PAPER - I

SECTION A
1. Attempt any THREE of the following in not more than 200 words each:
   (a) Describe broncho-pulmonary segments of lungs. Mention their clinical importance. (20)
   (b) Describe the development of Kidney. Mention the anomalies associated with it. (20)
   (c) What are the different mechanisms for regulation of body temperature? Why in summer, when humidity of air increases the person feels more uncomfortable? (20)
   (d) Explain the biochemical role of vitamins in the prevention of megaloblastic anaemia. State their dietary sources. (20)

2. (a) Trace the pathway of pain and thermal sensations with the help of a diagram. (20)
   (b) What are the general features of parasympathetic division of autonomic nervous system. Why is it known as 'anabolic division'? (20)
   (c) Describe the formation of placenta and its anomalies. State the functions of the placenta. (20)

3. (a) What is the normal percentage of reticulocytes in blood? Mention the conditions in which reticulocyte count increases, giving reasons. (20)
   (b) Enumerate the hormones secreted by thyroid gland. What is the mechanism of thyroid enlargement in iodine deficiency in diet? (20)
   (c) What changes take place in the ovary, uterus, vagina and breast during a menstrual cycle? (20)

4. (a) State the salient features of human DNA. Outline the steps involved in the synthesis of eukaryotic DNA. Mention the major goals of human genome project. (20)
   (b) What is cardiac output? What are the factors affecting it? (20)
   (c) Explain with the aid of flow chart, how metabolic pathways are integrated in starvation. (20)

SECTION B

5. Attempt any THREE of the following in not more than 200 words each:
   (a) Describe aetiology of hepatic cirrhosis. (20)
   (b) What are 'OPPORTUNISTIC INFECTIONS'? Discuss the role of AIDS in the emergence of opportunistic infections. Briefly describe the genesis and spread of 'Multi-Drug-Resistance' (MDR) tuberculosis in India. (20)
   (c) Describe in short the significance of drug metabolizing enzymes. Mention the consequences of microsomal enzyme induction. (20)
   (d) Enumerate the tests performed for examination of suspected seminal strains. Describe confirmatory tests for seminal stains. (20)

6. (a) What are precancerous disorders? Describe precancerous disorders of the gastrointestinal tract in short. (20)
   (b) Discuss the aetio-pathogenesis of infective diarrhoeas in children. What are bacterial Resistance transfer factors (RTFs) and their role in the prevalence of infective diarrhoeas. (20)
   (c) Discuss the genesis of two important immune-complex diseases. What serological tests will help to determine the prognosis of the illness? (20)

7. (a) Discuss the therapeutic uses of p-receptor blocking agents. Mention the advantages of cardio-selective p-blockers over non-selective blockers. (20)
   (b) Classify benzodiazepines according to their prominent use. Discuss the therapeutic uses and adverse effects of diazepam. (20)
   (c) Discuss the antibacterial spectrum, therapeutic uses and adverse effects of Ciprofloxacin. (20)

8. (a) Classify the degrees of burn injuries. Describe the postmortem findings in a case of immediate death due to 100% burns by flame. (20)
   (b) Classify the 'Organophosphorus compounds'. Describe the signs, symptoms, diagnosis and management of acute malathion poisoning. (20)
   (c) Describe the features of the entry wound by a bullet fired, from a rifle. Mention the differentiating features of an entry and exit would caused by a rifled firearm. (20)
PAPER - II
SECTION A
(General Medicine, Paediatrics and Dermatology)

1. Write as desired on any three of the following: (3 x 20 = 60)
(a) Outline drug treatment (name, dose, toxicity) of HIV infection.
(b) Enumerate causes of stroke in a 35 year old person. Enlist various investigations to elucidate the cause.
(c) Mention clinical features of tubercular meningitis in a 6 year old child. List the names of the investigations.
(d) Describe various lesions of post kala-azar dermal leishmaniasis. Name the drugs to treat the condition.

2. A 30 year old alcoholic male has come to casualty with haematemesis. Discuss the differential diagnosis, list of investigations and management of such a case. (60)

3. A 10 year old girl child has developed general anasarca, cola coloured urine and blood pressure of 240/120 mm of Hg. Give differential diagnosis; mention names of investigations and give an outline of management of this patient. (60)

4. (a) Discuss causes and treatment of common urticarias. (30)
(b) Mention various systematic symptoms and signs of progressive systemic sclerosis (PSS). What are the diagnostic tests to confirm the PSS? (30)

SECTION B

5. Write short notes on any three of the following: (20 x 3 = 60)
(a) Choledochal cyst, types and management.
(b) Complications of supracondylar fracture of humerus
(c) Copper T
(d) Immunization schedule upto 18 months of a child as per Government of India guidelines

6. A 20 year old male presents with painful progressive swelling in the right groin. Enumerate the causes. Describe the management of strangulated indirect inguinal hernia. (60)