

( 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 ) )

Total Pages—4

B.Sc-CBCS/IS/PHY/H/C1T/17

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 cardiac muscle on structural basis. 2

( 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 microsomies? 3 + 2

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( Continued )

( 3 )

- (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

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( Turn Over )