

APRIL - 2001

[KD 513]

M.D. (Siddha) DEGREE EXAMINATION

(New Regulations)

First Year

Branch V — Noi-Nadal

Branch VI — Nanju Noolum Maruthuva Neethi Noolum

Paper IV UYIR VEDHIYAL AND NUNNUYIRYAL

Time : Three hours Maximum 100 marks

Answer ALL questions

Answer Section A and B in separate answer books

SECTION A (50 marks)

(UYIR VEDHIYAL)

1. Draw and explain how glucose is converted into pyruvic acid during glycolysis. Calculate the production of ATP during the reaction. (10)
2. How are amino acids classified? Give example (10)
3. Describe the metabolism of calcium in our body. (10)

4. What are the hormones secreted by Pituitary gland? Briefly outline their functions. (10)

5. Describe the chemistry, functions and deficiency of Vitamin A. (10)

SECTION B — (50 marks)

(NUN-UYIRYAL)

6. List the hepatotropic viruses. Discuss in detail about the morphology, pathogenesis and laboratory diagnosis of Hepatitis-B virus. (15)

7. Discuss in detail about components, pathways and biological properties of complements. (15)

8. Write short notes on : (4 × 5 = 20)

- (a) ImVic test.
- (b) Weil's disease.
- (c) Opportunistic mycosis
- (d) Blood group antigens.

NOVEMBER - 2001

[KE 513]

M.D. (Siddha) DEGREE EXAMINATION

(New Regulations)

First Year

Branch V — Noi Nadal

Branch VI — Nanju Noolum Maruthuva Neethi Noolum

Paper IV — UYIR VEDHIYAL AND NUNNUYIRIYAL

Time : Three hours

Maximum : 100 marks

Answer ALL questions

Answer Sections A and B in separate answer books

SECTION A — (50 marks)

(UYIR VEDHIYAL)

1. Discuss how Iron is absorbed in intestine (10)
2. Draw and explain TCA cycle in detail. (10)
3. Explain the absorption of fat in our body. (10)
4. Name the free Nucleotides and their biological importance. (10)
5. What are the functions and synthesis of adrenaline and nor adrenaline? (10)

SECTION B — (50 marks)

(NUNNUYIRIYAL)

(MICRO BIOLOGY)

6. Define the terms sterilization, disinfection and antisepsis. Discuss the role of moist heat in sterilization. (15)
7. What is hyper sensitivity? How do you classify various types of hyper sensitivity reactions and discuss delayed hyper sensitivity reactions. (15)
8. Write short notes on : (4 × 5 = 20)
 - (a) Leprosy
 - (b) Bacteriophage
 - (c) Rubella
 - (d) Active immunizations

MARCH - 2002

[KG 513]

M.D. (Siddha) DEGREE EXAMINATION

(New Regulations)

First Year

Branch V — Noi-Nadal

Branch VI — Nanju Noolum Maruthuva Neethi Noolum

Paper IV — UYIR VEDHIYAL AND NUNNUYIRIYAL

Time : Three hours

Maximum : 100 marks

Answer ALL questions

Answer Sections A and B in separate answer books.

SECTION A (50 marks)

(UYIR VEDHIYAL)

- 1 What are the steps involved in glycolysis? (10)
- 2 Write down the β -oxidation of fatty acid (10)
3. Outline the physiological function and biochemical effects of calcium. (10)

4 Write down the metabolism of Magnesium (10)

5. Write an essay on the Metabolism of Sodium in our body. (10)

SECTION B (50 marks)

(NUNNUYIRIYAL)

6. Discuss the various virulence factors of staph. aureus. Discuss the laboratory diagnosis of various infections caused by staph. aureus. (1 × 15 = 15)

7. Discuss the pathogenesis and lab. diagnosis of polio virus. Discuss in detail about the prophylaxis against poliomyelitis. (1 × 15 = 15)

8 Write short notes on : (4 × 5 = 20)

- (a) Sugar media
- (b) Precipitation
- (c) Opportunistic mycosis
- (d) Flagella

SEPTEMBER - 2002

[KH 513]

M.D. (SIDDHA) DEGREE EXAMINATION

(New/Revised Regulations)

First Year

Branch V — Noi-Nadal

Branch VI — Nanju Noolum Maruthuva Neethi Noolum

Paper IV — UYIR VEDHIYAL AND NUNNUYIRYAL

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

ANSWER SECTIONS A AND B IN SEPARATE
ANSWER BOOKS.

SECTION A — (50 marks)

UYIR VEDHIYAL

1. What is the other name for Pantothenic Acid, give its metabolic role and requirement? (10)
2. Write an essay on Sulfur Metabolism. (10)
3. Explain the conversion of Pyruvic acid to Acetyl CoA. (10)
4. How bile acids and Bile salts are formed and give its functions? (10)
5. Classify Fatty acids (10)

SECTION B — (50 marks)

(NUN-UYIRIYAL)

(MICROBIOLOGY)

6. Define mutation. Write in detail about the various methods of gene transfer. (15)
7. Give an account of morphology. Cultural characters and toxins of *Es. coli*. Write in detail about the lab. diagnosis of infections caused by *Es. coli*. (15)
8. Write short notes on (4 × 5 = 20)
 - (a) Leptospirosis
 - (b) Western blot
 - (c) Varicella-Zoster virus
 - (d) Dengue fever.

APRIL - 2003

[KI 513]

Sub. Code : 2149

M.D. (SIDDHA) DEGREE EXAMINATION.

(New Regulations)

First Year

Branch V — Noi—Nadal

Branch VI — Nanju Noolum Maruthuva Neethi Noolum

Paper IV — UYIR VEDHIYAL AND NUNNUYIRYAL

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

Answer Section A and B in SEPARATE
answer books.

