

(LE 0214)

M.MED.FAMILY MEDICINE

Sub. Code: 4001

FIRST YEAR THEORY EXAM– FEB 2014

PAPER I - MEDICINE AND ALLIED SCIENCES

Q.P. CODE: 434001

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. 55 year old Mr. Ravi, a tailor, comes to your clinic with complaints of loose stools 4-5 times a day for the last four weeks. He has lost 4 Kgs over the last two months. He was treated in a nearby hospital and it has not given him any relief. On examination he is well-hydrated, but has pallor. Other than this, systemic examination is unremarkable.

(TOTAL: 20 MARKS)

- A. Is the cause of diarrhoea organic or functional? Give reasons. **(3 Marks)**
- B. Mr. Ravi says that he has occasionally noticed some blood as well as mucus in the stools. What are the differential diagnoses? **(4 Marks)**
- C. What are the red flags in this patient? **(5 Marks)**
- D. How will you investigate Mr. Ravi? **(5 Marks)**
- E. Describe features of small bowel diarrhoea. **(3 Marks)**

2. 24 year old Murthy, an agricultural worker and a known epileptic is brought to causality. He is seizing. His friends say convulsions started approximately 15 minutes before when he was working in the fields and has been continuing.

(TOTAL: 20 MARKS)

- A. What condition is he suffering from? Justify your answer. **(3 Marks)**
- B. What are the possible causes of Mr.Murthy's condition? **(3 Marks)**
- C. What are the three possible complications of prolonged seizures? **(3 Marks)**
- D. Draw an algorithm for the management for Mr. Murthy. **(8 Marks)**
- E. When will you refer Mr Murthy? **(3 Marks)**

PART – B
EXTENDED MATCHING QUESTIONS

(ANSWER ALL QUESTIONS)

1. THEME: FEVER – DIAGNOSIS & TREATMENT [QUESTIONS. 1(i) – 1(vi)]
(TOTAL: 6 MARKS)

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

Options :

- | | |
|--|---|
| A. Intermittent fever | I. Paracetamol and review after 48 hours if fever persists |
| B. T. Cefixime 200mg bd for 5 days | J. Tab. Azithromycin 500 mg od for 5days |
| C. Investigate for cause of fever and start antibiotics | K. Remittent fever |
| D. Change antibiotics, reassure and review after 2 days | L. Deep Abscess with a thick wall |
| E. 7 to 10 days | M. Penicillin G or Ceftriaxone 7 days |
| F. Metronidazole for 21 days | N. Large abscess with a thin wall |
| G. Advise admission and manage as inpatient | O. Haemophilus influenza |
| H. Staphylococcus aureus | P. Six weeks |
| | Q. Penicillin G or Ceftriaxone 10-14 days |
| | R. Metronidazole followed by diloxanide furoate for 10 days each |

Questions:

1(i) . 24 year old Mr. Manoj is admitted with fever. His temperature is not touching baseline but varies by more than 2⁰C. You will call this fever as.

1(ii). 22 year old Mr. Arvind presents to you in the OPD with fever of 2 days duration associated with body ache. There are no other symptoms. Clinical examination is normal except for a temperature of 101⁰C and a pulse rate of 108/min. Your best management plan would be

1(iii). 45 year old Mr. Sushil has cough, fever and pleuritic chest pain for the last 5 days. He was treated by a local doctor with C.Amoxycillin 500mg TID for the last 2 days but continues to have fever. His respiratory rate is 36/min, BP is 130/80. Respiratory system examination suggests consolidation. Your plan for him would be

1(iv). Antibiotic of choice for 22 year old Mr. Faizal whose CSF culture has grown Neisseria meningitides

1(v) . 30 year old Mr. Subash presents with a syndrome suggestive of atypical pneumonia without any indications for admission. The most appropriate antibiotic would be

1(vi) 71 year old Mrs. Latha is prescribed 21 days antibiotic for her pneumonia. What is the causative organism?

