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1 SEM TDC BOTH (CBCS) C 2

2021

(Held in January/February, 2022)

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. (a) Fill in the blanks : 1+1+1=3

(i) Conjugated protein consists of amino acids and a _____.

(ii) The hydrolysis of fat by organisms is called _____.

(iii) The cells of the multicellular organisms are held together by _____.

(2)

(b) Choose the correct answer : $1+1=2$

(i) Non-reducing commercial sugar is glucose/sucrose/fructose.

(ii) Active transport in biological membrane utilizes sucrose/ATP energy/AMP/amino acid.

2. Write short notes on any *three* of the following : $4 \times 3 = 12$

(a) Enzymes as biocatalyst

(b) Function of messenger RNA

(c) Lipid synthesis in ER

(d) Role of microtubules

3. Describe the structure and functions of protein with example. $6+6=12$

Or

Write short notes on the following : $4+4+4=12$

(a) Ramachandran plot

(b) Functions of fatty acids

(c) Significance of meiosis

4. Why are mitochondria and chloroplasts considered as semiautonomous cell organallae? Describe in detail the structure and functions of mitochondria. $4+8=12$

(3)

Or

Write explanatory notes on the following :

6+6=12

(a) Endosymbiotic theory

(b) Cell cycle

5. Write short notes on any *three* of the following :

4×3=12

(a) Function of Golgi apparatus.

(b) Laws of thermodynamics

(c) Role of enzymes

(d) Phosphoglycerides

(e) Properties of water

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