
- K. PCR
- L. High
- M. 428 cells/mm
- N. Western Blot test after 6 months

### Questions:

**10. (i).** 32 year old Ramu, a teacher, has been very worried about the possibility of acquiring HIV. So he had gone to a private Physician and got a battery of tests done. He has no risk factors. He has come to you with the results. His HIV ELISA and PCR are negative and his CD4 count is 820cells/mm<sup>3</sup>. What is your comment about his CD4 counts?

**10. (ii).** You are called to do a screening test for HIV infection for a group of inmates in a jail. What will be your choice of investigation according to WHO strategy I?

**10. (iii).** 25-year-old Murugan presents with chronic diarrhoea, weight loss, extra-pulmonary tuberculosis and oral candidiasis. He has sexual risk factors for acquiring HIV infection and past history of STDs. He was clinically diagnosed to have AIDS. But his ELISA test and repeat ELISA was reported as non-reactive. What is the next choice of investigation?

**10. (iv).** Raghavan is found to have primary infection with Human Immuno-deficiency Virus. What is the median CD4 count for primary infection with Human Immune-deficiency virus?

**10. (v).** A 30-year-old lady came for routine antenatal testing and was found to be ELISA reactive by one test and negative by the second ELISA. Her husband's ELISA was not reactive. She and her husband have not had any other sexual partners. What test will you order next?

**10. (vi).** Mallika, who is a HIV positive mother, has delivered a baby. She likes to know as quickly as possible whether the child has HIV infection. She is not breast feeding the baby. What is the ideal test to confirm the presence or absence of HIV infection in this baby?

\*\*\*\*\*

(LJ 0816)

M.MED. FAMILY MEDICINE

(Sub Code: 4011)

SECOND YEAR THEORY EXAM – AUGUST 2016 – OLD BATCH  
PAPER I - MEDICINE AND ALLIED SCIENCES

QP .CODE: 434011

Time: Three Hours

Maximum Marks: 100

INSTRUCTIONS

- The paper will be for a total of **100 Marks**.
- Answer **all** the Questions.
- The Paper has 2 parts – **Part A & Part B**.
- **Part A** will be **descriptive type questions** based on case scenarios **(40 Marks)**.
- **Part B** will have Objective type EMQs **Extended Matching Questions (60 Marks)**.
  - ✓ This will have 10 sets of these questions.
  - ✓ Each set will have 6 questions.
  - ✓ Each question will carry 1 mark.
  - ✓ Each set has a **theme** on the top. In each set there are **some options** given on the top followed by some **questions**. The options are lettered using the English Alphabets A, B, C, D and so on.

Example:

**3. THEME –COMMON PSYCHIATRIC PROBLEMS [QUESTIONS. 3(i) – 3(vi)] (6marks)**

**From the options ‘A to H’ given below, choose the best answer for the questions 3(i) – 3(vi)**

**Options:**

- A. Inj. Haloperidol
- B. Amitriptyline + counseling
- C. Tab. Chlorpromazine
- D. Tab. Trihexyphenidyl
- E. Tab. Diazepam
- F. Tab. Lithium
- G. Inj. Fluphenazine deconate
- H. Tab. Risperidone

**Questions: What is your treatment option in the following cases?**

3(i) What is the drug of choice for Acute Psychosis?

3(ii) What is the drug of choice for Bipolar illness?

❖ Match each question to a **single best option** and write it in your paper in the column provided like this:

3(i)	
3(ii)	
3(iii)	
3(iv)	
3(v)	
3(vi)	

❖ Each option may be used more than once. Some options may not be used at all.

**PART – A**

**DESCRIPTIVE QUESTIONS**

**(ANSWER ALL QUESTIONS)**

1. 20 year old Ms. Divya has been unwell for the past one month. To support the family income she works in a shoe company which she has been unable to do so for the past one week. She has lost weight and on enquiry says she does not have much appetite. She has cough and low grade fever for the past one month. **(Total: 20 Marks)**

- A. What is the most probable diagnosis? Discuss. **(2 Marks)**  
B. What will you look for in clinical examination? **(4 Marks)**  
C. What are some of the relevant investigations you will order and the expected findings to confirm your diagnosis? **(4 Marks)**  
D. How will you manage her? **(5 Marks)**  
E. What are the possible side-effects you will look for during the treatment and how will you manage them? **(5 Marks)**

2. 38 year old Mrs. Mohana, a house wife, comes to your clinic with 2 week duration of increased frequency of micturition; she passes urine almost 4 times in the night. She has lost weight in the last 2 weeks. **(Total: 20 Marks)**

- A. Mention two common diagnoses in this patient. **(2 Marks)**  
B. What further history and examination will lead you to the diagnosis? **(4 Marks)**  
C. What are the 2 initial investigations that you will ask for? Why? **(2 Marks)**  
D. How will you manage her? **(4 Marks)**  
E. What are the therapeutic goals in her management? **(4 Marks)**  
F. What are the complications she may develop in future, if not treated properly? **(4 Marks)**

**PART – B**

**EXTENDED MATCHING QUESTIONS**

**(ANSWER ALL QUESTIONS)**

1. **THEME: ANAEMIA [QUESTIONS 1(i) TO 1(vi)]** **(Total: 6 Marks)**

**From the options 'A to L' given below, choose the best answers for the questions 1(i) to 1(vi)**

**Options:**

- |                             |                                   |
|-----------------------------|-----------------------------------|
| A. Blood Transfusion        | G. Autoimmune Hemolytic anaemia   |
| B. Cerebellar ataxia        | H. Cooley's anaemia               |
| C. Iron deficiency anaemia  | I. Sickle Cell anaemia            |
| D. Blood loss               | J. Thalassemia Trait              |
| E. Hookworm infestation     | K. Vitamin B12 deficiency         |
| F. Hereditary Spherocytosis | L. Subacute combined degeneration |

### Questions:

*40 year old Mr. Babu came to your clinic with lethargy & weakness. He is not a diabetic or hypertensive. He is a pure vegetarian. On examination, he had pallor and angular stomatitis. His blood investigations revealed anaemia.*

1(i). What type of anaemia does he have?

1(ii). What is the long term complication of this condition if left untreated?

*45 year old Mr. Das, a farmer with no significant past history comes to your clinic with complaints of weakness & lethargy of 1 month's duration. You do a complete blood count. He has decreased MCV, MCH, and MCHC.*

1(iii). What type of anaemia does he have?

1(iv). What could be the cause of this type of anaemia in Das?

*Mrs. Banumathi came to you with a history of tiredness of 2 month's duration. Investigations showed low hemoglobin, normal MCHC but high MCH.*

1(v). What type of anaemia does Banumathi have?

*38 year old Mr. Kailas came to you with generalized weakness. You did all the relevant blood tests on him which was reported as normal except for low hemoglobin. You ordered for a Coomb's Test. Direct Coomb's test was found to be positive.*

1(vi). What type of anaemia does Kailas have?

### **2. THEME: HIV/ AIDS [QUESTIONS 2(i) TO 2(vi)]**

**(Total: 6 Marks)**

**From the options 'A to N' given below, choose the best answers for the questions 2(i) to 2(vi)**

### Options

- |   |  |
|---|--|
| <b>A.</b> Reverse transcriptase enzyme estimation | <b>H.</b> Low                              |
| <b>B.</b> Normal                                  | <b>I.</b> Western blot test after 1 month  |
| <b>C.</b> ELISA                                   | <b>J.</b> Indeterminate western blot       |
| <b>D.</b> 644 cells/mm <sup>3</sup>               | <b>K.</b> PCR                              |
| <b>E.</b> 1242 cells/mm <sup>3</sup>              | <b>L.</b> High                             |
| <b>F.</b> Positive                                | <b>M.</b> 428 cells/mm <sup>3</sup>        |
| <b>G.</b> Negative                                | <b>N.</b> Western Blot test after 6 months |

### Questions:

**2 (i)** 32 years old Mr. David, a teacher, has been very worried about the possibility of acquiring HIV. So he had gone to a private Physician and got a battery of tests done. He has no risk factors. He has come to you with the results. His HIV ELISA and PCR are negative and his CD4 count is 820cells/mm<sup>3</sup>. What is your comment about his CD4 counts?

**2 (ii)** You are called to do a screening test for HIV infection for a group of inmates in a jail. What will be your choice of investigation according to WHO strategy I?

**2 (iii)** 25 years old Mr. Pandian presents with chronic diarrhoea, weight loss, extra-pulmonary tuberculosis and oral candidiasis. He has sexual risk factors for acquiring HIV infection and past history of STDs. He was clinically diagnosed to have AIDS. But his ELISA test and repeat ELISA was reported as non-reactive. What is the next investigation of choice?

**2 (iv)** Mr. Kannan is found to have primary infection with Human Immuno-deficiency Virus. What is the median CD4 count for primary infection with Human Immune-deficiency virus?

**2 (v)** A 25 years old lady came for routine antenatal testing and was found to be ELISA reactive by one test and negative by the second ELISA. Her husband's ELISA was not reactive. She and her husband have not had any other sexual partners. What test will you order next?

**2 (vi)** Mrs. Nalini, who is a HIV positive mother, has delivered a baby. She likes to know as quickly as possible whether the child has HIV infection. She is not breast feeding the baby. What is the ideal test to confirm the presence or absence of HIV infection in this baby?

**3. THEME: CUTANEOUS INFECTIONS [QUESTIONS 3(i) to 3(vi)] (Total: 6 Marks)**  
**From the options 'A to L' given below, choose the best answers for the questions 3 (i) to 3 (vi)**

**Options**

- |  |                                 |
|--|---------------------------------|
| <b>A.</b> Tuberculosis verrucosa cutis | <b>G.</b> Pityriasis Versicolor |
| <b>B.</b> Herpes zoster                | <b>H.</b> Erythrasma            |
| <b>C.</b> Trichomycosis axillaris      | <b>I.</b> Impetigo contagiosa   |
| <b>D.</b> Superficial folliculitis     | <b>J.</b> Erysipelas            |
| <b>E.</b> Lupus vulgaris               | <b>K.</b> Deep folliculitis     |
| <b>F.</b> Herpes simplex               | <b>L.</b> Furuncles             |

**Questions: From the options given above, mark the most likely diagnosis for the following patients:**

**3 (i)** 34 years old Mr. A, diagnosed to have HIV infection and was started on anti-retroviral therapy, has developed a vesicular eruption confined to his left upper limb of two days duration.

**3 (ii)** 32 years old Mr. R presents with asymptomatic, brown scaly well defined macules seen in axillae, groins, and sub mammary area.

**3 (iii)** 17 years old Malathi presents with yellow, brown or black concretions on hair shafts in axillae, sometimes causing yellow-brown staining of clothes in the area of arm pits.

**3 (iv)** Mrs. S brought her daughter with erythematous macule in her face that rapidly developed into a fragile vesicle with an erythematous areola and cluster of erosions that is capped with a thick adherent honey-yellow crust.

**3 (v)** 64 years old Mrs. T, a tourist to India has developed acute erythematous warm tender in durated plaques in the face. The plaques are firm to hard and are spreading rapidly.