2. THEME: DYSPEPSIA [QUESTIONS. 2(i) - 2(vi)] (TOTAL: 6 MARKS)

From the options ‘A to K’ given below, choose the best answer for the questions 2(i) – 2(vi)

Options :

- | | |
|----------------------------|---------------------------|
| A. Cholecystitis | G. Faecal antigen testing |
| B. Malignant gastric ulcer | H. Urea breath test |
| C. Acid peptic disease | I. GERD |
| D. Leukaemia | J. Dyspepsia |
| E. Gastric ulcer | K. Non-ulcer dyspepsia |
| F. Duodenal ulcer | |

Questions:

- 2.(i).** Mr. Ravi has dyspeptic symptoms and is on treatment for H. Pylori. The test which is used in monitoring the progress of treatment in H. Pylori infection is
- 2.(ii).** Mr. Bashrat has dyspeptic symptoms, normal endoscopy and pellet-like stools and sensation of incomplete rectal evacuation. What is your diagnosis?
- 2.(iii).** 48 year old Mrs. Meena presents with right upper abdominal pain, nausea and frequent belching. Her BMI is 32. What is your diagnosis?
- 2.(iv).** Mr. Ram, a 63 year old man presents with loss of weight, loss of appetite and complaints of “acidity”. He has pallor on examination. What is your diagnosis?
- 2.(v).** Mr. Swamy, a 39 year old smoker and consumer of alcohol gives a 3 year history of upper abdominal pain which is more at nights and relieved by eating. He has gained weight in the past 3 months. What is your diagnosis?
- 2.(vi)** Mr. Dixit, a 30 year IT professional presents with epigastric pain which is relieved by vomiting and made worse by eating. He gives a history of weight loss over past 2-3 months. What is your diagnosis?

3. THEME: HYPERTENSION [QUESTIONS 3(i) – 3(vi)] (TOTAL: 6 MARKS)

From the options 'A to L' given below, choose the best answer for the questions 3(i) - 3(vi)]

Options :

- | | |
|-----------------------------------|-----------------------------|
| A. 120 -139 / 80-89 mmHg | G. Alpha 1 blocker |
| B. 140-159 / 90-99mmHg | H. Clonidine |
| C. >160 / 100 mm of Hg | I. Thiazides |
| D. Beta blocker | J. Alpha Methyl dopa |
| E. Calcium channel blocker | K. Alpha 2 blocker |
| F. ACE inhibitor | L. Spironolactone |

Questions:

- 3(i).** Mr.Balakrishna was told to have hypertension Stage 1. His BP should have been in the range of
- 3(ii).** 56 year old Mr. Muthu swami presents with edema and BP of 160/94 mm of Hg. The drug of choice for him will be
- 3(iii).** Drug of choice for 27 years old Kalyani, a primi gravida with BP160/100mmHg
- 3(iv).** Drug that can cause gynecomastia
- 3(v).** Drug of choice for 70 years old Mr.Basker with obstructive symptoms secondary to benign prostatic hypertrophy and BP-154/114 mm Hg
- 3(vi).** Drug of choice for 54yrs old Mr. Ashok, a known COPD patient with history of Transient Ischemic Attack .His blood pressure is BP-156/98 mmHg.

4. THEME: DIARRHOEA IN ADULTS [QUESTIONS. 4(i) – 4(vi)] (TOTAL: 6 MARKS)

From the options ‘A to I’ given below, choose the best answer for the questions 4(i) –4(vi)

Options :

- | | |
|----------------------------------|--------------------------|
| A. Anti Tuberculous Drugs | F. Tetracycline |
| B. Ganciclovir | G. Furazolidone |
| C. Paramomycin | H. Albendazole |
| D. ORS and symptomatic | I. Amphotericin B |
| E. Ciprofloxacin | |

Questions:

4 (i). Mr. Gauthum , an 28-year-old Mechanic, has come with history of two episodes of vomiting and 4 episodes of watery stools since morning. There was no blood in his stool. He feels tired and weak. His pulse is 100/min, BP: 100/60, He is lethargic, but his eyes are not sunken, tongue is moist, and skin looks normal.

4 (ii). 25-year-old Mrs. Rani presents with the history of diarrhoea with blood and mucus since last night. She has a low-grade fever with crampy abdominal pain.

4 (iii). 30-year-old Mr. Vishal is unwell for the past two months. He presents with history of loss of weight and appetite for the past 3 months. He has had a productive cough with a low-grade fever for the past 1 month. Diarrhoea is intermittent. On examination he is found to have ascites.

4 (iv). Treatment for Mr. Subbu, who is diagnosed to have tropical sprue

4 (v). Treatment for Mrs. Sita, a patient with positive HIV serology, and found to have CMV diarrhea.

4 (vi). Treatment for Mr. Sudhakar, a patient with positive HIV serology, and chronic diarrhea. His stool examination shows cryptococcal oocytes in stool examination.

