

Q.P. Code : 21724

(2½ 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. (a) Answer the following : 12
- (i) Give structure and functions of stratified connective tissue.
 - (ii) Explain diffusion as a transport process.
 - (iii) Give composition of Lymph.
 - (iv) Write a note of thalassemia.
 - (v) Explain wheel & flare response by histamine.
 - (vi) Give salient features of cardiac muscles.
1. (b) Answer the following : 3
- (i) Define Homeostasis
 - (ii) Enlist factors affecting oxygen carrying capacity of haemoglobin.
 - (iii) Enlist various functions of muscle tissue.
2. (a) Answer any **two** of the following : 8
- (a) Explain the life cycle of RBCs in detail.
 - (b) Explain the mechanism of blood clotting in detail.
 - (c) Write a note on types of immunities and explain T-cell mediated immunity in detail.
- (b) Write short note on any **one**. 3
- (i) Write a note on Leucopoiesis
 - (ii) Write a note on Polycythemia
3. (a) Answer any **two** of the following : 8
- (i) Explain in detail mechanism of contraction of cardiac muscles.
 - (ii) Compare and contrast between smooth muscles and skeletal muscles.
 - (iii) Write a note on Energy metabolism in muscle contraction.
3. (b) Answer any **one** of the following : 3
- (i) Differentiate between isotonic & isometric type of muscle contraction.
 - (ii) Give a detailed account on role of
 - (a) Troponin
 - (b) Tropomyosin.

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4. (a) Answer any **one** of the following : 4
(i) Draw a neat labeled diagram of lymph node and write a note on formation of lymph.
(ii) Write a note on : (a) Spleen (b) Thymus
4. (b) Write short note on any **one** . 4
(i) Rheumatoid arthritis
(ii) Immediate type of hypersensitivity reactions
4. (c) Answer any **one** of the following : 3
(i) Draw a neat labelled diagram of Neuron and give functions of Neurons.
(ii) Discuss about bone as a connective tissue
5. (a) Answer any **one** of the following : 4
(i) Describe the structure and function of plasma membrane.
(ii) Write a note on carrier mediated transport of solute across membrane.
5. (b) Answer any **one** of the following : 4
(i) Explain the role of calcium & acetylcholine in contraction of skeletal muscles.
(ii) Draw a neat labelled diagram of a sarcomere. Describe its various zones and bands.
5. (c) Answer any **one** of the following : 3
(i) Discuss chemotaxis during inflammation
(ii) Describe the process of tissue repair
6. (a) Answer any **two** of the following : 8
(i) Write a note on composition of blood and give functions of blood in brief.
(ii) Explain ABO blood group system and write a note on erythroblastosis fetalis.
(iii) Enlist different types of anaemias and explain pathophysiology of any two types of anaemias in brief.
6. (b) Answer any **one** of the following : 3
(i) Compare transudate & exudate.
(ii) Discuss the phenomenon of plasma extravasation in inflammation.

Student sig

J.S. sig

Block 1

LO-Con. 2357-15.

Block 2

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