SECTION A — (50 marks)

(UYIR VEDHIYAL)

1. (a) Classify Enzymes with examples. (5)
(b) Explain oxidative deamination. (5)
2. (a) Write the Metabolism of Magnesium. (5)
(b) Explain Glucose tolerance test. (5)
3. (a) What is the production of ATP for each turn of TCA – cycle? (5)
(b) Mention the important functions of plasma proteins. (5)

4. (a) Define β oxidation of fatty acid and Knoop's experiment of β -oxidation. (5)

(b) Write a note on Hypothyroidism and Hyperthyroidism. (5)

5. (a) Draw and explain Watson and Crick model of DNA structure. (5)

(b) What are the deficiency manifestation and metabolic role of Vitamin D. (5)

SECTION B — (50 marks)

(NUN-UYIRIYAL)

6. Discuss in detail about the morphology and cultural characters of clostridium tetani. Write in detail about laboratory diagnosis and prophylaxis of Tetanus. (15)

7. Write in detail about the different types of immunity. (15)

8. Write short notes on : (4 × 5 = 20)

- (a) Intestinal Amoebiasis
- (b) Bacterial spore
- (c) MMR vaccine
- (d) Aspergillosis.

OCTOBER - 2003

[KJ 513]

Sub. Code : 2149

M.D. (SIDDHA) DEGREE EXAMINATION.

(New Regulations)

First Year

Branch V — Noi-Nadal

Branch VI — Nanju Noolum Maruthuva Neethi Noolum

Paper IV — UYIR VEDHIYAL AND NUNNUYIRIYAL

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

Answer Sections A and B in SEPARATE answer books.

SECTION A — (50 marks)

(UYIR VEDHIYAL BIOCHEMISTRY)

1. How can you separate and identify amino acids by paper chromatography? (10)
2. Name the enzymes of clinical interest and explain SGOT and SGPT in detail. (10)
3. What are the physiological role of pyridoxine? (10)

4. Draw and explain EMP — Embden Meyerhof pathway of Glycolysis. (10)

5. Write the physiological effects and factors regulating the secretion of Aldosterone. (10)

SECTION B — (50 marks)

(MICROBIOLOGY NUNNUYIRIYAL)

6. What are the types of diseases caused by Salmonellae? Describe the laboratory diagnosis of enteric fever. (15)

7. Describe the morphology, pathogenesis, laboratory diagnosis of Rabies virus infection. Give an account of the prophylaxis of Rabies. (15)

8. Write short notes on : (4 × 5 = 20)

- (a) Monoclonal antibodies.
- (b) Bacterial growth curve.
- (c) Passive immunity.
- (d) Robert Koch.

APRIL - 2004

[KK 513]

Sub. Code : 2149

M.D. (SIDDHA) DEGREE EXAMINATION.

(New Regulations)

First Year

Branch V — Noi-Nadal

Branch VI — Nanju Noolum Maruthuva Neethi Noolum

Paper IV — UYIR VEDHIYAL AND NUN-UYIRIYAL

Time : Three hours

Maximum : 100 marks

**Sec. A & B : Two hours and
forty minutes**

Sec. A & B : 80 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

Answer ALL questions.

Answer Sections A and B in SEPARATE answer books.

SECTION A — (UYIR VEDHIYAL)

I. Long Essay :

**(1) Discuss the structure and functions of
Phospholipids. (15)**

II. Write Short notes on :

(2) Diabetic Mellitus

(3) Metabolic Reactions of Serine

(4) Coenzyme activity of Vit. B complex

(5) Absorption of Iron

(6) Goiter. (5 × 5 = 25)

SECTION B — (NUN-UYIRIYAL)

I. Long Essay : (1 × 15 = 15)

**(1) Write a detailed account of Food poisoning,
the causative organisms and laboratory diagnosis.**

II. Short notes : (5 × 5 = 25)

(2) Bacterial staining reactions

(3) Pyogenic infections

(4) Spirochetes

(5) Cultivation of viruses

(6) Whooping cough

AUGUST - 2004

[KL 513]

Sub. Code : 2149

M.D. (SIDDHA) DEGREE EXAMINATION.

(New Regulations)

First Year

Branch V — Noi-Nadal

Branch VI — Nanju Noolum Maruthuva Neethi Noolum

Paper IV — UYIR VEDHIYAL AND NUN-UYIRIYAL

Time : Three hours

Maximum : 100 marks

**Sec. A & B : Two hours and
forty minutes**

Sec. A & B : 80 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

Answer ALL questions.

**Answer Sections A and B in the SEPARATE
answer books.**

SECTION A

Long essay : (1 × 15 = 15)

(1) Discuss the amphibolic role of TCA cycle.

Write short notes on : (5 × 5 = 25)

**(2) Discuss the relationship between vitamins
and hormones**

(3) tRNA

(4) Metabolic actions of Insulin

(5) Alcaptonuria

(6) β oxidation.

SECTION B

Long Essay : (1 × 15 = 15)

**(1) Give a detailed account of urinary tract
infections and laboratory diagnosis.**

Write short notes on : (5 × 5 = 25)

(2) Morphology of bacteria.

(3) Toxins.

(4) Plague.

(5) Interferon.

(6) Mycobacterium leprae.

FEBRUARY - 2005

[KM 513]

Sub. Code : 2149

M.D. (SIDDHA) DEGREE EXAMINATION.

(New Regulations)

First Year

Branch V — Noi-Nadal

Branch VI — Nanju Noolum Maruthuva Neethi Noolum

Paper IV — UYIR VEDHIYAL AND NUN-UYIRIYAL

Time : Three hours Maximum : 100 marks

**Sec. A & B : Two hours and Sec. A & B : 80 marks
forty minutes**

M.C.Q. : Twenty minutes M.C.Q. : 20 marks

Answer ALL questions.

