Total No. of Questions : 6]

SEAT No. : ____

P1720

[Total No. of Pages : 2

[5132]-12
M.Sc.
BIOTECHNOLOGY
BT - 12 : Molecular and Cell Biology
(2008 Pattern) (New) (Semester - I)

Time : 3 Hours] ***[Max. Marks : 80***

Instructions to the candidates:

1) ***Answer to the sections must be written on separate answer sheets.***
2) ***All questions are compulsory.***
3) ***Figures to the right indicate full marks.***
4) ***Use of color pencil restricted to diagrams.***

SECTION - I

Q1) **Attempt the following in two to three sentences:** **[08]**

a) Write the name of cell organelle involved in phagocytosis.

b) Draw the ultra structure of RER and Golgi complex.

c) passive transport.

d) Oxygen evolving complex.

Q2) **Write self explanatory note on <u>any two</u> of the following:** **[16]**

a) Phospholipase C and DAG as signal transducer molecules.

b) Cyclic and non cyclic photophosphorylation.

c) Feedback regulation of pituitary and hypothalamic hormones.

Q3) **Explain <u>any two</u> of the following in details with suitable illustrations:[16]**

a) Role of *cdc 2* , cyclin and *wee* protein in cell cycle regulation.

b) Response of plants to environmental challenges.

c) Thread milling of tubulin monomers in microtubules.

P.T.O.

SECTION - II

Q4) **Attempt the following in two to three sentences:** **[08]**

a) Enlist the difference between RNA pol I, RNA pol II, RNA pol III.

b) Draw the structure of initiation closed complex of transcription in bacteria.

c) Distinguish between prokaryotic and eukaryotic ribosome.

d) Write four past translational modifications of proteins.

Q5) **Write self explanatory note on any two of the following:** **[16]**

a) Origin of Replication.

b) Mutations caused by Alkylating agents and nitrogen mustard.

c) Compare the translation factors of prokaryotes and eukaryotes.

Q6) **Explain any two of the following in details with suitable illustrations:[16]**

a) DNA and its role in Heredity.

b) Genetic variability and evolution.

c) Pharmacogenomics.

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