

MEDICAL SCIENCE - I (Optional)

Standard : Degree

Total Marks : 200

Nature : Conventional

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) :

- (a) Describe Hip joint under following heads : 10
 - (i) Type of the joint and factors stabilizing joint.
 - (ii) Movements of the joint and muscles involved in it.
 - (iii) Applied aspect.
- (b) (i) Describe the process of Haemostasis. 5
(ii) Describe the process of accommodation. 5
- (c) What is granuloma. Enumerate granulomatous conditions. Discuss mode of transmission and spread of tuberculosis. Enumerate Pulmonary lesions produced by tubercle bacilli. 10
- (d) Define sterilization. Enumerate the various techniques of sterilisation using moist heat at or below 100°C. Mention principle of autoclave. 10
- (e) What is pharmacokinetics ? Define clearance plasma half life ($T_{1/2}$) and volume of distribution (V_d) of a drug. Mention clinical significance of these pharmacokinetic parameters. 10

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SECTION - A

2. Answer the following sub-questions :
- (a) Describe morphology of the parotid gland, blood supply, nerve supply and add a note on applied anatomy. 10
 - (b) Describe spleen under following : 10
 - (i) Gross anatomy
 - (ii) Blood supply
 - (iii) Clinical anatomy
 - (c) Describe process of implantation and give abnormal site of implantations. 10
 - (d) Write notes on : 10
 - (i) Micro anatomy of compact Ground bone Transverse Section (T.S).
 - (ii) Sex chromatin.
3. Answer the following sub-questions :
- (a) Describe axillary nerve under. 10
 - (i) Root value
 - (ii) Course and relations
 - (iii) Branches
 - (iv) Applied anatomy
 - (b) Write notes on : 10
 - (i) Corpus callosum
 - (ii) Fibrous pericardium
 - (c) Write notes on : 10
 - (i) Yolk sac
 - (ii) First pharyngeal arch
 - (d) Write notes on : 10
 - (i) Mitochondria
 - (ii) Histology of Hyaline cartilage

SECTION - B

4. Short answer type questions :
- (a) (i) Functions of plasma proteins. 3
 - (ii) Dead space. 3
 - (iii) Haemodialysis. 4
 - (b) (i) Functions of saliva. 3
 - (ii) Milk let down. 3
 - (iii) Synapse. 4

		Marks
(c)	(i) Diagnostic and therapeutic use of enzymes.	5
	(ii) Lesch - Nyhan Syndrome	5
(d)	(i) Catabolism of Hemoglobin and related disorders.	5
	(ii) What is Recombinant DNA technology ? Write its four applications.	5
5.	Short answer type questions :	
(a)	(i) Active transport.	3
	(ii) Baroreceptors.	4
	(iii) Clearance test.	3
(b)	(i) Vit K	4
	(ii) Cushing's Syndrome.	3
	(iii) Enumerate functions of Hypothalamus.	3
(c)	Define Transamination and Deamination with examples. Write in brief about Fate of Ammonia.	10
(d)	What is Detoxification ? Explain in brief about phase I and phase II detoxification with examples.	10

SECTION - C

6.	(a) Enumerate diseases caused by Parasites. Mention their etiologic agent. Discuss Pathogenesis, clinical features and complications of any one of them.	10
	(b) Discuss etiologic classification and effects of Systemic Hypertension.	10
	(c) Enumerate organisms causing sexually transmitted infections. Describe laboratory diagnosis of primary syphilis.	10
	(d) Enumerate parasites causing diarrhoea in AIDS patient. Give life cycle, pathogenesis and laboratory diagnosis of E histolytic.	10
7.	(a) Define Leukemia. Discuss clinical features and laboratory diagnosis of Acute Leukemia.	10
	(b) Discuss etiology, diagnosis and complications of Myocardial Infarction.	10
	(c) Enumerate the causative agents of pyogenic meningitis. Give laboratory diagnosis of Neisseria meningitidis meningitis.	10
	(d) Enumerate the agents associated with superficial mycotic diseases. Give laboratory diagnosis of infections caused by candida albicans.	10

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SECTION - D

8. Answer the following sub-questions :

- (a) Classify Beta Blockers. Write their Therapeutic Indications. What is the status of Beta Blockers in CCF (Congestive Cardiac Failure) 10
- (b) Classify drugs used in treatment of tuberculosis. How are the patients categorised in RNTCP (Revised National Tuberculosis Control Programme) ? Mention mechanism of action and Indications of Rifampicin. 10
- (c) Define identity and what are the methods of establishing identity ? Write in detail about techniques and medico-legal uses of DNA FINGER PRINTING. 10
- (d) Define and classify Medical Negligence. Discuss the duties of R.M.P to society and patient. Write the functions of state medical council. 10

9. Answer the following sub-questions :

- (a) Classify NSAIDS. Give four differences between NSAIDS and OPIODS. Discuss therapeutic uses and Adverse Reactions of Aspirin. 10
- (b) Mention various types of oral contraceptives. Discuss their mechanism of action indications and adverse reactions. 10
- (c) Define and classify Hanging. What are the external and internal post mortem findings of Hanging ? Write in detail the difference between Ligature Strangulation and Hanging. 10
- (d) Define Toxicology. Define and classify Antidotes. Write in detail about organophosphorus compound poisoning, its treatment and medico-legal importance. 10

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