**Answer Sections A and B in the SEPARATE
Answer Books.**

SECTION A

1. Write in detail : (1 × 15 = 15)
Discuss how blood glucose level is regulated.
2. Write short notes on : (5 × 5 = 25)
 - (a) Glycogen storage diseases.
 - (b) Gout.

- (c) β oxidation.
- (d) Electrophoresis
- (e) Vit. A.

SECTION B

3. List the causative agents of Enteric fever. (2)
Describe the pathogenesis and lab diagnosis of
salmonella typhi. (5 + 8)
4. Short notes on : (5 × 5 = 25)
 - (a) ELISA
 - (b) Bacteriophage
 - (c) Opportunistic mycoses
 - (d) Hook worm infection
 - (e) Culture media.

AUGUST - 2005

[KN 513]

Sub. Code : 2149

M.D. (SIDDHA) DEGREE EXAMINATION.

(New Regulations)

First Year

Branch V — Noi-Nadal

Branch VI — Nanju Noolum Maruthuva Neethi Noolum

Paper IV — UYIR VEDHIYAL AND NUN-UYIRIYAL

Time : Three hours

Maximum : 100 marks

**Sec. A & B : Two hours and
forty minutes**

Sec. A & B : 80 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

Answer ALL questions.

**Answer Sections A and B in the SEPARATE
Answer Books.**

SECTION A — (40 marks)

I. Long Essay : (1 × 15 = 15)

1. Draw and explain β -oxidation cycle of fatty acid.

II. Write short notes on : (5 × 5 = 25)

1. Functions of proteoglycans.

2. Transaminases of clinical interest.

3. Factors maintaining the plasma calcium concentration.

4. Physiological action of progesterone.

5. Wald's visual cycle.

SECTION B — (40 marks)

I. Long Essay : (1 × 15 = 15)

1. (a) List the microbial organisms causing diarrhoea.

(b) Describe the morphology and cultural characteristics of vibrio cholera.

(c) Describe the lab diagnosis of vibrio cholerae from rice water stool.

II. Write short notes on : (5 × 5 = 25)

1. Ascaris infection.

2. Lab diagnosis of HIV virus.

3. Subcutaneous mycosis.

4. Immunoprophylaxis.

5. Transport media.

FEBRUARY - 2006

[KO 513]

Sub. Code : 2149

M.D. (SIDDHA) DEGREE EXAMINATION.

(New Regulations)

First Year

Branch V — Noi-Nadal

Branch VI — Nanju Noolum Maruthuva Neethi Noolum

Paper IV — UYIR VEDHIYAL AND NUN-UYIRIYAL

Time : Three hours

Maximum : 100 marks

**Theory : Two hours and
forty minutes**

Theory : 80 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

Answer ALL questions.

**Answer Sections A and B in the SEPARATE
Answer Books.**

SECTION A — (40 marks)

(UYIR VEDHIYAL)

I. Long Essay : (1 × 15 = 15)

**1. Describe the characteristics and major functions of
plasma proteins. (15)**

II. Short notes on : (5 × 5 = 25)

1. Vitamin D is a hormone justify.

2. Quaternary structure of protein.

3. Serum enzymes in myocardial infarction.

4. Bile salts.

5. Glycogen storage diseases.

SECTION B — (40 marks)

(NUN - UYIRIYAL)

I. Long Essay : (1 × 15 = 15)

1. Define Hypersensitivity.

2. Classify Hypersensitivity.

3. Explain in detail Type IV hypersensitivity.

II. Write short notes on : (5 × 5 = 25)

1. Standard tests for syphilis

2. Balantidium coli

3. Bacteriophage

4. Lab diagnosis of opportunistic fungi

5. Biomedical waste disposal.

AUGUST - 2006

[KP 513]

Sub. Code : 2149

M.D. (SIDDHA) DEGREE EXAMINATION.

First year

(New Regulations)

Branch V – Noi-Nadal

Branch VI – Nanju Noolum Maruthuva Neethi Noolum

Paper IV — UYIR VEDHIYAL AND NUN-UYIRIYAL

Time : Three hours

Maximum : 100 marks

**Theory : Two hours and
forty minutes**

Theory : 80 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

Answer ALL questions.

**Answer Sections A and B in the SEPARATE Answer
Books.**

SECTION A — (40 marks)

(UYIR VEDHIYAL)

I. Long Essay : (1 × 20 = 20)

**1. Write an essay on clinically important enzymes
and their significance.**

II. Write short notes on : (4 × 5 = 20)

- 1. Serum calcium**
- 2. Ketosis**
- 3. Plasma proteins**
- 4. Anterior pituitary hormones.**

SECTION B — (40 marks)

NUN – UYIRIYAL

III. Long Essay :

- 1. (a) Define acid fast bacilli. (1 × 20 = 20)**
**(b) Write in detail about laboratory diagnosis of
Mycobacterium tuberculosis.**

IV. Write short notes on : (4 × 5 = 20)

- 1. Bacterial cell wall**
- 2. Hepatitis C virus**
- 3. Immunoglobulins**
- 4. Laboratory diagnosis of malaria.**

March-2008

[KS 513]

Sub. Code : 2149

M.D. (SIDDHA) DEGREE EXAMINATION.

(New Regulations)

First Year

Branch V — Noi-Nadal

Branch VI — Nanju Noolum Maruthuva Neethi Noolum

Paper IV — UYIR VEDHIYAL AND NUNN-UYIRIYAL

Q.P. Code : 322149

Time : Three hours

Maximum : 100 marks

Answer ALL questions

Answer Sections A & B in the SEPERATE answer books.