**3 (vi)** 28 years old Mrs. B has history of painless pustules that heals without scarring. The hair shaft will frequently be seen in the center of the pustules

**4. THEME: CARDIAC DYSPNEA [QUESTIONS 4 (i) to 4 (vi)] (Total: 6 Marks)**

From the options 'A to M' given below, choose the best answers for questions 4 (i) to 4 (vi)

**Options**

- |  |  |
|--|--|
| <b>A.</b> Mild Ventricular Septal Defect                                 | <b>G.</b> Moderate Ventricular Septal Defect                       |
| <b>B.</b> Aortic Stenosis  | <b>H.</b> Valve area < 1.0 cm <sup>2</sup> in symptomatic patients |
| <b>C.</b> Valve area < 1.5 cm <sup>2</sup> in symptomatic patients       | <b>I.</b> Insert a needle in the 2nd space                         |
| <b>D.</b> Follow up with Echo every 12 months & endocarditis prophylaxis | <b>J.</b> ACE inhibitors   |
| <b>E.</b> Pulmonary Hypertension   | <b>K.</b> Probable myocarditis                                     |
| <b>F.</b> Aortic regurgitation   | <b>L.</b> Digitalis & endocarditis prophylaxis                     |
|  | <b>M.</b> Digoxin & loop diuretics                                 |

**Questions:**

*Mrs. F, a multiparous mother developed breathing difficulty 1 month after delivery of her twin babies. On clinical evaluation, she is found to be in cardiac failure.*

**4 (i)** How will you treat her?

*74 year old Mr. K comes to you with a history of breathing difficulty on walking which has been increasing in severity for the past 2 months. On cardiac examination, you hear an ejection systolic murmur at the 2nd right intercostal space.*

**4 (ii)** What is your diagnosis?

**4 (iii)** What is the indication for surgery in this condition?

*Mrs. L, a 34 year old lady comes to you with a history of breathing difficulty of 1 month duration. She says that the breathing difficulty has worsened over time and now it is present even on doing normal activities. On clinical evaluation, pulse is irregularly irregular. You diagnose her to have Mitral Stenosis. You also hear Graham Steel's murmur.*

**4 (iv)** What would the Graham Steel's murmur indicate?

*You have diagnosed 41 year old Mr. G to have Aortic Regurgitation. An Echocardiogram shows Aortic Regurgitation with no change in cardiac size.*

**4 (v)** How will you manage him?

*Four year old Rahul had a 4-5 day history of fever and some nasal discharge. He was feeling very weak & was brought to you for evaluation. On examination, his heart rate was 152/min, B.P was normal with slightly increased respiratory rate. Rest of the examination was normal.*

**4 (vi)** What do you suspect?

**5. THEME: PALLIATIVE CARE [QUESTIONS 5 (i) TO 5 (vi)] (Total: 6 Marks)**

From the options 'A to M' given below, choose the best answers for the questions '5 (i) to 5 (vi)

**Options**

- |                            |  |
|----------------------------|--|
| <b>A.</b> Oral Morphine    | <b>F.</b> Increasedose of dextropropoxyphene & paracetamol |
| <b>B.</b> Step 2 analgesia | <b>G.</b> Step 3 analgesia                                 |
| <b>C.</b> Haloperidol      | <b>H.</b> Nausea   |
| <b>D.</b> Constipation     | <b>I.</b> Hyoscine Butylbromide                            |
| <b>E.</b> Stop Morphine    |  |

J. Anaphylaxis  
K. Fluoxetine

L. Lamotrigine  
M. Headache

**Questions:**

*Mrs. S has carcinoma breast which was operated. She came back with severe bone pain due to bone secondaries. She went to the palliative clinic where she was started on a combination of paracetamol and dextropropoxyphene which she is taking once or twice a day. She comes to you with complaints that the pain has not subsided.*

5 (i) How will you manage her?

*Mr. D has rhabdomyosarcoma of thigh which was operated. He was on chemotherapy. He has come back with lung secondaries with severe chest pain and cough. His pain is relieved only on taking Tab. Morphine.*

5 (ii) What is the commonest side effect of morphine?

*Mrs. L, a known patient of long standing diabetes mellitus associated with hypertension and foot ulcers which are non-healing comes to you with severe pain of both feet not relieved on taking different types of medicines. You examine her and find her pain to be neuropathic.*

5 (iii) What is the next step of analgesia you would recommend?

*Mr. S has large liver secondaries from an unknown primary. He has severe abdominal pain and was started on Tab. Morphine. This caused excessive nausea.*

5 (iv) What is your next line of management?

*Mr. C has inoperable carcinoma of the urinary bladder which has spread to the lungs. He has developed breathlessness which has become frightening for him and his family.*

5 (v) How will you treat him?

*Mrs. P has end stage carcinoma ovary with multiple metastasis. She is taken care of at home by her family. She is terminal now and produces a noise when she is breathing which is frightening for the family.*

5 (vi) How will you treat this?

**6. THEME: ANTI DOTES FOR POISONING [6 (i) – 6(vi)]**

**(Total: 6 Marks)**

**From the options 'A to P' given below, choose the best answer for the questions 6 (i) – 6 (vi)**

**Options:**

A. Benzathine Penicillin  
B. Atropine  
C. Dopamine  
D. dMSA  
E. Flumenazil  
F. Naloxone  
G. Pyridoxine  
H. Prazosin

I. Acetyl cysteine  
J. Calcium gluconate  
K. Magnesium sulphate  
L. Cholestyramine  
M. Epinephrine  
N. Diazepam  
O. Diphenhydramine Hcl  
P. Sodium chloride

**Questions**

6 (i) Antidote for 3 year old Child who has come with Paracetamol poisoning.

- 6 (ii) Antidote for Mr. H who has come with Organo chlorines poisoning.
- 6 (iii) Antidote for Ms. Latha who has come with history of mercury poisoning.
- 6 (iv) Antidote for Mr. V who has come with history of diazepam poisoning.
- 6 (v) Antidote for 17 year old Madhu who has come with history of opium poisoning.
- 6 (vi) Antidote for Ms. Shanthi who has come with history of isoniazid poisoning.

**7. THEME: CHANGES IN ELDERLY [7 (i) – 7 (vi)] (Total: 6 Marks)**  
**From the options ‘A to L’ given below, choose the best answer for the questions 7(i)–7(vi)**

**Options:**

- |                          |                                  |
|--------------------------|----------------------------------|
| A. Stress Incontinence   | G. Urinary Retention             |
| B. Urge Incontinence     | H. Psychosomatic illness         |
| C. Depression            | I. Anxiety                       |
| D. Overflow Incontinence | J. Obsessive Compulsive disorder |
| E. Dementia              | K. Schizophrenia                 |
| F. Delirium              | L. Mania                         |

**Questions: Choose the correct Diagnosis:**

- 7 (i) 72 year old Mr. S, comes with complaints of sudden urge to urinate but is often not able to inhibit the passing of urine long enough to get to the toilet.
- 7 (ii) 68 year old Mrs. D complains leaking of urine as a result of maneuvers such as coughing, sneezing or laughing.
- 7 (iii) 75 year old Mr. A complains of difficulty in passing urine but has dribbling of urine on which he is not able to control.
- 7 (iv) Mr. H presents with memory disturbances; progressively severe loss, more so for recent events; attention is impaired; progressive downhill course over months to years; not much response to drugs; depression may be superimposed; there is change in psycho motor status.
- 7 (v) Mrs. J presents with memory disturbances; fluctuating loss, attention is normal; fluctuating over hours and days; resolves once the precipitating factors are treated; mood is agitated or calm; there is no change in psycho motor status.
- 7 (vi) Mr. M presents with memory disturbances; loss is often acute, attention is normal; mild memory loss; progressive course over weeks or months with Resolution with therapy; mood is depressed. There is no change in psychomotor status.

**8. THEME: JOINT PAIN [QUESTIONS 8 (i) TO 8 (vi)] (Total: 6 Marks)**  
**From the options ‘A to N’ given below, choose the best answers for the questions 8(i)-8 (vi)**

**Options**

- |                        |                         |
|------------------------|-------------------------|
| A. Adriamycin          | H. Prednisolone         |
| B. Paracetamol         | I. Allopurinol          |
| C. Hydroxy chloroquine | J. Rheumatoid arthritis |
| D. Osteoarthritis      | K. Cyclosporine         |
| E. Probenicid          | L. Methotrexate         |
| F. Ibuprofen           | M. Gout                 |
| G. Indomethacin        | N. Rheumatic arthritis  |

**Questions:**

*40-year-old Mrs. Radhika gradually developed joint pain and swelling of both the wrists over a 3 month period; she had early morning stiffness and could not do her daily cooking chores. On examination, both her PIP (proximal inter-phalangeal joint) and wrists were slightly swollen and tender.*

**8 (i)** What could be the possible diagnosis?

*60 year old Mr. Ganesh comes to you with ache in the knee joint on both sides. On examination there is pain on passive movement of the joint. A crepitus can be also felt on flexion.*

**8 (ii)** What could be the possible diagnosis?

**8 (iii)** What is the first drug of choice for him?

*45 year old Mr. Maran a rickshaw driver comes to you with severe pain of the right big toe that started while he was sleeping. He is writhing in pain and has low grade fever. On examination the whole foot seems to be tender and red but the swelling around the big toe is maximal.*

**8 (iv)** What could be the possible diagnosis?

*You have started treatment for 40 years old Mrs. Susithra with rheumatoid arthritis.*

**8 (v)** Which drug will need monitoring of LFT?

**8 (vi)** Name the drug which is not an immune-suppressant and used as a disease modifying drug in 20 year old Rumba diagnosed with SLE.

**9. THEME: SEXUALLY TRANSMITTED DISEASES [QUESTIONS 9 (i) TO 9 (vi)**

**(Total: 6 Marks)**

**From the options 'A to J' given below, choose the best answers for questions 9(i) to 9(vi)**

**Options:**

**A.** Acyclovir 400 mg PO five times daily for 7 days

**B.** Cap. Doxycycline 100 mg bd for 14 days

**C.** Cefixime 400 mg single dose Plus Doxycycline 100mg bd for 10 days

**D.** Inj. Benzathine penicillin G, 2.4 million units IM

**E.** Azithromycin 1g bd for 5 days

**F.** Azithromycin 1 g orally in a single dose

**G.** Inj. Benzathine penicillin G, 1.2 million units IM

**H.** Cap. Doxycycline 100 mg bd for 21 days

**I.** Metronidazole 2 G orally single dose

**J.** Acyclovir 200 mg PO five times daily for 5 days

**Questions: What is the pharmacological treatment for the following patients?**

**9 (i)** Mrs. R has come with complaints of genital ulcers. The ulcers are on the labia majora, labia minor, the thighs, and the perineum. They are multiple, painful with undermined edges. The inguinal nodes are tender and warm.

**9 (ii)** Mr. L reluctantly tells you that he has a genital ulcer. The ulcer started as a painless papule that became eroded and indurated rapidly. On examination, you found discrete, firm, mobile, and painless inguinal lymph nodes without overlying skin changes.

**9 (iii)** Mr. K has come with the complaints of tender enlarged inguinal lymphadenopathy. On examination you find painless shallow erosion in the penis on the penile shaft.

9 (iv) Mr. A has come with severe pain in the scrotum. On taking history, you understand that he also has with dysuria and urethral discharge. His scrotum is warm and tender.

9 (v) Mrs. H has complaints of pain abdomen and vaginal discharge. The discharge is greenish and frothy and has a strong odor. There is severe itching in the perineum. There is no history suggestive of high risk behaviour.

9 (vi) Mrs. P has come with complaints of recurrent painful genital lesions. The lesions are in the labia majora, labia minora, vaginal vestibule and introitus. Some of the lesions have ruptured and those lesions are small, moist ulcers and very painful.

**10. THEME: BITES AND STINGS [QUESTIONS. 10(i) - 10(vi)] (Total: 6 Marks)**

**From the options 'A to L' given below, choose the best answers for the questions 10(i) – 10(vi)**

**Options:**

K. Cobra bite

L. Dry bite

M. Viper bite

N. Hemotoxicity

O. Neurotoxicity

P. Scorpion sting

Q. Prazosin

R. Adrenalin

S. Krait bite

T. Hydrocortisone

U. Centipede bite

V. Local Xylocaine

**Questions:**

*When Murugan brought his wife with the snake bite, he also brought the killed snake with him. The snake was about 4-5 feet long, have a brown body with three rows of dark blotches. He said that his wife was working alone in the house. There is no mark on the hood of the snake and the fangs are anteriorly placed.*

10. (i). What bite is this?

