

(3 Hours)

[Total marks : 70]

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

1. (a) Answer the following :

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- i) Give functions of connective tissue
- ii) Define: Leucopoiesis
- iii) Give functions of plasma membrane.
- iv) Explain diffusion transport.
- v) Enlist any four types of anemia.
- vi) Comment on wheel and flare response by histamine.

(b) Define :

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- i) Endocytosis
- ii) Active transport
- iii) Osmosis

2. (a) Answer any **TWO** of the following :

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- i) Explain synthesis of hemoglobin with its structure.
- ii) Explain types of immunity.
- iii) Enlist types of WBC. Explain in brief agranulocyte.

(b) Answer any **ONE** of the following :

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- i) Write a note on Erythropoiesis.
- ii) Write pathophysiology of Grave's diseases.

3. (a) Answer any **TWO** of the following :

8

- i) Explain mechanism of contraction of skeletal muscle.
- ii) Draw diagram of sarcomere.
- iii) Explain role of acetylcholine in contraction of skeletal muscle.

(b) Answer any **ONE** of the following :

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- i) Give classification of Lymphatic organ. Explain spleen.
- ii) Write a note on cardiac muscle.

4. (a) Answer any **TWO** of the following :

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- i) Explain process of formation of lymph.
- ii) Explain process of phagocytosis and pinocytosis.
- iii) Write a note on thalassaemia.

(b) Answer any **ONE** of the following :

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- i) Differentiate between skeletal and smooth muscles
- ii) Write a note on hypersensitivity reaction.

5. (a) Answer any **TWO** of the following :

- i) Draw diagram of fluid mosaic design of plasma membrane and write its functions.
- ii) Draw diagram of neuromuscular junction. Enlist hormones of neuromuscular junction.
- iii) Write a note on inflammation.

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(b) Answer any **ONE** of the following :

- i) Explain process of tissue repair.
- ii) Write a note on passive transport process.

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6. (a) Answer any **TWO** of the following :

- i) Write note on process of clotting of blood.
- ii) Explain life cycle of RBC.
- iii) Define blood and write its composition and functions.

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(b) Answer any **ONE** of the following

- i) Explain process of cell mediated immunity.
- ii) Write a note on role of prostaglandins in inflammation

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