Q.P. Code No.31611

Sixth Semester B.Sc., Degree Examinations

May / June 2026

(NEP Scheme)

BOTANY

Paper : VII : Sub. Code : NSF – 0610 : Cell Biology

Time: 2 hrs.] [Max.Marks : 60

Instructions to Students :

1. *The students should legibly write Section number along with question numbers within the margin ONLY.*
2. *The answers without Section number and question numbers will not be valued.*
3. *Draw neat and labeled diagram wherever necessary.*
4. *Section – I Multiple Choice Questions should be answered in the First Page of Main answer book and same questions shall not be answered repeatedly.*
5. *Any identifications like marking, ticking, dots etc., in the options of MCQ Questions (SECTION - I) on the question paper is strictly prohibited. Do not write anything (Except Reg. No.) on the question paper.*

SECTION- I

I. *Select the most appropriate answer from options provided :* *10X 1= 10 Marks*

I-1) The primary cell wall material of the plant is _____

a) Pectin b) Lignin

c) Chitin d) Cellulose

I-2) The physical basis of life is _____

a) Cell wall b) Plasma membrane

c) Protoplasm d) Plasmodesmata

I-3) During _____ phase of the cell cycle DNA is synthesized.

a) Gl-phase b) S-phase

c) G2-phase d) GO-phase

I-4) Programmed cell death is called _____

a) Apoptosis b) Cell division

c) Cancer d) None of the above

Contd...2

Q.P. Code No.31611

I-5) The substance which causes cancer are called _____

a) Mutagen b) Carcinogen

c) Both a) and b) d) None of the above

I-6) The process of pairing of homologous chromosome is _____

a) Synapsis b) Chaisma

c) Crossing over d) All of above

I-7) The process of cell drinking is called _____

a) Phagocytosis b) Pinocytosis

c) Exocytosis d) None of the above

I-8) The following structure is present in both prokaryotic and eukaryotic cell_____

a) Peroxisome b) Lysosome

c) Ribosome d) All the above

I-9) The site for lipid synthesis is _____

a) Ribosomes b) Rough ER

c) Golgi apparatus d) Smooth ER

I-10) The polymorphic cell organelle is

a) Ribosome b) Lysosome

c) Mitochondria d) Centriole

SECTION- II

II. ***Answer/Write notes on any FIVE of the following.*** ***5X 3= 15 Marks***

II-1) Differentiate prokaryotic and eukaryotic cell

II-2) Cell-cell interactions

II-3) Briefly explain cell cycle

II-4) Active and Passive transport

II-5) Phagocytosis and Exocytosis

II-6) rRNA processing

II-7) Golgi apparatus.

II-8) Lysosomes

Contd…3

SECTION- III

III. ***Medium Answer questions.***

Answer any THREE questions from the following. ***3X 5= 15 Marks***

III-1) With neat labeled diagram explain structure of cell wall.

III-2) Explain the regulation of cell cycle- checkpoints.

III-3) Explain the Mitosis.

III-4) Describe the Nuclear pore complex.

III-5) Describe the structure of Rough ER and explain protein transport mechanism.

SECTION- IV

IV. ***Answer the following:*** ***2X 10= 20 Marks***

IV-1) With neat labelled diagram explain the Prophase – I of Meiosis.

OR

With neat labelled diagram explain the structure and functions of Mitochondria.

IV-2) With neat labelled diagram explain the structure and functions of Nucleus.

OR

With neat labelled diagram explain the structure and functions of Chloroplast.

** * * * **