10. (ii). What type of toxicity do you expect with this snake?

*Anuradha was bitten by a snake. She presented to the hospital after 4 hours with pain at the bite site; she also had hazy vision, drooping of eyelids, dysarthria, dysphagia, paresthesia, and somnolence.*

10. (iii). What bite is this?

*Dinesh was bitten by a snake. He reported to the hospital after 6 hours of the bite with a history of painful swelling of the back of his left hand. On examination, he was afebrile, vital signs were normal, and there were no abnormal neurological signs. His hemoglobin was 13g/dl, clotting time was 10 min, PT INR 1.2, Blood urea/creatinine – within normal limits and the urine was clear.*

10. (iv). This bite is most probably a \_\_\_\_\_.

*15 year old Sunil is brought with vomiting, salivation, sweating, priapism and history of unknown bite. His blood pressure is 140/ 98 mm Hg.*

10. (v). What could be the possible bite?

10. (vi). The most important agent for treating Sunil is \_\_\_\_\_.

\*\*\*\*\*

(LK 0217)

M.MED. FAMILY MEDICINE

(Sub Code: 4011)

SECOND YEAR THEORY EXAM – FEBRUARY 2017  
PAPER I - MEDICINE AND ALLIED SCIENCES

QP .CODE: 434011

Time: Three Hours

Maximum Marks: 100

**INSTRUCTIONS**

- The paper will be for a total of **100 Marks**.
- Answer **all** the Questions.
- The Paper has 2 parts – **Part A & Part B**.
- **Part A** will be **descriptive type questions** based on case scenarios. **(40 Marks)**
- **Part B** will have Objective type EMQs **Extended Matching Questions**. **(60 Marks)**
  - ✓ This will have 10 sets of these questions.
  - ✓ Each set will have 6 questions.
  - ✓ Each question will carry 1 mark.
  - ✓ Each set has a **theme** on the top. In each set there are **some options** given on the top followed by some **questions**. The options are lettered using the English Alphabets A, B, C, D and so on.

Example:

**3. THEME –COMMON PSYCHIATRIC PROBLEMS [QUESTIONS. 3(i) – 3(vi)] (6marks)**  
**From the options ‘A to H’ given below, choose the best answer for the questions 3(i) – 3(vi)**

**Options:**

- A. Inj. Haloperidol
- B. Amitriptyline + counseling
- C. Tab. Chlorpromazine
- D. Tab. Trihexyphenidyl
- E. Tab. Diazepam
- F. Tab. Lithium
- G. Inj. Fluphenazine deconoate
- H. Tab. Risperidone

**Questions: What is your treatment option in the following cases?**

- 3(i) What is the drug of choice for Acute Psychosis?
- 3(ii) What is the drug of choice for Bipolar illness?

❖ Match each question to a **single best option** and write it in your paper in the column provided like this:

❖ Each option may be used more than once. Some options may not be used at all.

3(i)	
3(ii)	
3(iii)	
3(iv)	
3(v)	
3(vi)	

**PART – A**

**DESCRIPTIVE QUESTIONS**

**(ANSWER ALL QUESTIONS)**

1. Mr. Rajan is brought with a history of snake bite an hour ago. Mr. Rajan is looking anxious, his pulse rate is 98/ minute and blood pressure is 120/80 mm of hg. There is no local oedema of the bite site. Systemic examination is normal. Mr. Rajan's relatives have brought the snake along with them. **(Total:20 Marks)**
- A. How will you differentiate a poisonous snake from a non-poisonous snake? **(2 Marks)**
- B. What are the 4 syndromes of poisonous snake bite? **(4 Marks)**
- C. What are the 'dos' and 'don'ts' of pre hospital care in snake bite? **(5 Marks)**
- D. What are the indications for Anti Snake Venom (ASV) use? **(3 Marks)**
- E. What are the three types of anaphylactic reactions associated with ASV? What is the treatment? **(6 Marks)**
2. 21 year old Mrs. Sundari has come with the complaints of excessive tiredness, breathlessness on exertion, palpitations and dizziness for the past few months. On examination, she is pale. **(Total: 20 Marks)**
- A. How do you elicit the history in a patient with anemia? **(3 Marks)**
- B. How will you differentiate types of anemia based on clinical examination? **(3 Marks)**
- C. How will you investigate a patient with anemia? **(4 Marks)**
- D. How will you treat a patient with iron deficiency anemia? **(5Marks)**
- E. How will you treat a patient with B12 deficiency anemia? **(5 Marks)**

**PART – B**

**EXTENDED MATCHING QUESTIONS**

**(ANSWER ALL QUESTIONS)**

1. **THEME: FEVER IN ADULTS [QUESTIONS 1(i) TO 1(vi)]** **(Total: 6 Marks)**  
From the options 'A to L' given below, choose the best answers for the questions 1(i) to 1(vi)

**Options:**

- |                           |                    |
|---------------------------|--------------------|
| A. Scrub typhus           | G. Enteric fever   |
| B. Pulmonary Tuberculosis | H. Widal test      |
| C. Leptospirosis          | I. Weil Felix test |
| D. Pneumonia              | J. Chest X - ray   |
| E. Dengue                 | K. Dengue IgM      |
| F. Viral encephalitis     | L. Sputum for AFB  |

**Questions:**

*Mr. Mohan, a 28 year old manual laborer presents to your clinic with the complaints of high grade fever for the past 5 days. He also has cough with minimal sputum and right sided chest pain which is worse on coughing and deep inspiration.*

- 1(i). What is the most probable diagnosis?
- 1(ii). If there is one test which will confirm your diagnosis what is it?

*20 year old Ms. Divya has been unwell for the past one month. To support the family income she works in a shoe company which she has been unable to do so for the past one week. She has lost weight and on enquiry says she does not have much appetite. She has cough and low grade fever for the past one month.*

- 1(iii). What is the most probable diagnosis?
- 1(iv). Which investigation you will order to confirm your diagnosis?

*39 year old Mr. Hari has come with complaints of fever, headache, myalgia, cough and diarrhoea for the past 5 days. On examination, he is febrile; pulse rate is 88/minute and his blood pressure is 130/80 mm of hg. There is a small black scab like lesion in the left forearm and the left axillary nodes are enlarged. Liver is palpable 3 cm below the right costal margin.*

- 1(v). What is the most probable diagnosis?
- 1(vi). What is the investigation of choice for Mr. Hari, based on his clinical details?

**2. THEME: HIV/ AIDS [QUESTIONS 2(i) TO 2(vi)] (Total: 6 Marks)**

**From the options 'A to H' given below, choose the best answers for the questions 2(i) to 2(vi)**

**Options**

- |  |  |
|--|--|
| <b>A.</b> Counsel for risk reduction - counsel HIV positive counsel            | <b>E.</b> Treat it as Inconclusive. Repeat after 2 weeks, if still inconclusive, follow up testing is needed |
| <b>B.</b> Do the confirmatory test-a repeat ELISA from a different kit         | <b>F.</b> Do western blot test for confirmation  |
| <b>C.</b> Counsel for risk reduction and offer next HIV testing after 6 months | <b>G.</b> Polymerase Chain Reaction assay  |
| <b>D.</b> Do HIV antibody test, usually ELISA                                  | <b>H.</b> Counsel for risk reduction - counsel HIV negative counsel  |

**Questions:**

*30 year old Mr. Sekar came to you with history of unprotected sex with a sex worker 4 months ago. He wants to know his HIV status.*

- 2 (i) What test will you do on him?

*The above test you did came as negative. When further questioning he told you that he had another unprotected sex with another sex worker 2 months ago.*

- 2 (ii) What will you do now?

*You are the Medical officer managing the ICTC in your hospital. 35 year old Mr. Kumar came to you for a pre-operative HIV testing. The test result came as positive.*

- 2 (iii) What will you do next?

*The test you did next was also positive but Mr. Kumar did not have any signs and symptoms of HIV infection.*

2 (iv) What will you do now?

*25 year old Mr. Pandian presents with chronic diarrhoea, weight loss, extra-pulmonary tuberculosis and oral candidiasis. He has sexual risk factors for acquiring HIV infection and past history of STDs. He was clinically diagnosed to have AIDS. But his ELISA test and repeat ELISA was reported as non-reactive.*

2 (v) What is the next investigation of choice?

*Mrs. Nalini, who is a HIV positive mother, has delivered a baby. She likes to know as quickly as possible whether the child has HIV infection. She is not breast feeding the baby.*

2 (vi) What is the ideal test to confirm the presence or absence of HIV infection in this baby?

**3. THEME: TREATMENT OF JOINT PAIN [QUESTIONS 3(i) to 3(vi)] (Total: 6 Marks)**

**From the options 'A to L' given below, choose the best answers for the questions 3 (i) to 3 (vi)**

**Options:**

- A. Hydroxy chloroquine
- B. Methotrexate
- C. Azathioprine
- D. Sulphasalazine
- E. Cyclosporine
- F. Cyclophosphamide

- G. Oxycodone
- H. Amitriptyline
- I. Amlodipine
- J. Probenicid
- K. Infliximab
- L. Allopurinol

**Questions:**

*Mrs. Parvathi has come with complaints of bilaterally symmetrical joint pain involving the proximal interphalangeal joints. The pain involves more than three joints; there is morning stiffness more than one hour. X-ray shows involvement of subchondral bone.*

3 (i) The first line DMARD (Disease Modifying Anti – Rheumatic Drugs) for Mrs. Parvathi

3(ii) If Mrs. Parvathi has failed to respond first and second line DMARDs, and the illness is severe, the DMARD that can be used

3(iii) 54 years old Mrs. Lakshmi has come with bilateral knee pain which worsens with use of the joints. What is the oral pharmacologic agent that is used if the first line non-opioids fail to control the pain?

*Mr. Jonas has come with pain both great toes, right ankle and heel. The pain is severe, burning and the overlying skin is red. He has had three or four similar episodes in the past. He has evidence renal stones in USG.*

3 (iv) The drug of choice for him will be

*24 years old Ram has come with low grade fever, fatigue, early morning stiffness of extremities and severe pain and stiffness of back. On examination the movements of spine and sacroiliac joints are restricted.*

3 (v) After confirmation with investigations, the ideal drug for Ram is

*Ms. Kala, a 24 year old primary grade teacher has presented with fatigue, fever, joint pain, malar rash and discoid lesions.*

3 (vi) The DMARD of choice if there is evidence of severe glomerulonephritis is

**4. THEME: DIABETES MELLITUS [QUESTIONS 4 (i) TO 4(vi)] (Total: 6 Marks)**

From the options 'A to L' given below, choose the best answers for questions 4 (i) to 4 (vi)

**Options**

- |                        |                   |
|------------------------|-------------------|
| A. Pioglitazone        | G. Gliptins       |
| B. Metformin           | H. Diarrhoea      |
| C. Hypoglycemia        | I. Gabapentin     |
| D. Gliclazide          | J. Giddiness      |
| E. Hepatic dysfunction | K. ACE inhibitors |
| F. Convulsions         | L. Insulin        |

**Questions:**

*Mrs. Indira is 58 years old and was diagnosed with Type 2 diabetes 6 months back. Her diabetes is not yet controlled and she needs to start taking medication.*

4 (i) What is the first choice of medication in her case?

4 (ii) What is the common side effect of this medication?

