* R N - 3 7 9 7 / 1 0 0 *

RN-3797

M. Sc. (Sem. III) (Integrated Biotechnology) Examination

May / June – 2010

IBT - 305 : Cell Biology (New Course)

Time : 3 Hours] [Total Marks : 70

Instruction :

(1)

નીચે દર્શાવેલ ☛ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fillup strictly the details of ☛ signs on your answer book.

Name of the Examination :

☛ **M. Sc. (Sem. 3) (Integrated Biotechnology)**

Name of the Subject :

☛ **IBT - 305 : Cell Biology (New)**

☛Subject Code No. : 3 7 9 7 ☛Section No. (1, 2,.....) : 1&2

Seat No. :

Student's Signature

(2) Figures to the **right** indicate full marks of the question.
(3) Draw neat and labelled diagrams whenever necessary.
(4) Both sections must be written in **separate** answer books.

Q.1 Attempt the following **(05)**

1) Name two enzymes of lysosomes
2) What are sister chromatids?
3) Define: Dictyosome
4) What is Cell Signalling?
5) Define: Polysomes

Q.2 What is Permeability? Explain the semi-permeable nature of the Plasma membrane. **(10)**

OR

Q.2 Describe the Singer & Nicholson Model of Plasma membrane. **(10)**

Q.3 a) Describe the ultra structure of Chloroplast **(06)**
b) Describe the phases of viral life cycle **(04)**

OR

Q.3 Elaborate the following
(a) Events of transcription **(05)**
(b) Golgi as 'Traffic Police of the Cell' **(05)**

Q.4 Short notes **(any two)** **(10)**

a) Functions of Ribosome
b) Mitochondrial DNA
b) Gram negative bacteria

Q.5 Define the following **(05)**

1) Interphase
2) Cytosol
3) Proliferative index
4) Pinocytosis
5) What are Okazaki Fragments?

Q.6 Compare and contrast mitosis and meiosis. **(10)**

OR

Q.6 Explain the cAMP pathway of G-Protein Linked Cell Surface Receptors **(10)**

Q.7 Discuss: Cell Signaling via Enzyme Linked Cell Surface Receptors with chart **(10)**

OR

Q.7 Classify Signaling based on the basis of extracellular receptors and mention any two receptor pathways of signaling **(10)**

Q.8 Short Note on (any two) **(10)**

a) Polytene chromosome
b) Cellular movements
c) Cell cycle check points
