

2016-2017

SEM- ONE - APP

SEM-I. Reg CBCS

APP-I

second Half-2016

QP Code : 773700

(3 Hours)

[ Total Marks : 80

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

1. (a) Answer the following :- 16
- (i) Justify bone as a connective tissue.
  - (ii) Enlist the functions of plasma membrane.
  - (iii) Give functions of lymphatic system.
  - (iv) Explain how biconcave shape of RBCs help in Oxygen transport.
  - (v) Enlist the stimuli for acute inflammation.
  - (vi) Give features and location of cardiac muscle.
  - (vii) Describe positive feedback system.
  - (viii) Justify skin as a component of innate immunity.
- (b) (i) Excessive loss of RBCs from large wounds leads to \_\_\_\_\_ 4  
 anemia.
- (ii) Enlist the basic life processes.
  - (iii) Describe the role of fibrinogen.
  - (iv) \_\_\_\_\_ type of muscle is non-striated & involuntary.
2. (a) Answer any **two** of the following :- 8
- (i) Describe the process of hemoglobin synthesis.
  - (ii) Describe the blood coagulation pathways.
  - (iii) Classify leukocytes. Give detail account of Neutrophils.
- (b) Write a short note on any **one** of the following :- 4
- (i) Anemia
  - (ii) Hemolytic disease of Newborn (HDN)
3. (a) Answer any **two** of the following :- 8
- (i) Describe sarcomere with a neat, labelled diagram.
  - (ii) Describe the events of sliding filament mechanism involved in skeletal muscle contraction.
  - (iii) Explain the sources of energy in skeletal muscle.

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(b) Write a short note on any **one** of the following :-

- (i) Give detail account of muscle proteins.
- (ii) With the help of neat, labelled diagram explain anatomy of smooth muscle.

4

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

- (i) Draw a neat, labelled diagram of thymus.
- (ii) Explain how lymphatic organs are classified. Give detail account of primary lymphatic organs.

4

(b) Write a short note on any **one** of the following :-

- (i) Myasthenia Gravis
- (ii) AIDS

4

(c) Answer any **one** of the following :-

- (i) Write a short note on Extra Cellular Matrix (ECM).
- (ii) Draw a neat, labelled diagram of Neuron and discuss the general functions of nervous tissue.

4

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

- (i) Write a short note on active transport mechanism with suitable example.
- (ii) Give detail account of structure of plasma membrane.

4

(b) Answer any **one** of the following :-

- (i) Compare and contrast isotonic and isometric contractions.
- (ii) Discuss Neuromuscular junction with the help of a neat, labelled diagram.

4

(c) Answer any **one** of the following :-

- (i) Compare and contrast acute and chronic inflammation.
- (ii) Describe the process of angiogenesis.

4

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

- (i) Distinguish between innate and adaptive immunity.
- (ii) Discuss the process of erythropoiesis in detail.
- (iii) Explain the role of T-cells, B-cells and MHC in immunity.

8

(b) Answer any **one** of the following :-

- (i) Explain the role of any **two** of the following in inflammation:-
  - (a) Histamine
  - (b) Bradykinin
  - (c) Prostaglandin
- (ii) Discuss the process of chemotaxis.

4