*After 12 months on the first medication, her diabetes is not yet well controlled.*

4 (iii) What medication would you now add?

4 (iv) What is the common side effect of this medication?

*Mr. Patel has had Type 2 diabetes for 12 years. On routine check-up and investigations, he was found to have microalbuminuria and diabetic neuropathy.*

4 (v) How will you manage his microalbuminuria?

4 (vi) What is the management of painful diabetic neuropathy?

**5. THEME: DIAGNOSIS – CNS DISORDERS IN THE ELDERLY [QUESTIONS 5 (i) TO 5 (vi)] (Total: 6 Marks)**

From the options 'A to O' given below, choose the best answers for the questions 5(i)to5(vi)

**Options**

- |                                      |                                    |
|--------------------------------------|------------------------------------|
| A. Delirium                          | E. Wilson's disease                |
| B. Alzhiemers's dementia             | F. Mini Mental State Exam (MMSE)   |
| C. Confusion Assessment Method (CAM) | G. Seizure disorder                |
| D. Incontinence                      | H. Mild Cognitive Impairment (MCI) |
|                                      | I. Stroke in evolution             |

- J. Parkinson's disease
- K. Falls Assessment
- L. Parkinsonism

- M. Late life depression
- N. ADL Assessment
- O. Age-related memory loss

**Questions:**

*Mr. Gopal, an 80 year old otherwise healthy man developed right sided weakness for which he sought medical attention only after 48 hours. On examination, he was found to have mild right hemiparesis.*

5. (i) What is the diagnosis of concern in this patient?

*Mr. Santosh, a 74 year old gentleman has been brought to the clinic by his family as they are concerned about overall health. The family reports that his walk and talk have changed. On exam, he has a blank facial expression and slow voluntary movements. When asked to walk, he had difficulty rising from his chair and his gait was characteristic of small, shuffling steps.*

5. (ii) What is your diagnosis?

*Mrs. Shanthi, an 84 year old lady was admitted to the hospital with severe cellulitis of the left lower limb. On day 3 of admission, she became agitated, pulled out her IV line and was trying to leave the ward. She became very angry with the nurse who tried to help her and said that she was trying to hurt her.*

5. (iii) What is the likely diagnosis?

*Mrs. Pramila, a 76 year old lady was brought to the clinic by her daughter with complaints of forgetfulness. The patient denied being forgetful and was angry with her daughter for bringing up this topic. The daughter reported that in the past few weeks, on few occasions, her mother has left the gas stove on after cooking and left the kitchen. Mrs. Pramila also has difficulty recalling the names of her grandchildren whom she sees regularly*

5. (iv) What is the likely diagnosis?

5. (v) What is regarded as the "gold standard" assessment for this condition?

*Mr. Raju, 67 year old, a retired engineer is distressed because he could not remember the name of a friend he met that morning. He has no other functional impairment.*

5. (vi) What is his problem?

**6. THEME: DIAGNOSIS - SKIN INFECTIONS [6 (i) – 6(vi)]**

**(Total: 6 Marks)**

From the options 'A to N' given below, choose the best answer for the questions 6(i)–6 (vi)

**Options:**

- A. Herpes Zoster
- B. Oral Candidiasis
- C. Scabies
- D. Impetigo
- E. Pityriasis Versicolor
- F. Tinea Corporis
- G. Perineal Warts

- H. Herpes Simplex gingivo stomatitis
- I. Condyloma acuminata
- J. Tinea capitis
- K. Tinea cruris
- L. Erythrasma
- M. Trichomycosis axillaris
- N. Leucoplakia

**Questions: Choose the correct diagnosis from the options above for the case scenarios given below:**

**6 (i)** 6 year old Arun is brought by his mother with crusted skin lesions on chest, arm, neck and face for the past week. He is otherwise doing well except for the pruritus which makes him scratch and leads to exacerbation of the lesions. The lesions are multiple superficial erosions with adherent golden yellow crust.

**6 (ii)** 45 year old Mrs. Vani was undergoing chemotherapy for lymphoma when she developed whitish lesions in her mouth associated with burning when she ate spicy food. What has she developed?

**6 (iii)** 8 year old Priya has an itchy lesion on her scalp behind her left ear for the past 2 weeks. This is associated with hair loss. What is the diagnosis?

**6 (iv)** 29 year old Kumar, a lorry driver, has painless cauliflower like growths in his perianal area for the past 6 months and has been slowly increasing in size. He appears to be otherwise healthy. What is the likely diagnosis?

**6(v)** 23 year old Hamid who lives in the military barracks presents with hypo-pigmented coalesced macules over his chest and upper back. He reported that many of his fellow soldiers also have similar lesions. What is your diagnosis?

**6 (vi)** 40 year old Madhavan was diagnosed to have HIV infection and was started on anti-retroviral therapy. Three months after initiation of treatment, he developed painful lesions confined to the right upper limb of two days duration. What is this condition?

**7. THEME: TREATMENT OF SKIN CONDITIONS [7 (i) – 7 (vi)] (Total: 6 Marks)**

**From the options 'A to K' given below, choose the best answer for the questions 7(i)–7(vi)**

**Options:**

- |                                      |  |
|--------------------------------------|--|
| <b>A.</b> Betnovate ointment         | <b>G.</b> Oral cyclophosphamide            |
| <b>B.</b> Hydrocortisone ointment    | <b>H.</b> Tacrolimus                       |
| <b>C.</b> Salicylic acid and steroid | <b>I.</b> Retinoid/clindamycin combination |
| <b>D.</b> Oral prednisolone          | <b>J.</b> Oral retinoids                   |
| <b>E.</b> Hydroquinone 4%            | <b>K.</b> Topical retinoids                |
| <b>F.</b> Inj.Hydrocortisone         |  |

**Questions: What is the pharmacological treatment for the following patients?**

**7(i)** Mrs. Jhansi has developed dry scaly itchy lesions of both the eyelids after changing her brand of eye shadow.

**7(ii)** Mr. Yuvaraj has come with complaints of thick scaly lesion in the scalp for the past 3 years. The scales are silvery and they are well within the hairline. There are no lesions on the face but there are very few lesions on the elbow and knee.

**7(iii)** Mrs. Kala has come with complaints of itchy, purple, polygonal, popular lesions in the sun exposed areas. The lesions started 4 months ago and she has been treated with various topical steroid ointments.

7 (iv) 18 year old Banu has come with complaints of Vitiligo on her lips. There are no other lesions in the body.

7 (v) 16 year old Ravi has come with mild pustular acne. This is the first time he has developed acne.

7 (vi) Mrs. Shanthi who delivered her first baby 2 months ago has come with complaints of hyper pigmented lesions on both her cheeks. She says that they appeared when she was around three months pregnant.

**8. THEME: POISONING [QUESTIONS 8 (i) TO 8 (vi)] (Total: 6 Marks)**

**From the options 'A to I' given below, choose the best answers for the questions 8 (i)–8 (vi)**

**Options**

- |                   |                             |
|-------------------|-----------------------------|
| A. Flumanezil     | F. Forced alkaline diuresis |
| B. Atropine       | G. Orciprenaline            |
| C. Ethanol        | H. N acetyl cysteine        |
| D. Naloxone       | I. Specific Fab fragments   |
| E. Zinc carbonate |                             |

**Questions:**

8 (i) Antidote for an alcoholic who has attempted suicide by taking around 20 tablets of Paracetamol?

8 (ii) Antidote for overdose of diazepam.

8 (iii) Munna is brought to casualty with history of ingestion of poison. The container that is brought along with reads 'carbamates'. What is the antidote will you give?

8(iv) 6 men are brought to emergency after drinking illicitly brewed alcohol containing methanol. What is the antidote?

8 (v) 4 year old Sheila has taken 12 tablets of her grandfather's digoxin tablets. What is the antidote?

8 (vi) A habitual drug user is brought to the casualty with overdose of barbiturates. What is the antidote?

**9. THEME: BLEEDING DISORDER [QUESTIONS 9 (i) TO 9 (vi)] (Total: 6 Marks)**

**From the options 'A to N' given below, choose the best answers for questions 9(i) to 9(vi)**

**Options:**

- |   |                             |
|---|-----------------------------|
| A. Liver disease                          | H. Fibrinogen deficiency    |
| B. Warfarin therapy                       | I. Hematological malignancy |
| C. Drug reaction due to Rifampicin        | J. Hemophilia               |
| D. Drug reaction due to Pyrazinamide      | K. Easy bruising syndrome   |
| E. Heparin therapy                        | L. ITP                      |
| F. Von Willebrand's disease               | M. Henoch Schonlein Purpura |
| G. Disseminated intravascular coagulation | N. Disseminated TB          |

**Questions: Choose from the above options, the most likely cause of the bleeding disorder in the following scenarios**

**9 (i)** 28 year old Mrs. Bhavani is a housewife, mother of two children. She was well two days ago and has developed a rash and heavy menstrual blood loss since yesterday. There is no past history of abnormal bleeding. The rash is generalized, purpuric. There was no pallor, lymphadenopathy or hepatosplenomegaly. Her platelet count is 19,000 / dl.

**9 (ii)** Mr. Basker was diagnosed to have pulmonary TB and started on ATT, category I last week. He had taken three doses of the medications. He has come with epistaxis and purpuric rash over chest and extremities. His platelet count is 14,000/ mm<sup>3</sup>.

**9 (iii)** 7 year old Hiram has swelling and ecchymoses over the right eye after a trivial fall while playing. His siblings have been diagnosed to have a bleeding diathesis. General examination is normal. His platelet count is 250,000/ mm<sup>3</sup>, Bleeding time is > 20 minutes. Clotting time and prothrombin time are normal.

**9 (iv)** A 35 year old woman presents with bruising of the upper thighs. She says that this kind of bruises occur often when she bumps into things. She denies menorrhagia or other bleeding symptoms. She reports two vaginal deliveries, an appendectomy, and a tubal ligation, all without any excessive bleeding. Her family history does not suggest a bleeding disorder and, except for the simple bruising, her physical examination is unremarkable.

**9 (v)** A 52 year old man gave a lifelong history of easy bruising and excessive bleeding following tooth extractions. After taking aspirin, he developed severe nosebleeds. Family history was remarkable for heavy vaginal bleeding in his mother and sister.

**9 (vi)** 15 year old girl Miss. Parveen is studying in the school final, developed abdominal pain since morning. Her mother noticed a rash over the extremities, back and buttocks. Her physical exam was otherwise normal except the rash and arthritis of right knee. The Purpura is raised above the skin and palpable. Platelet count is 2, 40,000 / mm<sup>3</sup>. Bleeding time is normal.

