Civil Services (Main) Examination, 2002

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)

There are EIGHT questions divided in two Sections.
Candidate has to attempt FIVE questions in all.
Question Nos. 1 and 5 are compulsory and out of the remaining, any THREE are to be attempted choosing at least ONE question from each Section.
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. Attempt any three of the following in not more than 200 words each:

(a) Describe the course, relations and structures supplied by the recurrent laryngeal nerve. Name the most important single muscle of the body supplied by this nerve. **20**

(b) Discuss the development of face in brief and give its common developmental anomalies. **20**

(c) What are the different hormones and other factors affecting growth? **20**

(d) Outline the steps involved in recombinant DNA technology. State the applications in medicine **20**

2. (a) Describe the layers of the scalp and its blood supply. Why does it bleed profusely when cut? **20**

(b) Name the different chemoreceptors present in the body. Write the mechanism of action of any one of them. **20**

(c) Discuss the development of thyroid gland and its blood supply. **20**

3. (a) What do you mean by haemorrhagic disorders? Name the two common disorders. What are the steps of haemostasis? **20**

(b) Which are the main circadian rhythms in the body? Discuss any one of them. **20**

(c) What changes are produced in the uterus by female sex hormones during the menstrual cycle? How can the cycle be delayed? **20**

4. (a) Describe with the aid of a flow chart the metabolism of any one of the aromatic amino acids. Indicate the associated metabolic defects. How can this be diagnosed by laboratory tests? **20**

(b) What are the normal values of diffusion capacities of oxygen and carbon dioxide? Which factors affect the diffusion of oxygen in lungs? **20**

(c) Describe in brief the functions of plasma proteins. Where are they synthesized? Give the role of serum electrophoresis in the diagnosis of various diseases with the help of diagrams. **20**

SECTION 'B'

5. Attempt any three of the following in not more than 200 words each:

(a) What are the etiological factors in the genesis of oral cancer? Enumerate the malignant lesions that are likely to affect the oral cavity. Briefly describe their histopathological features. **20**

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(b) Discuss the etiology, sequelae and complications of Rheumatic fever. What are the short- and long-term measures taken in the prevention of Rheumatic heart disease? **20**

(c) Explain schematically the different phases of dose-response curve. Discuss the factors modifying the drug action. **20**

(d) Define 'Hurt'. What are the various clauses of 'grievous hurt'? Discuss the eighth clause in detail. **20**

6. (a) Classify malignant lymphomas. Describe the histological distinguishing features between Hodgkin's and non-Hodgkin's lymphomas. How is the prognosis of malignant lymphomas related to the histological type's? **20**

(b) What is biological warfare? Name the agents involved, in the genesis of biological warfare. Discuss the preventive measures you would like to undertake to contain biological warfare. **20**

(c) Discuss the etiopathogenesis and pathology of aseptic meningitis. **20**

7. (a) What do you mean by general anaesthesia? How are anaesthetics classified? What are the properties of an ideal anaesthetic? What are the common complications seen in general anaesthesia? **20**

(b) Write about the indications, dosages, side-effects and contraindications of Mitomycin C, Vincristine and Bleomycin. **20**

(c) What are the antiamoebic drugs? Discuss briefly the treatment of acute intestinal, chronic intestinal and hepatic amoebiasis. **20**

8. (a) Define 'partial hanging'. Describe typical ligature marks, seen in cases of ante-mortem hanging. How would you differentiate between ante-mortem hanging and post-mortem suspension? **20**

(b) Discuss differential diagnosis of "Red stain". Discuss briefly the various chemical tests for detection of human blood. **20**

(c) What do you understand by the term "Envenomation"? Explain. How will you differentiate between colubrine and viperine snake bites? Discuss briefly the management of a case of suspected snake bite. **20**

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