5. THEME: CONSTIPATION- TREATMENT

**[QUESTIONS. 5(i) – 5(vi)]
(TOTAL: 6 MARKS)**

From the options ‘A to H’ given below, choose the best answer for the questions. 5(i)–5(vi):

Options:

- | | |
|---------------------------|-------------------------------|
| A. Bran | E. Bowel training |
| B. Antidepressants | F. Polyethylene glycol |
| C. Biscodyl | G. Liquid Paraffin |
| D. Lactulose | H. Enema |

Questions:

5(i). Causes reflex evacuation

5(ii). Changes intestinal mucosal permeability; stimulates muscle activity and fluid secretion.

5(iii). Causes Volume lavage

5(iv). Increases fecal bulk as well as the fluid retained in the bowel lumen

5(v). Lubricates and softens fecal mass

5(vi). Salts lead to retained fluid in the bowel lumen with increased fluid secretion in the small intestine.

**6. THEME : DIABETES MELLITUS – COMPLICATIONS [QUESTIONS. 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. Proliferative Diabetic Retinopathy | H. Cotton wool spots |
| B. Sub clinical neuropathy | I. Venous beading |
| C. Autonomic neuropathy | J. Hard exudates |
| D. Proximal neuropathy | K. Micro aneurysms |
| E. Large fiber neuropathy | L. Blot hemorrhages |
| F. Entrapment syndrome | M. Moderate NPDR |
| G. Diffuse symmetrical polyneuropathy | N. Severe NPDR |
| | O. Very severe NPDR |
| | P. Mild NPDR |

Questions :

6(i). 58 year old Mr.Raju, a diabetic on treatment presents with complaints of dull, aching, deep seated pain. On examination, he has impaired vibration sense, depressed deep tendon reflexes, Romberg’s sign positive, small muscle wasting and deformity of toes and fingers. What is the most likely cause for this?

6(ii) 78 year old Mr.Kasi, a known diabetic presents with pain in his right wrist and history of dropping his glasses and spoons. The pain has progressed slowly. He complains of numbness in hands and tingling in fingers. What is the most likely cause for this?

Mrs.Kani a known diabetic comes to you with difficulty in vision. You perform an ophthalmoscopic examination. You observe the following. What is your inference?

6(iii) Bright white yellow structures with a wavy outline , coalescing to form patterns in the retina are:

6(iv) When venous beading is present in two or more quadrants, it indicates:

6(v) Saccular outpouchings from retinal capillaries seen as round bright spots with regular borders:

6(vi) 81 year old Mr. Balu, a diabetic, presents to you with abrupt onset of pain in both thighs which started on the right thigh and progressed to the left thigh. This was followed by weakness of the thigh muscles and inability to rise from sitting position. What does Mr. Balu have?

7. THEME – EDEMA AND THYROID DISORDERS

**[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:

- | | |
|-------------------------------------|-----------------------------------|
| A. Hashimoto’s Thyroiditis | F. TSH high, free T4 low |
| B. Lymphocytic Thyroiditis | G. TSH normal, free T4 low |
| C. De Quervain Thyroiditis | H. TSH low, free T4 high |
| D. Growth hormone deficiency | I. Lithium |
| E. Hypothyroidism | J. Sodium valproate |

Questions: Mark the correct diagnosis for the following patients:

7(i) 37 year old Mrs. Janaki with goitre, high TSH, low free T4 and thyroid antibodies.

7(ii). Mrs. Sheela, a 65 years old lady comes to you with a history of bilateral pedal oedema, lethargy, constipation, weight gain and intolerance to cold. What is the diagnosis?

7 (iii). What will be her TSH and free T4 levels for you to make such a diagnosis?

7 (iv). 24 year old Megala, a type 1 diabetic with new onset thyroid swelling .She has delivered a healthy male baby 3 months ago.

7(v). Mrs. Sheetal, 65 years old lady develops symptoms of hypothyroidism after being on this medication.

7 (vi). 35 year old Mrs. Hilda with painful thyroid swelling, fever and malaise for the past 2 weeks

8. THEME: INTERPRETING CSF ANALYSIS RESULTS

[QUESTIONS 8(i) – 8(vi)] (TOTAL: 6 MARKS)

From the options 'A to H' given below, choose the best answers for the questions

8(i) – 8(vi):

Options:

A. CSF fluid turbid, WBC-500, Polymorphs- nil, Protein > 62mg/dl, Glucose - 45mg/dl.

E. Staphylococcus Aureus

B. CSF fluid turbid, WBC- 5238, Polymorphs- 86%, Protein 72 mg/dl, Glucose - 35mg/dl

F. Crystalline penicillin : 0.5 lakh units daily in 3 divided doses for 14 days.

C. CSF fluid turbid, WBC- 512, Polymorphs- 27% lymphocytes – 73% Protein 300mg/dl, Glucose - 40 mg/dl.

G. Cefotaxime: 200 mg / kg/day q 6 H for 14 days

D. CSF fluid crystal clear, WBC - 3, Polymorphs-nil, Protein 24 mg/dl, Glucose – 64 mg/dl

H. Neisseria Meningitides

Questions:

8(i). Mr. Ravi has been diagnosed to have bacterial meningitis. What will the CSF picture be?