**10. THEME: PALLIATIVE CARE [QUESTIONS. 10(i) - 10(vi)] (Total: 6 Marks)**  
**From the options 'A to L' given below, choose the best answers for the questions 10(i) – 10(vi)**

**Options:**

- |  |                                 |
|--|---------------------------------|
| <b>A.</b> Oral Morphine  | <b>G.</b> Step 3 analgesia      |
| <b>B.</b> Step 2 analgesia                                     | <b>H.</b> Nausea                |
| <b>C.</b> Haloperidol  | <b>I.</b> Hyoscine Butylbromide |
| <b>D.</b> Constipation   | <b>J.</b> Anaphylaxis           |
| <b>E.</b> Stop Morphine  | <b>K.</b> Fluoxetine            |
| <b>F.</b> Increase dose of<br>dextropropoxyphene & paracetamol | <b>L.</b> Lamotrigine           |

**Questions:**

*Mrs. Saraswathi has carcinoma breast which was operated. She came back with severe bone pain due to bone secondaries. She went to the palliative clinic where she was started on a*

*combination of paracetamol and dextropropoxyphene which she is taking once or twice a day. She comes to you with complaints that the pain has not subsided.*

**10 (i)** How will you manage her?

*Mr. Dayalan has rhabdomyosarcoma of thigh which was operated. He was on chemotherapy. He has come back with lung secondaries with severe chest pain and cough. His pain is relieved only on taking Tab. Morphine.*

**10 (ii)** What is the commonest side effect of morphine?

*Mrs. Leela, a known patient of long standing diabetes mellitus associated with hypertension and foot ulcers which are non-healing comes to you with severe pain of both feet not relieved on taking different types of medicines. You examine her and find her pain to be neuropathic.*

**10 (iii)** What is the next step of analgesia you would recommend?

*Mr. Sridhar has large liver secondaries from an unknown primary. He has severe abdominal pain and was started on Tab. Morphine. This caused excessive nausea.*

**10 (iv)** What is your next line of management?

*Mr. Chellappa has inoperable carcinoma of the urinary bladder which has spread to the lungs. He has developed breathlessness which has become frightening for him and his family.*

**10 (v)** How will you treat him?

*Mrs. Parvathi has end stage carcinoma ovary with multiple metastasis. She is taken care of at home by her family. She is terminal now and produces a noise when she is breathing which is frightening for the family.*

**10 (vi)** How will you treat this?

\*\*\*\*\*

SECOND YEAR THEORY EXAM- AUGUST 2017  
PAPER I -MEDICINE AND ALLIED SCIENCES

QP .CODE: 434011

Time: Three Hours

Maximum Marks: 100

**INSTRUCTIONS**

- The paper will be for a total of **100 Marks**.
- Answer **all** the Questions.
- The Paper has 2 parts – **Part A & Part B**.
- **Part A** will be **descriptive type questions** based on case scenarios. **(40 Marks)**
- **Part B** will have Objective type EMQs **Extended Matching Questions**. **(60 Marks)**
  - ✓ This will have 10 sets of these questions.
  - ✓ Each set will have 6 questions.
  - ✓ Each question will carry 1 mark.
  - ✓ Each set has a **theme** on the top. In each set there are **some options** given on the top followed by some **questions**. The options are lettered using the English Alphabets A, B, C, D and so on.

Example:  
**3. THEME -COMMON PSYCHIATRIC PROBLEMS [QUESTIONS. 3(i) – 3(vi)] (6marks)**  
**From the options ‘A to H’ given below, choose the best answer for the questions 3(i) – 3(vi)**

**Options:**

- A. Inj. Haloperidol
- B. Amitriptyline + counseling
- C. Tab. Chlorpromazine
- D. Tab. Trihexyphenidyl
- E. Tab. Diazepam
- F. Tab. Lithium
- G. Inj. Fluphenazine deconate
- H. Tab. Risperidone

**Questions: What is your treatment option in the following cases?**

- 3(i) What is the drug of choice for Acute Psychosis?
- 3(ii) What is the drug of choice for Bipolar illness?

❖ Match each question to a **single best option** and write it in your paper in the column provided like this:

3(i)	
3(ii)	
3(iii)	
3(iv)	
3(v)	
3(vi)	

❖ Each option may be used more than once. Some options may not be used at all.

**PART – A**

**DESCRIPTIVE QUESTIONS**

**(ANSWER ALL QUESTIONS)**

- 1. Mr. Natarajan, a 30 year old labourer, presents with a history of fever with headache for the past 1 week. (Total: 20 Marks)**
- A. List the possible differential diagnoses you would consider. (4 Marks)
  - B. If he had cough and post nasal drip, but no additional clinical features, how would you manage him? (4 Marks)
  - C. If he had a history of drowsiness, irritability and vomiting, what would be the clinical signs you would look for on examination? (4 Marks)
  - D. If any of the signs you looked for in Mr. Natarajan are positive, what organisms would you suspect as being responsible? (4 Marks)
  - E. If none of the clinical signs you suspect are positive, what are other conditions you could consider? (4 Marks)
- 2. Mrs. Kalyani is a 28 year old lady from rural Tamil Nadu. She presents with a history of tiredness, weight loss and headache. Her haemoglobin is 7.2 g/dl. (Total: 20 Marks)**
- A. What is the WHO severity grading for anaemia? According to this, what would be the severity of Mrs. Kalyani's anaemia? (4 Marks)
  - B. You find out Mrs. Kalyani is 3 months pregnant, and is having severe vomiting. Her oral intake has been poor. What are some of the likely causes of her anaemia? (4 Marks)
  - C. If the blood counts revealed an MCV of 130. With this information, what are the possibilities you would like to consider? (4 Marks)
  - D. Had the blood counts showed an MCV of 56, what would be your differential diagnosis? (4 Marks)
  - E. As a family physician, what are some of the preventive strategies that can be done to tackle the problem of anaemia in pregnancy? (4 Marks)

**PART – B**

**EXTENDED MATCHING QUESTIONS**

**(ANSWER ALL QUESTIONS)**

- 1. Theme: Diagnosis of Joint Pain [Questions 1(i) – 1(vi)] (Total: 6 Marks)**  
**From options 'A to L' given below, choose the best answers for the questions '1(i) – 1(vi)':**

**Options:**

- |                                 |                           |
|---------------------------------|---------------------------|
| A. Rheumatoid Arthritis         | G. Enthesitis             |
| B. Osteoarthritis               | H. Gonococcal arthritis   |
| C. Gout                         | I. Rheumatic Fever        |
| D. Ankylosing Spondylitis       | J. Polymyalgia Rheumatica |
| E. Systemic Lupus Erythematosus | K. Hypermobile Joint      |
| F. Septic arthritis             | L. Syphilitic Arthritis   |

**Questions: What is the diagnosis?**

- 1(i). Mr. Rajesh, a 60 year old gentleman, comes to you with severe pain in right big toe for the past 2 months
- 1(ii). Mrs. Thangamani, a 72 year old lady, presents with severe with bilateral knee joint pain for the past 6 years. She does not have any other joint pains or stiffness.
- 1(iii). Mrs. Elizabeth, a 45 year old lady, presents with joint pains of both the knees, elbows, wrists and PIP joints
- 1(iv). 13 year old Murali was brought to the emergency unit with severe pain around left knee. Patient looks toxic and is febrile.
- 1(v). Mr. Raman, a 30 year old male, comes to you with diffuse back pain, early morning stiffness relieved by exercise
- 1(vi). Mrs. June, a 24 year old lady, comes with fever, fatigue, joint pain, facial skin rash and renal involvement.

**2. Theme: Geriatrics – Diagnosis (Questions 2(i)–2(vi) ) (Total: 6 Marks)**

**From options ‘A to K’ given below, choose the best answers for the questions ‘2 (i) – 2(vi)’:**

**Options:**

- |                        |                           |
|------------------------|---------------------------|
| A. Urge incontinence   | G. Dementia               |
| B. Stress incontinence | H. Atrophic vaginitis     |
| C. Osteoporosis        | I. Delirium               |
| D. Osteoarthritis      | J. Decreased testosterone |
| E. Presbyopia          | K. Parkinsonism           |
| F. Presbycusis         |                           |

**Questions: What is the diagnosis?**

- 2(i). Mr. Raju, 67 year old, is a retired doctor. Over the past few years, he has stopped responding when his name is called unless he is shouted at, and frequently does not answer questions asked to him in conversation. Worried about his behavior, his son takes him to see a psychiatrist, but is told he does not have any psychiatric issues. What could be his likely diagnosis?
- 2(ii). Mrs. Krishnan, a 75 year old, has a history of severe joint pains, limping and frequent falls.
- 2(iii). Mrs. Anna, an 87 year old lady, presents with urinary incontinence which occurs while at sleep (2 or 3 AM). She also leaks 3-4 times during the day. The post void volume is 20ml. What does she have?
- 2(iv). 84 year old Savithri had a trivial fall in the house last month and sustained a fracture neck of femur which required surgery. What is she likely to have?
- 2(v). Mrs. Kala, a 60 year old post-menopausal woman, complains of dyspareunia and dysuria. What is she likely to have?
- 2(vi). 72 year old Mr. Rangasamy presents with resting tremor, rigidity, bradykinesia, postural instability and cognitive impairment.

**3. Theme: Treatment of Common Skin Infections (Questions 3(i)–3(vi))**

**(Total: 6 Marks)**

From options 'A to L' given below, choose the best answers for the questions '3(i) – 3(vi)':

**Options:**

- |   |                                   |
|---|-----------------------------------|
| A. Systemic antifungals                                 | G. Topical tretinoin 1%           |
| B. Cryotherapy with liquid nitrogen/<br>CO <sub>2</sub> | H. 20% salicylic acid             |
| C. Permethrin   | I. Clindamycin                    |
| D. Acyclovir  | J. Coal Tar                       |
| E. Topical antifungals                                  | K. Anti-streptococcal antibiotics |
| F. Amitriptyline  | L. Anti-pseudomonas antibiotics   |

**Questions: What would be the best treatment for each of these skin conditions?**

**3(i).** Mr. Thomas presented with a history of itching in his hands and feet for two weeks, and has been diagnosed with scabies.

**3(ii).** Mrs. Kripa had a history of painful genital blisters that burst into ulcers over two weeks. You diagnose her as having Herpes Simplex infection.

**3(iii).** Mr. Dinesh's left big toenail started becoming brittle and parts of it chipped off. There was yellowish discoloration of the nail bed and foul smell. He was diagnosed as having tinea unguum.

**3(iv).** Mr. Chouhan has several coarse warts over both his feet.

**3(v).** Ms. Kalpana has a red, circular, itchy, scaly rash on her chest. You have diagnosed her with dermatophytosis

**3(vi).** Mr. Raghu has painful, itchy lesions forming yellowish crusts near his mouth. You diagnose him with impetigo.

**4. Theme: Tests for HIV [(QUESTIONS 4 (i) To 4 (vi) ]**

**(Total: 6 Marks)**

From options 'A to I' given below, choose the best answers for the questions '4 (i) to 4 (vi)':

**Options:**

- |                           |                      |
|---------------------------|----------------------|
| A. ELISA                  | F. Urine test        |
| B. Salivary test          | G. MBC culture       |
| C. Particle Agglutination | H. DNA PCR assay     |
| D. Western blot           | I. HIV RNA detection |
| E. P24 assay              |                      |

**Questions: Choose from the options given above, the answers for the questions related to tests for HIV given below**

**4(i).** Mr. Harish is suspected to have HIV, and you want to use a test that is useful during early stage of disease.

**4(ii).** There are some unreliable reports from a small uncertified laboratory stating that Ms. Saradha has HIV. You want to clarify this using this confirmatory test.

**4 (iii).** This test is used in microtitre plate format.

4(iv). You need to perform an emergency laparotomy on Ms. Shanthi. She is brought by some friends, and she has a history of iv drug abuse. You want to perform a rapid test for HIV before the procedure.

4(v). Mr. Ramanathan has been referred to a voluntary test counseling centre, but does not want to give a blood sample. Which non-serological test can be offered?

4 (vi). This is a readily available and inexpensive test. Sensitivity and specificity > 99.9%.

