2017

PHYSIOLOGY

[Honours]

(CBCS)

[First Semester]

PAPER – C1T

Full Marks : 40

Time : 2 hours

Answer **all** questions

The figures in the right hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

Illustrate the answers wherever necessary

1. Answer any *five* questions from the following : 2×5

(*a*) Differentiate smooth muscle from cardic muscle on structural basis. 2

(*b*) What are liposomes ? What is their importance ? 1 + 1

(*c*) Distinguish between flex and flip-flop movements of membrane lipids. 2

(*d*) What is pinocytosis ? 2

(*e*) Define cytoribosomes. 2

(*f*) Write down the significance of gap junction. 2

(*g*) Write down functions of microtubules in cellular movements. 2

(*h*) What are nucleoid materials ? 2

2. Answer any *four* questions from the following : 5 × 4

(*a*) Write down the principles of phase contrast microscopy with its uses. 3 + 2

(*b*) Write notes on tight junction and CAM. $2\frac{1}{2} + 2\frac{1}{2}$

(*c*) Differentiate white fibrous and yellow elastic tissues. What are microsomes ? 3 + 2

(*d*) Write down the difference between facilitated diffusion and active transport. What are claudin molecules ? (2 + 2) + 1

(*e*) Write briefly on voltage and ligand gated channels. Differentiate phosphoglycerides and sphingomyelin. (2 + 2) + 1

(*f*) Write down the distributions and functions of stratified epithelium tissues. What is meant by functional syncytium ? (2 + 2) + 1

3. Answer any *one* question from the following : 10 × 1

(*a*) (*i*) Write in brief about membrane proteins with their structures and functions.

(*ii*) State the functions of peroxisomes.

(*ii*) Write briefly on different events of cell cycle including characteristic features of each event. 3 + 3 + 4

(*b*) (*i*) What are cytoskeletons ?

(*ii*) Give a brief description of different types of cytoskeletal structures found in eukaryotic cells including their functions. 1 + (5 + 4)