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**1 SEM TDC BOTH (CBCS) C 2**

**2 0 2 2**

( Nov/Dec )

**BOTANY**

( Core )

Paper : C-2

**( Biomolecules and Cell Biology )**

Full Marks : 53

Pass Marks : 21

Time : 3 hours

*The figures in the margin indicate full marks  
for the questions*

1. Fill in the blanks of the following :  $1 \times 5 = 5$

- (a) A water molecule has \_\_\_\_ polar covalent bonds.
- (b) The \_\_\_\_ bond of ATP is the highest energetic bond.
- (c) Prokaryotic ribosomes are of \_\_\_\_S types.

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( Turn Over )

( 2 )

(d) DNA synthesis occurs in synthetic phase of \_\_\_\_\_.

(e) Phospholipids are \_\_\_\_\_ in nature.

2. Write short notes on any three of the following :  
4×3=12

(a) Saponification

(b) Nitrogenous bases

(c) ATP as energy currency

(d) Membrane transport

3. With labelled sketches, describe the structure and functions of ribosomes and lysosomes.  
6+6=12

Or

Write short notes on :  
4×3=12

(a) Function of chromosome

(b) Fluid mosaic model

(c) Function of chloroplasts

4. What is protein denaturation? Describe the biological roles of proteins.  
6+6=12

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( Continued )

( 3 )

Or

Write on the following :  
6×2=12

(a) Role of enzymes

(b) Cell cycle checkpoints

5. Write short notes on any three of the following :  
4×3=12

(a) "Mitochondria is the powerhouse of the cell."

(b) Function of endoplasmic reticulum

(c) Composition of carbohydrates

(d) Endocytosis

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