SECTION A — (50 marks)

(UYIR VEDHIYAL)

- I. Long Essay : (1 × 20 = 20)
1. (a) How amino acids are classified? Give examples.
(b) Outline the steps in TCA cycle.
- II. Write short notes : (5 × 6 = 30)
1. Mention the enzyme deficiency in the following diseases :
- (a) Phenylketonuria
(b) Hyperammonemia Type I
(c) Alkaptonuria

2. How are proteins digested?
3. Vitamin D is a hormone and not a vitamin. Justify.
4. What are the types of enzyme specificities?
5. What are the metabolic effects of glucagon?

SECTION B — (50 marks)

(NUNN UYIRIYAL)

- I. Long Essay : (1 × 20 = 20)
1. Define immunity and discuss in detail about native immunity.
- II. Write short notes on : (5 × 6 = 30)
1. Bacterial spores
2. Differential media
3. Lab diagnosis of rabies
4. Fungal stains
5. Blood culture.

[KT 513]

Sub. Code : 2149

M.D. (SIDDHA) DEGREE EXAMINATION.

(New Regulations)

First Year

Branch V — Noi-Nadal

Branch VI — Nanju Noolum Maruthuva Neethi Noolum

Paper IV — UYIR VEDHIYAL AND NUNN-UYIRIYAL

Q.P. Code : 322149

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

**Answer Sections A & B in the SEPERATE
answer book.**

SECTION A — (50 marks)

(UYIR VEDHIYAL)

I. Long Essay : (1 × 20 = 20)

**1. Structure, Biosynthesis, Metabolism, Regulation
and Metabolic actions of INSULIN.**

II. Write short notes on : (5 × 6 = 30)

1. Metabolic functions of Ascorbic acid.

2. Functions of plasma proteins.

3. Energy production and inhibition of Glycolysis.

**4. Mention any five important co-enzymes and give
its action.**

5. Biological functions of Nucleic acid.

SECTION B — (50 marks)

(NUNN-UYIRIYAL)

I. Long Essay : (1 × 20 = 20)

**1. List the bacterial aetiological agents of
diarrhoea. Describe the morphology, pathogenesis and
lab diagnosis of vibrio cholerae.**

II. Write short notes on : (5 × 6 = 30)

1. Type I hyper sensitivity.

2. Entamoeba histolytica.

3. Poliovirus.

4. Candida albicans.

5. Robert koch.

March - 2009

[KU 513]

Sub. Code : 2149

M.D. (SIDDHA) DEGREE EXAMINATION.

(New Regulations)

First year

Branch V — Noi-Nadal

Branch VI — Nanju Noolum Maruthuva Neethi Noolum

Paper IV — UYIR VEDHIYAL AND NUN-UYIRIYAL

Q.P. Code : 322149

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

Answer Section A & B in the SEPERATE answer books.

SECTION A — (50 marks)

(UYIR VEDHIYAL)

I. Long Essay : (1 × 20 = 20)

1. Draw and Explain the Salient Features and Reactions of GLYCOLYSIS. and add a note on its Regulation and production of ATP.

II. Write a short notes on : (5 × 6 = 30)

- 1. Bio-Chemical functions of pantothenic acid**
- 2. Allosteric regulation.**
- 3. Mechanism of absorption of Monosaccharides.**
- 4. Energetics of β -oxidation.**
- 5. What are the tests to assess liver function.**

SECTION B— (50 marks)

(MICROBIOLOGY)

I. Long Essay : (1 × 20 = 20)

1. Classify the salmonella group of bacteria write about the morphology, pathogenesis laboratory diagnosis and prevention of salmonella infections.

II. Write a short notes on : (5 × 6 = 30)

- 1. Coryne bacterium diphtheria**
- 2. Immono - Prophylax is of Infectious Diseases.**
- 3. Anti - Fungal Agents and their usess.**
- 4. Amoebae - Types, pathogenesis and lab diagnosis.**
- 5. Zoonotic -Infections.**

September - 2009

[KV 513]

Sub. Code : 2149

M.D. (SIDDHA) DEGREE EXAMINATION.

(New Regulations)

First Year

Branch V — Noi-Nadal

Branch VI — Nanju Noolum Maruthuva Neethi Noolum

Paper IV — UYIR VEDHIYAL AND NUN-UYIRIYAL

Q.P. Code : 322149

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

Answer Section A and B in the SEPARATE answer books.

SECTION A — (50 marks)

(UYIR VEDHIYAL)

I. Long Essay : (1 × 20 = 20)

1. Discuss the oxidation of Pyruvic acid to Acetyl CoA.

II. Write short notes on : (5 × 6 = 30)

1. Pompe's disease (Type II).

2. Reaction of amino acids with FDNB.

3. Respiratory Quotients of Food stuffs.

4. Factors controlling absorption of calcium.

5. Physiological actions of progesterone.

SECTION B — (50 marks)

(NUN-UYIRIYAL – MICROBIOLOGY)

III. Long Essay : (1 × 20 = 20)

1. Describe bacterial growth curve. Discuss in detail about bacterial physiology.

IV. Write short notes on : (5 × 6 = 30)

1. Blood culture.

2. Mantoux test.

3. Bacteriophage.

4. Superficial mycoses.

5. Quellung Reaction.

September 2010

[KX 513]

Sub. Code : 2149

M.D. (SIDDHA) DEGREE EXAMINATION.

