

NTK/KW/15–6971

**First Semester Examination for the Degree
of Bachelor of Pharmacy**

HUMAN ANATOMY AND PHYSIOLOGY – I

Paper – 1 T 3

Time : Three Hours]

[Max. Marks : 80

- N. B. : (1) Question No. 1 is compulsory.
(2) Solve any four questions from the remaining.
(3) Draw neat labeled diagram wherever necessary.

1. Solve any **five** :—

- (a) Write in brief about different body cavities and their membrane.
- (b) Explain endocytosis and exocytosis.
- (c) Write functions of plasma proteins.
- (d) Explain normal electrocardiograph.
- (e) Write functions of lymph.
- (f) Draw well labeled diagram showing organs of respiratory system.
- (g) Explain renin-angiotensin system. 20

2. (a) Explain in detail structure of cell membrane and write functional significance of proteins and lipids on cell membrane. 10
- (b) Explain working of $\text{Na}^+\text{-K}^+$ pump. 5

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Contd.

3. Classify elementary tissues of human body and explain in detail distribution, characteristics and functions of connective tissues. 15
4. (a) Describe in detail mechanism of blood coagulation. 10
(b) Explain types and functions of different WBC. 5
5. (a) Explain action potential and its spread in contractile fibres of heart. 10
(b) Explain various phases of cardiac cycle. 5
6. (a) Describe in detail transport of O₂ and CO₂ in blood. 10
(b) Explain nervous regulation of respiration. 5
7. Write short notes on any **Three** :—
(a) Somatic cell division.
(b) Anaemia.
(c) Blood groups.
(d) Spleen.
(e) Vital capacity. 15