

Q.P. Code : 21759

(3 Hours)

[Total Marks : 70

- N.B. :** 1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Draw neat labelled diagrams wherever necessary.

1. Answer the following :

- (a) (i) Define : "Pre load" and "After load".
(ii) Differentiate between Primary and Secondary hypertension.
(iii) State the functions of Juxtaglomerular apparatus.
(iv) Enumerate the different types of Kidney stones.
(v) Give the general structure and composition of tooth.
(vi) What are the clinical conditions which may lead to jaundice ?

12

- (b) (i) _____ is reduced in Congestive Cardiac failure.
(ii) What is the secretion from the Chief cells of the stomach ?
(iii) Renal tubules secrete H^+ into the urine and reabsorb _____ so that it is not lost in the urine.

3

2. (a) Answer any two :

- (i) Draw a neat and labelled diagram of testis showing stages of spermatogenesis
(ii) Describe the process of Oogenesis
(iii) State the functions of Sertoli cells.

8

(b) Answer any one :

- (i) Write a note on Male Infertility
(ii) State the physiological role of Luteinizing hormone (LH) and Follicle Stimulating hormone (FSH)

3

3. (a) Answer any two :

- (i) Draw a neat and labelled diagram showing internal structure of heart.
(ii) Discuss the anatomical features of capillary. Explain the mechanism of capillary exchange.
(iii) Draw normal ECG. Explain the significance of segments and peaks and its diagnostic use.

8

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2

- (b) Answer any one : 3
- (i) Define Arrhythmia. Discuss in brief the causes of Arrhythmia.
 - (ii) What is the influence of sympathetic and parasympathetic innervations on the heart rate.
4. (a) Answer any two : 8
- (i) Draw a neat labelled diagram of section of Kidney. Discuss the functions of kidneys.
 - (ii) Discuss the role and physiological significance of renin - angiotensin - aldosterone system
 - (iii) Explain the phases of gastric secretion in detail.
- (b) Answer any one : 3
- (i) Write a note on Urinary Tract Infections.
 - (ii) State the etiology, signs and symptoms of Glomerulonephritis.
5. (a) Answer any two : 8
- (i) Draw a neat labelled diagram showing histology of small intestine.
 - (ii) Explain in detail the process of digestion and absorption of fats along the GI tract.
 - (iii) Give a detailed account on Peptic Ulcer.
- (b) Answer any one : 3
- (i) Write a note on Proton Pump.
 - (ii) Define cholecystitis and cholelithiasis.
6. (a) Answer any two : 8
- (i) What is the normal human Blood Pressure. Explain the hormonal regulation of Blood Pressure.
 - (ii) What is Angina Pectoris. State the risk factors, signs and symptoms of Angina Pectoris.
 - (iii) Provide the physiological role of the digestive enzymes:
 - (a) Pepsin
 - (b) Amylase
 - (c) Lypase
 - (d) Trypsin
- (b) Answer any one : 3
- (i) Discuss the functioning of Atrioventricular valves.
 - (ii) What does the heart sounds "lubb" and "dupp" indicate ?