(New Regulations)

First Year

Branch V — Noi-Nadal

Branch VI — Nanju Noolum Maruthuva Neethi Noolum

Paper IV — UYIR VEDHIYAL AND NUN-UYIRIYAL

Q.P. Code : 322149

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

**Answer Section A and B in the SEPARATE
answer books.**

SECTION A — (50 marks)

(UYIR VEDHIYAL)

- I. Long Essay : (1 × 20 = 20)
1. Write in detail the Tricarboxylic Acid Cycle (TCA).
Add a note on the significance of this cycle.

II. Short notes : (5 × 6 = 30)

1. Write the source, daily requirement, normal level and functions of calcium.
2. Cerebrospinal Fluid (CSF) Analysis.
3. Structure of DNA.
4. What are the major regulatory factors of sodium and water balance?
5. Discuss the enzymes useful in clinical diagnosis.

SECTION B — (50 marks)

(NUN UYIRIAL)

(MICROBIOLOGY)

III. Essay : (1 × 20 = 20)

1. Name the bacterial organisms causing diarrhoea. Describe the morphology, cultural characteristics and lab diagnosis of vibrio cholerae.

IV. Write short notes on : (5 × 6 = 30)

1. Dengue fever.
2. Lab diagnosis of pulmonary tuberculosis.

3. Type I hypersensitivity.

4. Chemical agents used in sterilisation.

5. Candidiasis.

MAY 2011

[KY 513]

Sub. Code : 2149

M.D. (SIDDHA) DEGREE EXAMINATION.

(New Regulations)

First Year

Branch V — Noi-Nadal

Branch VI — Nanju Noolum Maruthuva Neethi Noolum

Paper IV — UYIR VEDHIYAL AND NUN-UYIRIYAL

Q. P. Code : 322149

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

Answer Section A and B in the SEPARATE answer books.

SECTION A — (50 marks)

UYIR VEDHIYAL

I. Long Essay :

(1 x 20 = 20)

1. Give an account of fatty acid oxidation with suitable figure.

II. Write short notes on :

(5 x 6 = 30)

1. What are the biochemical functions of copper?
2. Bio-chemical functions of Adrenocortico steroids.
3. Electrolyte balance – Explain.
4. What are the isoenzymes of LDH and give its significance and diagnostic importance?
5. Functions of phospholipids.

SECTION B — (50 marks)

NUN-UYIRIYAL (MICROBIOLOGY)

III. Long Essay :

(1 x 20 = 20)

1. Laboratory diagnosis of tuberculosis.

IV. Write short notes on :

(5 x 6 = 30)

1. Non specific urethritis.
 2. Polymerase chain reaction.
 3. Dengue.
 4. Anti Rabies Vaccine.
 5. Entomeba histolytica.
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October 2011

[KZ 513]

Sub. Code: 2149

DOCTOR OF MEDICINE (M.D.) SIDDHA DEGREE EXAMINATION

FIRST YEAR

BRANCH V – NOINADAL

BRANCH VI – NANJU NOOLUM AND MARUTHUVA NEETHI NOOLUM

PAPER IV – UYIRVEDHIYAL AND NUNNUYIRIYAL

(BIOCHEMISTRY AND MICROBIOLOGY)

Q.P. Code : 322149

Time : Three hours (180 minutes)

Maximum : 100 marks

Answer ALL questions in the same order.

Answer Section A and B separately

SECTION A — (50 marks)

UYIR VEDHIYAL

(BIOCHEMISTRY)

I. Elaborate on :

Pages (Max.)	Time (Max.)	Marks (Max.)
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1. Describe Hexose monophosphate shunt and add a note on its significance. What are the importance of pentoses and NADPH?

11	35 min.	20
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II. Write notes on :

1. Tests to assess liver function.
2. Give any three examples for glycerophospholipids and explain it.
3. Iso enzymes of creatine phosphokinase. And give its clinical significance.
4. Bio-chemical functions of pyridoxine with example for each.
5. Bio-chemical functions of catecholamines.

4	10 min.	6
4	10 min.	6
4	10 min.	6
4	10 min.	6
4	10 min.	6

(PTO)

SECTION B — (50 marks)
NUNNUYIRIYAL (MICROBIOLOGY)

I. Elaborate on :

Pages (Max.)	Time (Max.)	Marks (Max.)
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1. Define Immunity. Enumerate the different types of immunity.

Write in detail about innate immunity.	11	35 min.	20
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II. Write notes on :

- | | | | |
|-------------------------------------|---|---------|---|
| 1. Anaerobic culture methods. | 4 | 10 min. | 6 |
| 2. Hepatitis B vaccine. | 4 | 10 min. | 6 |
| 3. Swine flu. | 4 | 10 min. | 6 |
| 4. Dermatophytosis. | 4 | 10 min. | 6 |
| 5. Laboratory diagnosis of malaria. | 4 | 10 min. | 6 |
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[LB 513]

Sub. Code : 2149

M.D. (SIDDHA) DEGREE EXAMINATION – OCTOBER 2012

First Year

(Common to Branch V and VI)

**Paper IV — UYIR VEDHIYAL AND NUNNUYIRIYAL
(BIOCHEMISTRY AND MICROBIOLOGY)**

Q.P. Code : 322149

Time : 180 minutes

Maximum : 100 marks

Answer ALL questions in the same order.

Answer Section A and B separately.

