

**2010**  
**MEDICAL SCIENCE (Optional)**  
**Paper : I**

**Standard : Degree**  
**Nature : Conventional**

**Total Marks : 200**  
**Duration : 3 Hours**

**Note :**

- (i) *Answers must be written in English.*
- (ii) *Question No. 1 is Compulsory. Of the remaining questions, attempt any four selecting one question from each section.*
- (iii) *Figures to the RIGHT indicate marks of the respective question.*
- (iv) *Number of optional questions upto the prescribed number in the order in which they have been solved will only be assessed. Excess answers will not be assessed.*
- (v) *Credit will be given for orderly, concise and effective writing.*
- (vi) *Candidate should not write roll number, any name (including their own), signature, address or any indication of their identity anywhere inside the answer book otherwise he/she will be penalised.*
- (vii) *For slab of 10 marks, the examinee is expected to write answers in 125 words.*

**1. Answer any four of the following (10 Marks each) : (40 Marks)**

- (a) Describe Larynx under following heads :
  - (i) Skeletal framework 2
  - (ii) Intrinsic muscles of Larynx 3
  - (iii) Nerve supply 2
  - (iv) Applied anatomy 3
- (b) Enumerate the hormones of anterior pituitary gland and describe the functions of growth hormone. 10
- (c) What is Diabetes Mellitus. How it is classified. Discuss laboratory investigations in a case of Diabetes Mellitus. 10
- (d) Enumerate organisms causing meningitis. Discuss lab diagnosis of acute meningitis 10
- (e) Write briefly on Any Two : 10
  - (i) Clinical importance of Drug Half life.
  - (ii) Adrenaline in Anaphylactic shock.
  - (iii) Pralidoxime in organophosphorus poisoning.

**P.T.O.**

## SECTION - A

2. Answer the following sub-questions :
- |   |    |
|---|----|
| (a) Describe constrictors of the pharynx and add a note on swallowing mechanism | 10 |
| (b) Describe coronary circulation and its applied anatomy.                      | 10 |
| (c) Describe formation and fate of uro-genital sinus                            | 10 |
| (d) (i) Amniocentesis   | 5  |
| (ii) Phenylketonuria (PKU)  | 5  |
3. Answer the following sub-questions :
- |  |    |
|--|----|
| (a) Define inversion and eversion of foot and describe the muscles causing these movements . | 10 |
| (b) Enumerate layers of scalp and add a note on applied anatomy of scalp.                    | 10 |
| (c) (i) Development of right atrium of heart   | 5  |
| (ii) Atrial septal defects   | 5  |
| (d) Autosomal recessive inheritance  | 10 |

## SECTION - B

4. Answer the following sub questions :
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|---|----|
| (a) Define cardiac output and describe the factors regulating it.   | 10 |
| (b) Describe the errors of refraction.  | 10 |
| (c) Describe the classification of carbohydrates. State why sucrose is a non-reducing sugar, while maltose is a reducing sugar. | 10 |
| (d) Describe $\beta$ oxidation of fatty acids. Write a note on energetics of palmitic acid.                                     | 10 |
5. Answer the following sub questions :
- |  |    |
|--|----|
| (a) Rh blood group.  | 10 |
| (b) Deglutition.   | 10 |
| (c) Describe various liver function tests. State how different diagnostic enzymes are used for differential diagnosis of jaundice. | 10 |
| (d) Write a note on various detoxication mechanisms, giving one example each.  | 10 |

## SECTION - C

6. Answer the following sub questions:
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|---|----|
| (a) How leprosy is classified. Tabulate differences between lepromatous and Tuberculoid leprosy.  | 10 |
| (b) Define and classify cirrhosis. Discuss clinical features and laboratory investigations in a case of cirrhosis of liver.                       | 10 |
| (c) Define Sterilisation, disinfection and antisepsis. Enumerate methods of sterilisation using moist heat stating their use in hospital setting. | 10 |
| (d) Enumerate parasites infecting brain. Discuss life cycle and laboratory diagnosis of malarial parasites.                                       | 10 |

- |  | <b>Marks</b> |
|--|--------------|
| 7. Answer the following sub questions :  |              |
| (a) Define anemia. How will you investigate a case of iron deficiency anemia ?   | 10           |
| (b) Discuss etiology, gross and microscopic features of lung tumours.  | 10           |
| (c) Define and enumerate causes of pyrexia of unknown origin (PUO) Mention laboratory diagnosis of Enteric fever.  | 10           |
| (d) Enumerate viruses transmitted via sexual route. Mention modes of transmission of Hepatitis B Virus infection. Give brief account of vaccines available for Active Immunisation against hepatitis B virus infection. Mention immunization schedule. | 10           |

#### SECTION - D

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|---|----|
| 8. Answer following sub questions :   |    |
| (a) Describe development & management of drug dependence with suitable examples.  | 10 |
| (b) Write briefly <b>any two</b> :  | 10 |
| (i) Radio iodine  |    |
| (ii) Adverse effects of oral contraceptive pills  |    |
| (iii) Vitamin A   |    |
| (c) Define Infanticide. What are the autopsy findings of dead born foetus and Live born foetus? What are the possible un-natural causes of infant death.  | 10 |
| (d) Define & discuss infamous conduct with suitable examples. What are the duties of medical practitioner? What are the privileges and rights of the patients? .  | 10 |
| 9. Answer following sub questions :   |    |
| (a) Describe prevention and management of Adverse Drug Reactions with suitable examples.  | 10 |
| (b) Describe use and ADR of multi Drug therapy in Tuberculosis.   | 10 |
| (c) Classify sexual offences with suitable examples. Discuss examination of victim and accused of Rape with preservation of evidential material from Accused and Victim.  | 10 |
| (d) Classify Asphyxiants. Discuss physical characteristics, action, sources, signs & symptoms, effect of different air concentration, treatment, post mortem appearance, medicolegal importance and viscera preservation in poisoning due to 'CARBON MONOXIDE'. | 10 |

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