

IAS Mains Medical Science 1997

Paper I

Section A

Anatomy, Physiology & Biochemistry

1. Answer any three of the following (each in about 200 words):

a. Describe the hip joint under the following headings:

- i. ligaments
- ii. relations
- iii. movements
- iv. applied anatomy (20)

b. Give an account of the structure, secretion and functions of insulin (20).

c. Describe briefly the pathology of malignancies associated with Epstein-Barr virus (20).

d. Mention the dosage, route of administration, metabolism, toxic effects and pharmacokinetics of Ibuprofen (20).

e. How will you differentiate between antemortem and postmortem wounds (20)?

f. Mention the diseases caused by helminth infestation and discuss their laboratory diagnosis (20).

2. Answer the following questions

a. Draw and label a transverse section of abdomen at the level of lumbar one vertebra (20).

b. Define muscle tone, flaccid and spastic muscle. Describe the higher centres controlling muscle tone. Compare classical and ischaemic decerebration (20).

c. Describe the final common pathway by which carbohydrates, proteins and fats are metabolised. Explain why minimum glucose utilisation is needed even for the tissues that get their energy from aminoacids and fats (20).

3. Answer the following questions

a. Describe the coronary circulation of heart and add a note on its applied anatomy (20).

b. Discuss the regulation of gastric secretion and motility (20).

c. Describe the process of protein synthesis. Name the inhibitors of protein synthesis along with their site of action (20).

Section B

Pathology & Microbiology

1. Answer the following questions

a. Describe irreversible and reversible cell injury (20).

b. Define the terms sterilisation and disinfection. Describe the principles and uses of sterilisation by irradiations and vapour phase disinfectants (30).

2. Answer the following questions

a. Define nephrotic syndrome. Enumerate its causes. Give gross and microscopic picture of kidney amyloidosis (30).

b. Describe the bacterial growth curve (30).

Section C

Pharmacology Forensic Medicine & Toxicology

1. Answer the following questions

a. Write short notes on aspirin (20).

b. Explain briefly the mode of action of cephalothin (20).

c. Explain therapeutic uses and clinical toxicity of vincristine (20).

2. Answer the following questions

a. How will you differentiate between true and false virgin (20).

b. Describe various clauses of grievous hurt (20).

c. Describe the causes of death from wounds (20).