

MEDICAL SCIENCE
(Paper I)

Time Allowed : Three Hours

Maximum Marks : 300

QUESTION PAPER SPECIFIC INSTRUCTIONS

(Please read each of the following instructions carefully before attempting questions)

Question No. 1 is compulsory.

Candidate has to attempt FIVE questions in all, selecting the remaining questions from the Sections that follow, as directed in the paper.

The number of marks carried by a question/part is indicated against it.

Wherever any assumptions are made for answering a question, they must be clearly indicated.

Word limit in questions, wherever specified, should be adhered to.

SECTION 'A'

1. Answer any three of the following (each in about 200 words):
 - (a) Describe the development of right and left Atria. Mention the congenital malformations associated with its development. 20
 - (b) Mention different ways by which enzyme activity is regulated. Describe the regulatory steps of glycolysis. 20
 - (c) Discuss briefly immune response to Virus Infection. 20
 - (d) Classify diuretics. Discuss the dosage and route of administration of Furosemide in different clinical conditions. 20
 - (e) A person is having 24 teeth of which 20 are milk teeth. Answer with reasons what is the age of the person. 20
 - (f) Describe the aetiopathogenesis of chronic hepatitis. 20
2. (a) Write short notes on: (i) Development of uterus and its congenital anomalies. (ii) Distribution of facial nerve. 20
(b) Discuss the mechanism of action of Hormones. 20
(c) Explain why toxicity of vitamins is seen mainly with respect to fat soluble vitamins only. Describe different forms and roles of vitamin A. 20
3. (a) Write short notes on: (i) Broncho-pulmonary segments of lungs. (ii) Mechanism of locking and unlocking of knee joint. 20
(b) (i) Describe the structure and functions of muscle spindle. (ii) Compare the properties of monosynaptic and polysynaptic reflexes. 20
(c) Name the enzymes involved in DNA and RNA synthesis. Describe post-transcriptional modifications. 20

SECTION 'B'

4. (a) Discuss pathogenesis and pathology of ischaemic heart disease. 30
(b) Discuss pathogenesis and laboratory diagnosis of Cholera. 30
5. (a) Describe carcinoma colon. Name its pre-cancerous conditions. 30
(b) Name various parasites which may be found in the peripheral blood. Discuss briefly life cycle, pathogenicity and laboratory diagnosis of Plasmodium Falciparum 30

SECTION 'C'

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| 6. | (a) | Describe the mechanism of action and adverse effects of narcotic analgesics. | 20 |
| | (b) | Describe the mechanism of action, dosage and toxicity of ampicillin. | 20 |
| | (c) | Discuss adverse effects of the following drugs. (i) Chloroquin (ii) Metronidazole (iii) Methotrexate (iv) Aspirin | 20 |
| 7. | (a) | A skull has been sent to you for examination. How will you determine the sex and establish the individual identity? | 40 |
| | (b) | How will you differentiate an entry wound from an exit wound in case of a firearm injury? | 20 |