SECTION A — (50 marks)

UYIR VEDHIYAL (BIOCHEMISTRY)

I. Elaborate on :	Pages	Time	Marks
1. Biochemical functions and abnormalities of Adrenal hormones.	(Max.) 11	(Max.) 35 min.	(Max.) 20
II. Write notes on :			
1. Clinically important enzymes.	4	10 min.	6
2. Pyridoxine.	4	10 min.	6
3. Biochemical functions and abnormalities of copper.	4	10 min.	6
4. Rapoport-Leubering cycle.	4	10 min.	6
5. Production of ketone bodies and ketosis.	4	10 min.	6

SECTION B — (50 marks)

NUNNUYIRIYAL (MICROBIOLOGY)

I. Elaborate on :		Pages	Time	Marks
1.	Describe the bacterial cell structure and functions with suitable illustration. Name five common bacteria which cause diarrhoea, their mode of transmission and the specific part of the alimentary tract affected by them. Add a note of vaccine for cholera.	(Max.) 11	(Max.) 35 min.	(Max.) 20
II. Write notes on :				
1.	Types of media.	4	10 min.	6
2.	Classes of antibody.	4	10 min.	6
3.	Immunodiffusion.	4	10 min.	6
4.	Yersinia pestis.	4	10 min.	6
5.	Hepatitis B virus.	4	10 min.	6

[LC 513]

SUB CODE : 2149

M.D. (SIDDHA) DEGREE EXAMINATION – APRIL 2013

FIRST YEAR

(Common to Branch V & VI)

PAPER IV – UYIR VEDHIYAL & NUNNUYIRIYAL

(Biochemistry & Microbiology)

Q.P.Code : 322149

Time : 3 hours

Maximum : 100 marks

Answer Section A and B Separately

Section –A

I. Long Essay : (1x20=20)

1. Write the location, reactions, energetic and regulation of citric acid cycle with suitable figure.

II. Short Notes: (5x6=30)

1. Write the diagnostic importance of enzymes and Iso enzymes.
2. Name the various biologically important peptides and their functions.
3. What are the functions of Liver? Write about the tests to assess liver functions.
4. Write the synthesis, functions and clinical significance of various components of plasma proteins.
5. Bio-synthesis, bio-chemical functions, regulation and abnormalities of thyroid hormones.

Section –B

I. Long Essay : (1x20=20)

1. Explain the general properties of virus and classify the viruses based on nucleic acid contents.

II. Short Notes: (5x6=30)

1. Explain different types physical sterilization methods.
2. Explain different types Immunoglobulin with suitable illustrations
3. Give an account on Antigen and antibody reactions.
4. Explain the mechanisms of Type I hypersensitivity.
5. Explain the mechanism of Auto immune diseases.

[LD 513]

SUB CODE : 2149

M.D. (SIDDHA) DEGREE EXAMINATION – OCTOBER 2013

FIRST YEAR

(Common to Branch V & VI)

PAPER IV – UYIR VEDHIYAL & NUNNUYIRIYAL

(Biochemistry & Microbiology)

Q.P.Code : 322149

Time : 3 hours

Maximum : 100 marks

Answer Section A and B Separately

Section –A

I. Long Essay : (1x20=20)

1. Integrate carbohydrate, protein and fat metabolism with reference to TCA cycle with suitable figure.

II. Short Notes: (5x6=30)

1. Write the names, functions and disorders of adrenal cortical hormones.
2. Write a note on water balance, electrolyte balance and acid-base balance and its disorders.
3. Bio-chemical functions and disease states of sodium and potassium.
4. Write the enzyme pattern in diseases.
5. What are the biochemical functions of folic acid and vitamin B12 and also add a note on their interrelationship.

Section –B

I. Long Essay : (1x20=20)

1. Explain in detailed about the bacterical growth and nutritional requirement for growth with suitable growth curve pattern.

II. Short Notes: (5x6=30)

1. Explain the materials and methods involved in identification of Bacteria.
2. Give an account on Mycobacterium tuberculosis.
3. Explain the diagnostic procedure of Vibrio cholera infection.
4. Differentiate disinfectant and antiseptics.
5. Classify the virus based on nucleic acid content.

[LE 513]

SUB CODE : 2149

M.D. (SIDDHA) DEGREE EXAMINATION – APRIL 2014

FIRST YEAR

(Common to Branch V & VI)

PAPER IV – UYIR VEDHIYAL & NUNNUYIRIYAL

(Biochemistry & Microbiology)

Q.P.Code : 322149

Time : 3 hours

Maximum : 100 marks

Answer Section A and B Separately

Section –A

I. Long Essay :

(1x20=20)

1. Draw the figure and Explain the oxidation of fatty acid and its energetics.

II. Short Notes:

(5x6=30)

1. Explain glucose tolerance test with suitable graph.
2. Classify phospholipids and Name the various glycerophospholipids and their functions.
3. What are the tests to assess renal function, define clearance and Explain creatinine clearance test.
4. Write the chemistry and functions of anterior pituitary hormones
5. Write a note on calcium metabolism.

Section –B

I. Long Essay :

(1x20=20)

1. Give the detailed account on culture media and pure culture technique.

II. Short Notes:

(5x6=30)

1. Explain the different types of Infection and add a note on Normal flora.
2. Draw the structure of gram negative bacterial cell and explain its organelles
3. Comment on Leptospirae.
4. Give an account on urinary tract infection causing micro organisms
5. Explain the different types of Hepatitis Virus.

**M.D.(SIDDHA) DEGREE EXAMINATION
FIRST YEAR
BRANCH V & VI**

**PAPER IV – UYIRVEDHIYAL AND NUNNUYIRIYAL
(Biochemistry and Microbiology)**

Q.P. Code :322149

Time: Three Hours

Maximum : 100 Marks

SECTION - A

I. Elaborate on:

(1 x 20 = 20)

1. Write an essay on chemistry, mechanism of Action, functions and clinical importance of female sex hormones.

II. Short Notes:

(5 x 6 = 30)

1. Urea cycle.
2. Chemistry of cerebro-spinal fluid.
3. Types and functions of RNA.
4. Functions and disorders of Sodium.
5. Chemistry and Functions of Vitamin D.