8(ii) Mrs. Rani has been diagnosed to have viral meningitis. What will the CSF picture be?

8(iii) Mr. Das has been diagnosed to have tuberculous meningitis. What will the CSF picture be?

8(iv) Mrs. Fazia is suspected to have acute CNS infection. But the CSF picture turned out to be normal .What will the normal CSF picture be?

22 year old Mr.Balaji comes to you with symptoms of meningitis.CSF gram stain shows bacterial meningitis.

8(v) What is the most probable causative organism?

8(vi) How will you treat Balaji?

9. THEME – CHEST PAIN [QUESTIONS. 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. Dissecting aneurysm | H. Pneumothorax |
| B. Pericarditis | I. STEMI |
| C. Pulmonary embolism | J. NSTEMI |
| D. Pneumonia | K. Positive |
| E. Unstable angina | L. Negative |
| G. Stable angina | |

Questions: Mark the correct diagnosis for the following patients:

- 9(i).** Mr. Shankar, with pleuritic type of pain, fever with findings of egophony and dullness on percussion.
- 9(ii).** Mrs. Banu with pleuritic type of pain which gets relieved with sitting up and leaning forward . It gets aggravated by lying supine and change in position. On examination, her temperature is normal, pulse rate is 114/minute and B.P is 100/70mmHg.
- 9(iii).** Mr. Saleem , a known case of lung malignancy, presents with a sudden onset of severe dyspnoea and chest pain and hemoptysis.
- 9(iv).** Mr. Murugan, a known case of COPD presents with sudden onset of dyspnoea and chest pain. On examination, he is Afebrile, pulse rate is 114/minute; respiratory rate is 32/minute; trachea is shifted to opposite side, lung is hyper resonant with absent breath sounds.
- 9(v).** Mrs. Malini presents with retrosternal chest pain radiating to back, both the thighs and legs. On examination, pulses are absent in right lower limb, radial pulse rate is 120/minute, BP is 90/60mmHg.
- 9(vi).** Mrs. Packyavathi has come with typical chest pain within 2 hours of chest pain. Her ECG is normal and troponin levels I are 0.6 ng/mL. Is troponin level positive or negative for MI?

10. THEME: SEIZURES – DIAGNOSIS [QUESTIONS. 10(i) – 10(vi)]

TOTAL: 6 MARKS)

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

Options

- | | |
|---|---|
| A. Typical absence seizures | G. Atonic seizures |
| B. Complex partial seizures | H. Unclassified seizures |
| C. Simple partial seizures | I. Pathologic myoclonic seizures |
| D. Partial seizure with secondary generalization | J. Infantile spasms |
| E. Primary generalized seizures | K. Syncope |
| F. Tonic seizures | L. Psychogenic seizure |

Questions :

- 1.** Mala brings her 40 days old baby with complaints of episodes of abrupt movements of head, trunk or limbs; occur in a cluster of 10 to 20 movements per episode; the movements are sudden flexion of the neck and abdomen with extension of the limbs.
- 2.** 4 months old Subala’s baby with history of hypoxic birth injury is brought with complaints of episodes of sudden and brief muscle contraction that involve whole or part of the body. The child has not attained social smile yet.
- 3.** 7 year old Subbu is brought with episodes of sudden loss of postural tone lasting for 1 to 2 seconds associated with brief loss of consciousness. His EEG shows Brief, generalized spike-and-wave discharges followed immediately by diffuse slow waves that correlate with the loss of muscle tone.
- 4.** 6 month old Fausia is brought with episodes of rigid, violent muscular contractions, fixing the limbs in some strained position, with deviation of the eyes and of the head toward another side. These episodes of hypertonia are not followed by clonic jerks.
- 5.** 25 year old Murugan is brought with complaints of seizures; the seizures start suddenly; the initial phase consists of tonic contractions of the muscles throughout the body; he lets out a loud cry, develops impaired respiration, and cyanosis. Sometimes there is biting of tongue. This period of 10-20 seconds is followed by period of relaxation and then slowly he regains consciousness.
- 6.** 45 year old Mr. Sudhakar has complaints of episodes of experiencing unusual intense odors. CT scan of the brain will show a focal lesion in the temporal lobe. He does not lose consciousness during the episode.
