

- N.B. : (1) **All** questions are **Compulsory**
 (2) Answer **all** sub questions **together**.
 (3) **Draw neat labeled diagram wherever necessary.**

Q.1A) Answer the following 16M

- i. Enlist heart valves.
- ii. Explain Stroke volume.
- iii. Differentiate between cortical and juxtamedullary nephrons.
- iv. Write down composition and functions of saliva.
- v. Give three basic processes of nephron.
- vi. Enlist phases of female reproductive cycle
- vii. Enlist vital functions of liver and gallbladder
- Viii. Explain cephalic phase of digestion.

Q.1B) Answer the following 4M

- i. The membrane that surrounds and protects the heart is _____.
- ii. _____ involves the maturation of spermatids into sperm.
- iii. _____ prevents filtration of blood cells but allows all components of blood plasma to pass through filtration membrane.
- iv. The _____ consists of areolar connective tissue that binds the mucosa to the muscularis.

Q.2 A) Answer any TWO of the following 8M

- i. Draw a normal ECG. Explain the significance of segments and peaks.
- ii. Write note on conduction system of heart.
- iii. Explain in detail structure of blood vessels.

B) Answer any ONE of the following 4M

- i. Write a short note on cardiac arrhythmia.
- ii. Write the Pathophysiology of hypertension.

Q.3 A) Answer any TWO of the following 8M

- i. Discuss in detail functions of liver and add a note on hepatocyte.
- ii. Draw a neat labeled diagram of anatomy of Large intestine.
- iii. Give detail account on chemical digestion in small intestine.

B) Answer any ONE of the following 4M

- i. Explain pathophysiology of reflux oesophegitis.
- ii. Write a short note on jaundice.

Q.4 A) Answer any TWO of the following 8M

- i. Discuss the process of reabsorption and secretion in proximate convoluted tubule.
- ii. Draw a neat labeled diagram of section of kidney and discuss funtions of kidneys.
- iii. Give hormonal regulation of tubular reabsorption and secretion.

B) Answer any ONE of the following 4M

- i. Write a note on urinary tract infection.
- ii. Write the Pathophysiology of kidney stone.

Q.5 A) Answer any TWO of the following 8M
i. Explain neural and hormonal regulation of blood pressure.
ii. Explain mechanism of capillary exchange and comment on net filtration pressure.
iii. Discuss in detail cardiac cycle.

B) Answer any ONE of the following 4M
1. Write the Pathophysiology of Sexually transmitted diseases.
2. Write a short note on infertility.

Q.6 A) Answer any TWO of the following 8M
i. Enlist and discuss reproductive system ducts in male.
ii. Write a note on oogenesis and follicular development.
iii. Draw a neat labeled diagram of testis

Q.6 B) Answer any ONE of the following 4M
i. Write a note on electrolyte in body fluid.
ii. Write a note on fluid compartments and fluid balance.