SECTION - B

I. Elaborate on:

(1 x 20 = 20)

1. Give a detailed account on Gram staining method and explain the general properties of Gram negative bacterial cell with illustration.

II. Short Notes:

(5 x 6 = 30)

1. Explain different types physical sterilization methods.
2. Briefly explains the Widal test and add a note on its application.
3. Explain the mechanisms of Type I hypersensitivity.
4. Give an account on different types of Hepatitis virus.
5. Explain the leptospirosis add a note on its vector.

M.D. (SIDDHA) DEGREE EXAMINATION
FIRST YEAR
BRANCH V – NOI NAADAL &
BRANCH VI – NANJU NOOLUM MARUTHUVA NEETHI NOOLUM
PAPER IV – UYIR VEDHIYAL AND NUNNUYIRIYAL
(Biochemistry and Microbiology)

Q.P. Code : 322149

Time: Three Hours

Maximum : 100 Marks

Answer ALL questions in the same order

SECTION - A

I. Elaborate on:

(1 x 20 = 20)

1. Write an essay on source, daily requirement, functions, deficiency and clinical importance of Vitamin A.

II. Short Notes on:

(5 x 6 = 30)

1. Diseases of Malnutrition.
2. Mucopolysaccharides.
3. Structure and functions of DNA.
4. Function and disorders of Potassium.
5. Chemistry and Functions of Aldosterone.

SECTION - B

I. Elaborate on:

(1 x 20 = 20)

1. Explain in detailed about the bacterial growth and nutritional requirement for growth with suitable growth curve pattern.

II. Short Notes on:

(5 x 6 = 30)

1. Explain the procedure and the steps involved in the identification of unknown Bacteria.
2. Give an account of *Mycobacterium tuberculosis*.
3. Explain the characteristics and diagnostic procedure of *Clostridium tetani* and *Corynebacterium diphtheriae*.
4. Comment on disinfectant and antiseptics.
5. Classify the virus based on nucleic acid content.

**M.D.(SIDDHA) DEGREE EXAMINATION
FIRST YEAR
BRANCH V & VI**

**PAPER IV – UYIRVEDHIYAL AND NUNNUYIRIYAL
(Biochemistry and Microbiology)**

Q.P. Code :322149

Time: Three Hours

Maximum : 100 Marks

SECTION – A

I. Elaborate on: (1 x 20 = 20)

1. Write an essay on source, absorption, transport, storage, daily requirement, functions and disorders of Calcium.

II. Short Notes on: (5 x 6 = 30)

1. Cushing's syndrome.
2. Extrinsic pathway of Blood coagulation.
3. Glycolysis pathway.
4. Function and deficiency of Thiamine
5. Body Water Balance.

SECTION – B

I. Elaborate on: (1 x 20 = 20)

1. Give a detailed account on Physical and chemical sterilization methods.

II. Short Notes on: (5 x 6 = 30)

1. Explain the different classes of Immunoglobulins with illustration.
2. Draw the structure of gram negative bacterial cell and explain its organelles.
3. Explain the salient features of *Treponema pallidum*.
4. Explain about Culture media and Cultural characteristics of *M. tuberculosis*.
5. Enumerate the properties of DNA Virus.

**M.D.(SIDDHA) DEGREE EXAMINATION
FIRST YEAR
BRANCH V & VI**

**PAPER IV – UYIRVEDHIYAL AND NUNNUYIRIYAL
(Biochemistry and Microbiology)**

Q.P. Code :322149

Time: Three Hours

Maximum : 100 Marks

SECTION – A

I. Elaborate on: (1 x 20 = 20)

1. Write an essay on Liver Function tests?

II. Short Notes on: (5 x 6 = 30)

1. Cerebrosides.
2. GTT.
3. Classification of enzymes.
4. Physiologically important peptides.
5. Importance of Nucleosides.

SECTION – B

I. Elaborate on: (1 x 20 = 20)

1. Write a detailed notes on Hypersensitivity reaction.

II. Short Notes on: (5 x 6 = 30)

1. Write a short notes on human Immunodeficiency virus.
2. Different types of culture medias.
3. Give an account of Tetanus Bacillus.
4. Different types of sterilization methods.
5. Write short notes on auto Immunity.

M.D.(SIDDHA) DEGREE EXAMINATION

FIRST YEAR

BRANCH V & VI

PAPER IV – UYIRVEDHIYAL AND NUNNUYIRIYAL
(Biochemistry and Microbiology)

Q.P. Code :322149

Time: Three Hours

Maximum : 100 Marks

SECTION – A

I. Elaborate on: (1 x 20 = 20)

1. Describe in detail chemistry of Blood Coagulation and write Short notes on bleeding disorders.

II. Short Notes on: (5 x 6 = 30)

1. Plasma Proteins.
2. Balanced Diet.
3. Glucagon.
4. Selenium.
5. Water Balance.

SECTION – B

I. Elaborate on: (1 x 20 = 20)

1. Explain the immunological phenomena of allergy. Describe in detail about atopy and its clinical manifestations.

II. Short Notes on: (5 x 6 = 30)

1. Write a short note on Leptospirosis.
2. Enumerate immune cells. Explain T – cell.
3. Write a short note on Complement system.
4. How do you cultivate viruses? Emphasis on tissue culture.
5. Draw the diagram of a bacterial spore. Classify bacteria based on spore shape and position.

**M.D.(SIDDHA) DEGREE EXAMINATION
FIRST YEAR
BRANCH V & VI**

**PAPER IV – UYIRVEDHIYAL AND NUNNUYIRIYAL
(Biochemistry and Microbiology)**

Q.P. Code :322149

Time: Three Hours

Maximum : 100 Marks

SECTION – A

I. Elaborate on: (1 x 20 = 20)

1. Describe in detail Hexose Monophosphate shunt and its Physiological Importance.

II. Short Notes on: (5 x 6 = 30)

1. Cori's Cycle.
2. DNA structure and functions.
3. Phosphorus.
4. Body fluid compartments.
5. Chemistry of Cerebro-spinal fluid.