**5. Theme: Chest X-ray Findings [Questions 5 (i) To 5 (vi)] (Total: 6 Marks)**

**From options 'A to I' given below, choose the best answers for the questions '5 (i) to 5(vi)':**

**Options:**

- |                        |                      |
|------------------------|----------------------|
| A. Pneumo thorax       | F. Pleural effusion  |
| B. Pulmonary fibrosis  | G. Lung abscess      |
| C. Tuberculous cavity  | H. Bronchiectasis    |
| D. normal x-ray        | I. Broncho pneumonia |
| E. Hydro pneumo thorax |                      |

**Questions: Choose the correct diagnosis from the above options for each of the X-ray findings given below:**

5(i). Homogenous opacity in the left lower zone with 'Ellis curve' pattern

5(ii). Homogenous opacity with the straight upper border

5(iii). Hypertranslucent lung with absent normal broncho-vascular markings; mediastinal shift to the contra lateral side

5(iv). Bilateral diffuse reticulo nodular pattern

5(v). Lungs with normal landmarks and translucency bilaterally

5(vi). Translucent area within the lung parenchyma, with irregular margins that is surrounded by an area of nodular or fibrotic densities

**6. Theme: Bleeding Disorders [Questions 6 (i) To 6 (vi)] (Total: 6 Marks)**

**From options 'A to L' given below, choose the best answers for the questions '6(i) to 6(vi)':**

**Options:**

- |   |                               |
|---|-------------------------------|
| A. Drug induced Thrombocytopenia          | G. Clotting Factor Deficiency |
| B. Aplastic Anemia                        | H. Henoch Schonlein Purpura   |
| C. Von Willibrand Disease                 | I. Vitamin K deficiency       |
| D. Coagulaopathy                          | J. Intracranial bleeding      |
| E. Idiopathic Thrombocytopenic<br>Purpura | K. Hemophilia A               |
| F. Hemophilia B                           | L. Subdural Hematoma          |

**Questions:**

6(i). Mr. Daniel is a known case of Rheumatic heart disease with atrial fibrillation on oral anticoagulation with Warfarin 6 mg once daily. He has come to your clinic with sudden onset of severe headache and vomiting since morning. What could be the one dangerous cause for headache that should be ruled out?

**6(ii).** 34 year old Mr. Kaushal was diagnosed to have pulmonary tuberculosis and started on ATT, cat I last week. He had taken three doses of the medications. He has come with epistaxis and purpuric rash over chest and extremities. His platelet count is 54,000/ mm<sup>3</sup>. There is no past history of similar episodes. What could be the cause of his bleeding problem?

**6(iii).** 30 year old Mrs. Bharathi is a housewife, mother of two children. She was well two days ago and has developed a generalized purpuric rash and heavy menstrual blood loss since yesterday. She is otherwise healthy. There was no past history of abnormal bleeding. There was no pallor, lymphadenopathy or hepatosplenomegaly. Her platelet count is 59,000 / dl. What could be the cause of her bleeding problem?

**6(iv).** 50 year old Mr. Krishnan presents with bleeding gums of two days duration. He complains of ongoing tiredness and lethargy for the past one month for which he did not seek help. He looks pale. His liver is palpable 6 cm below the right costal margin and spleen is palpable 4 cm below the left costal margin. His investigations: Hb 3.9 gm; Platelet count 32,000 / mm<sup>3</sup>; WBC count 2,400 cells/ mm<sup>3</sup>. What is the likely diagnosis?

**6(v)** . 7 year old Krishnan has come with black eye and ecchymoses over the right eye after a trivial fall while playing. Father is worried as the swelling continues to increase. His siblings have been diagnosed to have a bleeding diathesis. General examination is normal. His platelet count is 2, 70,000/ mm<sup>3</sup>. Bleeding time is > 20 minutes. Clotting time and prothrombin time are normal. What could be the cause of his bleeding problem?

**6(vi).** Pushpa, a 15 year old student, has developed abdominal pain since morning. Her mother noticed a rash over the extremities, back and buttocks. Her physical exam was otherwise normal except the rash and arthritis of right knee. The purpura is raised above the skin and palpable. Platelet count is 2, 40,000 / mm<sup>3</sup>. Bleeding time is normal. Urine albumin 2+, microscopy showed numerous RBCs. What is the diagnosis?

**7. Theme: Toxidromes [(Questions 7 (i) To 7 (vi)] (Total: 6 Marks)**  
**From options 'A to J' given below, choose the best answers for the questions '7(i) to 7(vi)':**

**Options:**

- |   |   |
|---|---|
| <b>A.</b> Anticholinergic Syndrome        | <b>F.</b> Substance Withdrawal Syndrome |
| <b>B.</b> Cholinergic muscarinic Syndrome | <b>G.</b> Benzodiazepine overdose       |
| <b>C.</b> Cholinergic nicotinic Syndrome  | <b>H.</b> Paracetamol overdose          |
| <b>D.</b> Opioid Syndrome                 | <b>I.</b> Steroid overdose              |
| <b>E.</b> Sympathomimetic Syndrome        | <b>J.</b> Alcohol toxicity              |

**Questions: Choose the correct Toxidrome from the above options for each of the patient descriptions given below:**

**7(i).** Mr. Philip, a farmer, is brought to you with history of having consumed poison. On examination, he has miosis, bronchorrhea, bradycardia, and SLUDGE (Salivation, Lacrimation, Urination, Defecation, GI Cramps and Emesis).

**7(ii).** Mr. Lucas is an athlete but has been addicted to drugs on and off. He is brought to you after an all-night party after their team won the championship at a national meet held in your city. On examination, he is agitated, has dilated pupils, BP 160/100, Pulse 110/minute and his Temperature is 99.2° F.

**7(iii).** Mrs. Swapna, a staff nurse, a known patient of MDP (Maniac Depressive Psychosis) is in a depressive phase now. She had taken an overdose of a restricted drug and is presenting to you with sedation, miosis, hypoventilation, hypotension and hypothermia.

**7(iv).** Shyam a 10<sup>th</sup> grade student, was depressed when he failed his board exams and had consumed 10 of the tablets that his father was taking for his seizure disorder, about 12 hours ago. Now he is brought now with agitation, tachycardia and diaphoresis.

**7(v).** Mary, a 6 year old girl, consumed some mushrooms from the field and is now delirious, mydriatic and hyperthermic.

**7(vi).** While studying for exams, Martha took some tablets offered by her friend to enhance her memory! She is now brought to you with agitation and on examination has dilated pupils, BP 160/100, Pulse 110/minute and his Temperature is 99.2° F.

**8. Theme: Palliative Care [(Questions 8 (i) To 8 (vi)] (Total: 6 Marks)**

**From options ‘A to G’ given below, choose the best answers for the questions ‘8(i) to 8(vi)’:**

**Options:**

**A.** By the mouth

**B.** By the clock

**C.** By the ladder

**D.** By the individual

**E.** By the doctor

**F.** By the caregiver

**G.** By the regimen

**Questions:**

**8(i).** Mr. Cherian has cancer of the larynx and was treated with surgery and radiotherapy. He has managed his own tracheostomy for 2 years without difficulty. He has recently been diagnosed with recurrence and was referred to the local pain and palliative care clinic for management of his difficult pain. The pain is well controlled but his brother is unhappy that he is taking morphine 10mg q4hourly. He has told Varghese morphine is a dangerous drug that will ‘leave you as an addict’ and should only be used when necessary. So Varghese wants injections. You explain to him that the oral route is best. Which principle of pain management are you following?

**8(ii).** David has cancer of the buccal mucosa. He has pain in his jaw with a shooting pain that radiates into his left ear. He has been taking Proxyvon (paracetamol and dextropoxyphene) one or two times a day but the pain is not controlled. Which principle of pain management would help Vijay?

**8(iii).** Sita has diabetes with several complications including partial blindness, hypertension, a small stroke and non-healing foot ulcers. She is looked after at home by her daughter-in-law. Her diabetes is under reasonable control now but she is complaining bitterly about pain in her feet. Initially you had put her on paracetamol and amitriptyline, then you had added a mild opioid analgesic. Now you plan to upscale it to a stronger opioid. Which principle of pain management are you following?

**8(iv).** Mr. Naik, a labourer from rural Bihar as well as Mr. Nair, a financier from Kerala, both patients with the same stage of lung malignancy are both being discharged from your ward. You prescribe morphine for Mr. Nair but another opioid for Mr. Naik. This is because you are following this principle of pain management:

**8(v).** A patient with cancer pain due to bone secondaries has only minimal relief from dextropoxyphene and paracetamol combination taken as required. You change the prescription to 2 tabs q6h and add diclofenac 50mg q8h. He comes to you after 2 weeks and you find that the pain is still not controlled. Now you change to oral morphine 5mg q6h and 5mg for ‘breakthrough’ and continue diclofenac 50mg q8h, adding bisacodyl 2-4 tabs to prevent constipation. Which principle of pain management are you following?

8(vi). The WHO has prescribed guidelines for this principle of pain management.

**9. Theme – Diabetic Neuropathy [Questions. 9(i) – 9(vi)] (Total: 6 Marks)**

**From the options ‘A to I’ given below, choose the best answer for the questions 9(i) – 9(vi)**

**Options:**

- |                            |                            |
|----------------------------|----------------------------|
| A. Generalized neuropathy  | F. Autonomic neuropathy    |
| B. Sub clinical neuropathy | G. Mononeuropathy          |
| C. Proximal neuropathy     | H. Auto-immune neuropathy  |
| D. Large fibre neuropathy  | I. Post-herpetic neuralgia |
| E. Small fibre neuropathy  |                            |

**Questions: What type of neuropathy is described in each of the scenarios?**

9(i). Mr. Selvan, a 40 year old Teacher and a diabetic for 5 years has come for his annual screening. On examination you find that his touch and vibration sense is impaired. However, he has no symptoms. He says that he feels absolutely fine.

9(ii). Mrs. Radhika, a 50 year old house wife and a diabetic for 10 years has come with small muscle wasting and deformity of toes and fingers. In addition, there is impaired vibration sense, depressed tendon reflexes and sensory ataxia.

9(iii). Mr. Sampath, a 63 year old retired bus driver and a diabetic for 12 years has come with complaints of burning, superficial pain of both lower limbs and hyperesthesia. On examination, there is a small ulcer in the big toe.

9(iv). 68 year old Mrs. Leela is a diabetic for almost 20 years now. She has come with complaints of pain in both the thighs. She tells you that in the beginning, she had pain only in the right thigh but now she is having pain in both the thighs. She is quite worried because she found that she is not able to rise from sitting position without help for the past two weeks.

9(v). Mr. Kirubakaran is 40 years old and he is diagnosed to have diabetes when he was 30 years old. Today he has come with complaints of double vision and blurred vision. On examination, there is ptosis and divergent squint. Pupillary reaction is normal and equal in both the eyes.

9(vi). 52 year old Mrs. Saramma has come with complaints of nocturnal diarrhea. She has been a diabetic for the past 10 years. She very reluctantly tells you there these nocturnal stools are often accompanied by urgency and incontinence of stools. On examination, resting pulse rate is 100/ minute. Her supine blood pressure is 130/ 90 mm of hg and blood pressure on standing is 100/ 80 mm of hg.

**10. Theme: CNS disorders in the elderly [(Questions 10(i) - 10(vi)] (Total: 6 Marks)**

**From options ‘A to O’ given below, choose the best answers for the questions 10(i)**

**To 10(vi):**

**Options:**

- |                                    |                            |
|------------------------------------|----------------------------|
| A. Delirium                        | I. Stroke in evolution     |
| B. Alzheimers’s dementia           | J. Parkinson’s disease     |
| C. Wernicke’s encephalopathy       | K. Huntington’s disease    |
| D. Incontinence                    | L. Parkinsonism            |
| E. Wilson’s disease                | M. Late life depression    |
| F. Multiple Sclerosis              | N. Late onset psychosis    |
| G. Seizure disorder                | O. Age-related memory loss |
| H. Mild Cognitive Impairment (MCI) |                            |

**Questions:**

**10(i).** Mr. Gopal, an 80 year old otherwise healthy man developed right sided weakness for which he sought medical attention only after 48 hours. On examination, he was found to have mild right hemiparesis. What is the diagnosis of concern in this patient?

