2018

CBCS

1st Semester

BOTANY

PAPER—C2T

(Honours)

Full Marks : 40

Time : 2 Hours

The figures in the right-hand margin indicate full marks.

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

Illustrate the answers wherever necessary.

Biomolecules and Cell Biology

Answer *all* questions

1. Answer any *five* questions : 5×2

(a) Name a bond between metal and nonmetal due to transfer of electron. Give an example.

(b) Define pH.

(c) State the basic structure of fatty acid.

(d) Define redox potential with an example.

(e) Distinguish between cofactor and coenzyme with respective examples.

(f) Write any two important biological roles of protein.

(g) Write the differences between endocytosis and exocytosis.

(h) What are cdks in cell cycle ?

2. Answer any *four* questions : 4×5

(a) Describe different levels of organization of protein upto quarternary structure with sketches.

(b) Illustrate nuclear pore complex with suitable drawing and description.

(c) Explain Michaelis-Menten equation.

(d) Compare B and Z types of DNA.

(e) Briefly describe the components and organization of plasma membrane.

(f) Describe ultrastructural features and functions of Mitochondria.

3. Answer any *one* question : 1×10

(a) Outline the different phases of eukaryotic cell cycle.

Comment on the cell-cycle checkpoints and regulation. 5 + 5

(b) Describe microtubule, microfilament and intermediary filament.

Distinguish between active and facilitated transport through plasma membrane. 5 + 5

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