SECTION – B

I. Elaborate on: (1 x 20 = 20)

1. Write an essay on the growth requirements of bacteria. Describe the various phases of bacterial growth curve.

II. Short Notes on: (5 x 6 = 30)

1. What is TORCH panel? What is the purpose of doing these tests?
2. Describe the structure and function of IgM antibody.
3. What is traveler's diarrhoea? Discuss its pathogenesis.
4. Describe the Structure of flagella and add a note on its distribution.
5. What are L-forms? Differentiate Spheroplast and Protoplast.

**M.D. (SIDDHA) DEGREE EXAMINATION
FIRST YEAR
BRANCH V & VI**

**PAPER IV – UYIRVEDHIYAL AND NUNNUIYIRIYAL
(Biochemistry and Microbiology)**

Q.P. Code :322149

Time: Three Hours

Maximum : 100 Marks

SECTION – A

I. Elaborate on: (1 x 20 = 20)

1. Describe in detail about Female sex hormones and write short notes on clinical disorders associated with female sex hormones.

II. Short Notes on: (5 x 6 = 30)

1. Plasma Lipoproteins.
2. Diseases of Malnutrition.
3. Vitamin A deficiency.
4. RNA and its functions.
5. Sulfur and its physiological Importance.

SECTION – B

I. Elaborate on: (1 x 20 = 20)

1. Describe the pathogenesis of Rabies. Add a note on Rabies vaccines.

II. Short Notes on: (5 x 6 = 30)

1. Describe Koch Postulates.
2. How do you cultivate viruses? Emphasis on tissue culture.
3. Describe bacterial pharyngitis and its management.
4. Write a short note on sexually transmitted diseases. Discuss LGV.
5. What is bacterial capsule? Describe Quellung's reaction.

M.D. (SIDDHA) DEGREE EXAMINATION
FIRST YEAR
BRANCH V & VI

PAPER IV – UYIRVEDHIYAL AND NUNNUYIRIYAL
(Biochemistry and Microbiology)

Q.P. Code :322149

Time: Three Hours

Maximum : 100 Marks

SECTION – A

I. Elaborate on: (1 x 20 = 20)

1. Write an essay on Transamination, Deamination and Urea cycle.

II. Short Notes on: (5 x 6 = 30)

1. Write a note on Obesity.
2. Importance of Nucleotides.
3. Body Fluid Compartments.
4. Functions of Progesterone.
5. Disorders of Fluorine.

SECTION – B

I. Elaborate on: (1 x 20 = 20)

1. Explain in detailed about the Immunoglobulins.

II. Short Notes on: (5 x 6 = 30)

1. Explain the materials and methods involved in identification of Viruses.
2. Give an account of *Mycobacterium tuberculosis*.
3. Explain the diagnostic procedure of *Salmonella* infection.
4. Differentiate disinfectant and antiseptics.
5. Classify the bacteria based on structure.

[LN 2149]

OCTOBER 2018

Sub. Code: 2149

M.D. (SIDDHA) DEGREE EXAMINATION

FIRST YEAR

BRANCH V & VI

PAPER IV – UYIRVEDHIYAL AND NUNNUYIRIYAL
(Biochemistry and Microbiology)

Q.P. Code :322149

Time: Three Hours

Maximum : 100 Marks

SECTION – A

I. Elaborate on:

(1 x 20 = 20)

1. Write an essay on Beta – oxidation of Fatty Acids and Ketosis.

II. Short Notes on:

(5 x 6 = 30)

1. Biologically important peptides.
2. Biochemical functions of Selenium.
3. Balanced diet.
4. Symptoms of Pellagra.
5. Diabetes insipidus.

SECTION – B

I. Elaborate on:

(1 x 20 = 20)

1. Explain the general properties of viruses and classify the viruses based on nucleic acid contents.

II. Short Notes on:

(5 x 6 = 30)

1. Explain different types Chemical sterilization methods.
2. Explain different types Immunoglobulin with suitable illustrations.
3. Give an account on Antigen and Antibody reactions.
4. Explain the mechanisms of Type II and III hypersensitivity.
5. Give an account on Human Immunodeficiency virus and Hepatitis B virus.

[LO 2149]

MAY 2019

Sub. Code: 2149

M.D. (SIDDHA) DEGREE EXAMINATION

FIRST YEAR

BRANCH V & VI

PAPER IV – UYIRVEDHIYAL AND NUNNUYIRIYAL
(Biochemistry and Microbiology)

Q.P. Code :322149

Time: Three Hours

Maximum : 100 Marks

SECTION – A

I. Elaborate on:

(1 x 20 = 20)

1. Give a detailed account on Gluconeogenesis.

II. Short Notes on:

(5 x 6 = 30)

1. Write a note on Fatty Liver.
2. Describe briefly about clinically important enzymes.
3. Explain the functions of Phosphorus.
4. Functions of Pituitary hormones.
5. Biochemical Functions of Vitamin K.

SECTION – B

I. Elaborate on:

(1 x 20 = 20)

1. Give a detailed account on Microbial isolation technique and culture media.

II. Short Notes on:

(5 x 6 = 30)

1. Explain the different types of Infection and add a note on Normal flora.
2. Draw the structure of Immunoglobulin (IgG) with illustration.
3. Comment on Leptospirae.
4. Give an account on urinary tract infection causing microorganisms.
5. Explain the different types of Hepatitis Virus.