**10(ii).** Mr. Santosh, a 74 year old gentleman has been brought to the clinic by his family as they are concerned about overall health. The family reports that his walk and talk have changed. On exam, he has a blank facial expression and slow voluntary movements. When asked to walk, he had difficulty rising from his chair and his gait was characteristic of small, shuffling steps. What is your diagnosis?

**10(iii).** Mrs. Shanthi, an 84 year old lady was admitted to the hospital with severe cellulitis of the left lower limb. On day 3 of admission, she became agitated, pulled out her IV line and was trying to leave the ward. She became very angry with the nurse who tried to help her and said that she was trying to hurt her. What is the likely diagnosis?

**10(iv).** Mrs. Pramila, a 76 year old lady was brought to the clinic by her daughter with complaints of forgetfulness. Detailed mental status examination revealed that her answers for questions to check memory were generally correct. She looks dull however, and takes a long time to answer questions. What is her likely diagnosis?

**10(v).** Mr. Jonathan is a 70 year old gentleman with a history of forgetfulness for nearly 2 years, worse in the last 6 months. He has difficulty dressing, forgets directions easily and even makes mistakes while finding rooms in his house. He makes mistakes in the names of his children, and cannot remember where he keeps his money. What is his most likely diagnosis?

**10(vi).** Mr. Raju, 67 year old, a retired engineer was found unconscious on his bed. The housekeeper recalls she saw his entire body become tight a few minutes before he became unconscious, and his bed was wet with urine. What is his diagnosis?

\*\*\*\*\*

(LM 0218)

M.MED. FAMILY MEDICINE

(Sub Code: 4011)

**SECOND YEAR THEORY EXAM- FEBRUARY 2018  
PAPER I - MEDICINE AND ALLIED SCIENCES**

*QP .CODE: 434011*

**Time: Three Hours**

**Maximum Marks: 100**

**INSTRUCTIONS**

- The paper will be for a total of **100 Marks**.
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- **Part A** will be **descriptive type questions** based on case scenarios. **(40 Marks)**
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  - ✓ This will have 10 sets of these questions.
  - ✓ Each set will have 6 questions.
  - ✓ Each question will carry 1 mark.
  - ✓ Each set has a **theme** on the top. Below this, some **options** are given followed by some **questions**. The options are lettered using the English alphabets **A, B, C, D** and so on.

Example:

**3. THEME –COMMON PSYCHIATRIC PROBLEMS [QUESTIONS. 3(i) – 3(vi)] (6marks)**  
**From the options ‘A to H’ given below, choose the best answer for the questions 3(i) – 3(vi)**

**Options:**

- A.** Inj. Haloperidol
- B.** Amitriptyline + counseling
- C.** Tab. Chlorpromazine
- D.** Tab. Trihexyphenidyl
- E.** Tab. Diazepam
- F.** Tab. Lithium
- G.** Inj. Fluphenazine deconate
- H.** Tab. Risperidone

**Questions: What is your treatment option in the following cases?**

- 3(i) What is the drug of choice for Acute Psychosis?
- 3(ii) What is the drug of choice for Bipolar illness?

- ❖ Match each question to a **single best option** and write it in your paper in the column provided like this:

3(i)	
3(ii)	
3(iii)	
3(iv)	
3(v)	
3(vi)	

- ❖ Each option may be used more than once. Some options may not be used at all.

**PART – A**  
**DESCRIPTIVE QUESTIONS**  
**(ANSWER ALL QUESTIONS)**

1. 35 year old Mrs.Renuka, a house wife has come with joint pains for the past 2 months. The joint involvement is bilateral and symmetrical and involves all the fingers and wrist joint. There is history of morning stiffness. **(Total: 20 Marks)**

- A. What is the likely diagnosis for Mrs. Renuka? What are the criteria for making this diagnosis? **(4 Marks)**
- B. What are the other clinical features you will look for in this patient? **(5 Marks)**
- C. How will you investigate this patient? **(4 Marks)**
- D. How will you manage this patient? What are the safety precautions and monitoring required during drug therapy? **(7 Marks)**

2. 25 year old Mrs. Lalitha, a mother of four children has come with complaints of excessive tiredness, breathlessness on exertion, palpitations and dizziness. On examination, she is looking pale. **(Total: 20 Marks)**

- A. What are the common types of anaemia in our country? List the common causes of each type of anaemia. **(5 Marks)**
- B. How will you grade the severity of anemia? **(3 Marks)**
- C. How will you investigate a patient with anemia? **(4 Marks)**
- D. When will you suspect Vit.B12 deficiency? What are the ways it can present clinically? **(5 Marks)**
- E. How will you treat a patient with B12 deficiency anemia? **(3 Marks)**

**PART – B**  
**EXTENDED MATCHING QUESTIONS**  
**(ANSWER ALL QUESTIONS)**

1. **Theme: Bites and Stings [Questions 1(i) – 1(vi)]** **(Total: 6 Marks)**  
From the options 'A to J' given below, choose the best answer for questions 1(i) – 1(vi):

**Options:**

- |                  |                   |
|------------------|-------------------|
| A. Cobra bite    | F. Scorpion sting |
| B. Dry bite      | G. Krait bite     |
| C. Viper bite    | H. Centipede bite |
| D. Hemotoxicity  | I. Sea snake bite |
| E. Neurotoxicity | J. Millipede bite |

**Questions:**

*When Tarun brought his wife with a snake bite, he brought the killed snake along with him. The snake was about 4-5 feet long, with a brown body and three rows of dark blotches. He said that his wife was working alone in the house. There is no mark on the hood of the snake and the fangs are anteriorly placed.*

1(i). What bite is this?

1(ii). What is the type of toxicity you expect with this snake?

*Mrs. Aruna was bitten by a snake. She was brought to the hospital after 4 hours with pain at the bite site; she also had hazy vision, drooping of eyelids, dysarthria, dysphagia, paresthesia, and somnolence.*

1(iii). What bite is this?

*DhuruV was bitten by a snake. He reported to the hospital after 6 hours of the bite with a history of painful swelling in the back of his left hand. On examination, he was afebrile, vital signs were normal, and there were no abnormal neurological signs. His hemoglobin was 13g/dl, clotting time was 10 mins, PT INR 1.2, Blood urea/creatinine – within normal limits and the urine was clear.*

1(iv). What bite is this?

*15 year old Sunil is brought with vomiting, salivation, sweating, priapism and history of unknown bite. His blood pressure is 140/ 98 mm Hg.*

1(v). What could be the possible bite?

*Seela was bitten by a snake and she developed generalized pain, tenderness, stiffness of muscles and trismus within 30 minutes of the bite.*

1(vi). What kind of snake bite did Sheela sustain?

**2. Theme: Diagnosis of Common Skin Infections [Questions 2 (i) – 2(vi)] (Total: 6 Marks)**

**From options ‘A to J’ given below, choose the best answer for questions 2(i) – 2(vi):**

**Options:**

- |                  |                                      |
|------------------|--------------------------------------|
| A. Impetigo      | F. Pityriasis Versicolor             |
| B. Candidiasis   | G. Tinea Corporis                    |
| C. Scabies       | H. Common Wart                       |
| D. Herpes Zoster | I. Herpes Simplex gingivo stomatitis |
| E. Oral Thrush   | J. Condyloma acuminata               |

**Questions: What is the diagnosis for the patient descriptions given below?**

2(i). "Burrow" is characteristic of this infection which you found in the finger webs of 7 year old Suresh, who came with the complaint of itching.

2(ii). 30 year old man presents with skin lesions on his hands which are smooth skin coloured papules with a hyperkeratotic surface.

2(iii). 5 year old Usha with lesions over her face, which has golden-yellow crusts on them.

2(iv). 15 year old Mala presents with a 2 days history of fever and painful oral lesions.

2(v). 50 year old Mr. Ram, a diabetic, presents with vesicular eruptions over the right side of the trunk which have a dermatomal distribution.

2(vi). 10 year old Babu who lives in a school hostel presents with a hypo-pigmented coalesced macules over his chest and upper back. He says that many of his hostel-mates also have similar lesions.

**3. Theme: Treatment of Common Skin Infections [Questions 3(i) – 3(vi)] (Total: 6 Marks)**

From options 'A to L' given below, choose the best answer for the questions 3(i) – 3(vi):

**Options:**

- |                              |                                       |
|------------------------------|---------------------------------------|
| A. Systemic antifungals      | G. Coal Tar                           |
| B. Cryotherapy               | H. Surgical excision                  |
| C. Permethrin                | I. Topical erythromycin               |
| D. Acyclovir                 | J. Oral erythromycin                  |
| E. Terbinafine, hair removal | K. Topical fusidic acid, hair removal |
| F. 20% salicylic acid        | L. Ciclopiroxolamine                  |

**Questions: What is the treatment for the following patient scenarios?**

- 3(i). 8 year old child comes with Pediculosis of the scalp hair.
- 3(ii). 38 year old Mrs. Kalyani has asymptomatic, relapsing lesions of brown scaly, well defined macules in flexures of axillae and submammary area.
- 3(iii). 45 year old Mrs. Sharmila has fine punched out pits, coalescing to give a cribriform pattern over soles.
- 3(iv). Mr. Natarajan comes with Common warts
- 3(v). 50 year old Saradha comes with fungal infection of toe nail and doesn't want oral drugs.
- 3(vi). 12 year old Savitha comes with yellowish brown concretions on hair shafts in axillae, causing yellow-brown staining of clothes in the area of arm pits.

**4. Theme: HIV Related Infections [Questions 4(i) – 4 (vi)] (Total: 6 Marks)**

From options 'A to N' given below, choose the best answer for the questions 4(i) – 4(vi):

**Options:**

- |                                   |                                   |
|-----------------------------------|-----------------------------------|
| A. Cerebral Lymphoma              | H. Tuberculosis                   |
| B. Cerebral Toxoplasmosis         | I. Streptococcal angina           |
| C. Antibiotic associated diarrhea | J. Pneumocystis carinii infection |
| D. Esophageal Candidiasis         | K. Cryptococcal Meningitis        |
| E. Herpes Zoster                  | L. Norwegian Scabies              |
| F. Lymphoma                       | M. Seborrhoeic Dermatitis         |
| G. Streptococcal skin infection   | N. Kaposi's Sarcoma               |

**Questions: What is the likely diagnosis for the following case scenarios?**

- 4(i). 35 year old man with HIV presents with dysphagia and weight loss.
- 4(ii). 29 year old Murali was diagnosed with HIV, 2 years back. Now he presents with several large cervical lymph nodes. Aspiration of lymph node is negative for Acid Fast Bacilli. Lymph node biopsy shows caseation.
- 4(iii). 33 year old Mrs. Kala with HIV presents with left thoracic pain. On examination, she has a few vesicular lesions where she is feeling the pain.
- 4(iv). 18 year old young man, diagnosed to be HIV positive, presented with high fever and protracted headache. What will be your first differential diagnosis in this case?

4(v). 25 year old who was diagnosed to have HIV infection 2 years back did not come for regular follow-up. He presents now with seizure. After recovering from seizures, he was noticed to have left hemiparesis. What could he probably have?

4(vi). 26 year old HIV positive patient presents with dry cough and progressively increasing breathlessness. On examination, he is tachypnoeic disproportionate to the X-ray findings and his SPO2 is 86%. What is your diagnosis?

**5. Theme: Geriatrics – Diagnosis [Questions 5 (i) – 5 (vi)] (Total: 6 Marks)**

**From options ‘A to K’ given below, choose the best answer for questions 5(i) – 5(vi):**

**Options:**

- |                               |  |
|-------------------------------|--|
| A. Urge incontinence          | G. Dementia                            |
| B. Stress incontinence        | H. Atrophic vaginitis                  |
| C. Osteoporosis               | I. Decreased response of               |
| D. Osteoarthritis             | J. hypothalamic-pituitary-adrenal axis |
| E. Age associated memory loss | K. Decreased testosterone              |
| F. Delirium                   | L. Parkinsonism                        |

**Questions: What is the likely diagnosis for the following case scenarios?**

5(i). Mr. Raju, 67 year old, a retired engineer is distressed because he could not remember the name of a friend he met that morning. He has no other functional impairment.

5(ii). Mr. Krishnan, 75 year old has been fit till 6 months back when his relatives found him difficult to manage. He repeats the same questions several times; he goes to visit friends and cannot find his way back. He becomes angry when cautioned and becomes restless and is unable to sleep.

5(iii). An 87 year old Mrs. Murali presents with urinary incontinence, this occurs while at sleep at 2 or 3 AM. She also leaks 3-4 times during the day. The post void volume is 20ml.

5(iv). 84 year old Savithri had a trivial fall in the house last month and sustained a fracture neck of femur which required surgery.

5(v). 60 year old post-menopausal woman complains of dyspareunia and dysuria.

5(vi). 72 year old Mr. Rangasamy presents with resting tremor, rigidity, bradykinesia, postural instability and cognitive impairment.

**6. THEME: Poisoning [Questions 6(i) – 6 (vi)] (Total: 6 Marks)**

**From options ‘A to I’ given below, choose the best answer for the questions 6(i) – 6(vi):**

**Options:**

- |                   |                             |
|-------------------|-----------------------------|
| A. Flumazenil     | F. Forced alkaline diuresis |
| B. Atropine       | G. Orciprenaline            |
| C. Ethanol        | H. N acetyl cysteine        |
| D. Naloxone       | I. Specific Fab fragments   |
| E. Zinc carbonate |                             |

**Questions: Choose the appropriate antidote for the patient descriptions given below:**

**6(i).** Antidote for an alcoholic who has attempted suicide by taking around 20 tablets of Paracetamol.

**6(ii).** Antidote for overdose of diazepam.

**6(iii).** Munna is brought to casualty with a history of ingestion of poison. The container that is brought along with reads 'carbamates'. What is the antidote?

**6(iv).** 6 men are brought to emergency after drinking illicitly brewed alcohol containing methanol. What is the antidote?

**6(v).** 4 year old Sheila has ingested 12 tablets of her grandfather's digoxin tablets accidentally.

**6(vi).** A habitual drug user is brought to the casualty with overdose of barbiturates. What is the antidote?

**7. THEME: Diabetes mellitus [Questions 7 (i) –7 (vi)] (Total: 6 Marks)**

**From options 'A to J' given below, choose the best answer for questions 7(i) – 7(vi):**

**Options:**

- |                                    |                        |
|------------------------------------|------------------------|
| <b>A.</b> Sulphonylureas           | <b>F.</b> Acarbose     |
| <b>B.</b> Life style modification  | <b>G.</b> Metformin    |
| <b>C.</b> Insulin therapy          | <b>H.</b> Pioglitazone |
| <b>D.</b> ACE Inhibitors           | <b>I.</b> Nateglinide  |
| <b>E.</b> Calcium channel blockers | <b>J.</b> Liraglutide  |

**Questions: What is your treatment of choice in the following cases?**

**7(i).** Mrs. Banu, age 45, is a newly diagnosed diabetic with no complications. In spite of her lifestyle modifications, her BMI is 32. The investigations are as follows: FBS 183mg%; PPBS 384mg%; urinary acetone negative.

**7(ii).** Mr. Shaheen, age 18, newly detected diabetic with no complications. His BMI: 15. The investigations are as follows: FBS: 233 mg%; PPBS: 483 mg%. Urinary Acetone: Negative.

**7(iii).** Mr. Mani, age 47, diagnosed to have diabetes a month ago with no complications. His BMI 21. He was advised 1800 kilo calories diet and walking for 45 minutes a day; He followed meticulously. After one month, the investigations are as follows: FBS: 186 mg%; PPBS: 376 mg%.

**7(iv).** Mr. Ramachandran, age 51, diabetic on Biguanides for the past two years. BMI 35. Occasional poor compliance. Now he has come with cellulitis of right leg extending to the knees. The investigations are as follows FBS 180 mg%; PPBS: 294 mg%, Creatinine normal.

**7(v).** Mrs. Kalaivani, age 24, primigravida with 6 months amenorrhoea, was found to have gestational diabetes in GTT. Fasting sugar after 2 weeks of diet and exercise is 148 mg%. She is not willing for insulin at all.

7(vi). Mr. Subash, age 48, diabetic on Sulphonylureas for the past three years. BMI 21. very good compliance. FBS 100 mg%; PPBS: 148 mg%. BP 140/ 90 in repeated occasions. Creatinine normal. Urine micro albumin 145 µg/minute.

**8. THEME: Fever [Questions 8 (i) – 8 (vi)] (Total: 6 Marks)**

**From the options ‘A to L’ given below, choose the best answer for questions 8 (i) – 8 (vi):**

**Options:**

- |                                   |   |
|-----------------------------------|---|
| <b>A.</b> Ampicillin + Gentamicin | <b>G.</b> IV fluids and monitoring        |
| <b>B.</b> Imipenem                | <b>H.</b> Plasma expanders and monitoring |
| <b>C.</b> Ceftriaxone             | <b>I.</b> Oral fluids and monitoring      |
| <b>D.</b> Chloroquine + Primaquin | <b>J.</b> Artesunate followed by ACT      |
| <b>E.</b> Metronidazole           | <b>K.</b> Chloroquine                     |
| <b>F.</b> Doxycycline             | <b>L.</b> Ciprofloxacin                   |

**Questions: Choose the correct management for the following patients:**

**8(i).** Mr. Leo, a 35 year old business man has come with complaints of sudden onset of fever, malaise, headache for the past 12 hours. You find that he also has severe back pain, retro orbital pain and mild conjunctival suffusion. There is no vomiting, pain abdomen or evidence of any mucosal bleeds. On examination, his blood pressure is 120/80 mmHg. There is a faint macular rash or mottling of the skin and liver is just palpable. Tourniquet test is positive. On investigating, Mr. Leo’s platelet count is 2,12,000/ mL.

**8(ii).** Mr. Hari has come with complaints of fever, headache, myalgia, cough and diarrhoea for the past 5 days. On examination, he is febrile; pulse rate is 88/minute and his blood pressure is 130/80 mmHg. There is a small black scab like lesion in the left forearm and the left axillary nodes are enlarged. Liver is palpable 3 cm below the right costal margin.

**8(iii).** Mr. Paul has come with fever for the past 4 days. He has vomiting and body ache, but he is otherwise fine. His peripheral smear shows plasmodium vivax. What will be your first drug of choice for treatment of the present episode?

**8(iv).** Mrs. Geetha is febrile and looks dehydrated. She has two children and her LMP was 2 weeks ago. Her blood pressure is 90/60 mmHg. She is continuously vomiting and not retaining anything orally. Her blood smear is positive for malaria, serum bilirubin is 4 mg/dl and serum creatinine 2.2mg/dl.

**8(v).** Mrs. Palaniamma, a 42 year old a mother of three children who works as a manual laborer, comes to you with dysuria and fever for 3 days.

**8(vi).** A 40 year Mr. Bhuiyo has been brought to you in a state of coma. He is from a malarial endemic area and a blood smear confirms the presence of Falciparum Malaria. You catheterize him and you get about 100 ml of reddish urine.

**9. Theme: Weight Loss in the Adult [Questions 9 (i) –9(vi)] (Total: 6 Marks)**

**From options ‘A to J’ given below, choose the best answer for the questions 9(i) – 9(vi):**

**Options:**

- |                          |                           |
|--------------------------|---------------------------|
| <b>A.</b> Hypothyroidism | <b>B.</b> Hyperthyroidism |
|--------------------------|---------------------------|

- |                          |                               |
|--------------------------|-------------------------------|
| C. Diabetes Mellitus     | G. Tuberculosis               |
| D. Chronic Renal Failure | H. Pheochromocytoma           |
| E. Depression            | I. Congestive cardiac failure |
| F. Malignancy            | J. Chronic liver disease      |

**Questions: What could be the likely cause for loss of weight in the following scenarios?**

**9(i).** 60 year old Mr. Titus, a known diabetic comes to you with the complaints of nausea and decreased appetite. He has noticed that his weight has reduced from 55 kg to 44 kg over the past six months. His sugars are under control. On examination his blood pressure is 140/90, he has pallor and mild bilateral pitting pedal edema.

**9(ii).** 55 year old Mrs. Cynthia presents with complaints of loss of appetite since 1 month. On examination, there is raised JVP, pedal edema and basal crackles on auscultation.

**9(iii).** A 28 year old Maya presents with complaints of weight loss though she has increased appetite, She is very happy with her family and her work. She also says that she has become intolerable to heat, feels anxious, and has palpitations, sweating and tremors.

**9(iv).** 26 year old Dinakaran came with history of loss of appetite and loss of weight. He has lost interest in his work and gets tired easily. He has lost his father six months ago.

**9(v).** 40 years old Hafeez presents with increased appetite but has loss of weight, he also feels thirsty and increase in frequency of micturition.

**9(vi).** 60 year old Narayan came with weight loss and constipation for the past three months. Constipation alternates with periods of diarrhea. There is blood associated with stools.

**10. Theme: Palliative care [Questions 10 (i) –10 (vi)] (Total: 6 Marks)**

**From options ‘A to M’ given below, choose the best answer for questions 10(i) –10(vi):**

**Options:**

- |  |                          |
|--|--------------------------|
| A. Oral Morphine                                     | G. Step 3 analgesia      |
| B. Step 2 analgesia                                  | H. Vomiting              |
| C. Haloperidol                                       | I. Hyoscine Butylbromide |
| D. Constipation                                      | J. Anaphylaxis           |
| E. Stop Morphine                                     | K. Fluoxetine            |
| F. Increase dose of dextropropoxyphene & paracetamol | L. Domperidone           |
|  | M. Headache              |

**Questions:**

**10(i).** Mrs. Saraswathi has carcinoma breast which was operated. She came back with severe bone pain due to bone secondaries. She went to the palliative clinic where she was started on a combination of paracetamol and dextropropoxyphene which she is taking once or twice a day. She comes to you with complaints that pain has not subsided. How will you manage her?

**10(ii).** Mr. Dayalan has Rhabdomyosarcoma of thigh which was operated. He was on chemotherapy. He has come back with lung secondaries with severe chest pain and cough. His pain is relieved only on taking Tab. Morphine. What is the commonest side effect of morphine?

**10(iii).** Mrs. Leela, a known patient of long standing diabetes mellitus, hypertension and foot ulcers which are non-healing, comes to you with severe pain of both feet not relieved on taking

different types of medicines. You examine her and find her pain to be neuropathic. What is the next step of analgesia you would recommend?

**10(iv).** Mr. Sridhar has large liver secondaries from an unknown primary. He has severe abdominal pain and was started on Tab. Morphine. He developed severe, unrelenting nausea. What is your next line of management?

**10(v).** Mr. Chellappa has inoperable carcinoma of the urinary bladder which has spread to the lungs. He has developed breathlessness which has become frightening for him and his family. How will you treat him?

**10(vi).** Mrs. Parvathi has end stage carcinoma of ovary with multiple metastasis. She is taken care of at home by her family. She is terminal now and produces a noise when she is breathing which is frightening for the family. How will you treat this?

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