

NTK/KW/15/5830

Bachelor of Science (B.Sc.) Semester—III Examination
BOTANY
(Cell Biology, Plant Breeding & Evolution)
Paper—II

Time—Three Hours]

[Maximum Marks—50

- N.B. :—** (1) All questions are compulsory and carry equal marks.
(2) Draw well labelled diagrams wherever necessary.

1. Write on :

- (a) Structure and functions of Cell Wall 5
(b) Structure and functions of Endoplasmic reticulum. 5

OR

Write short notes on :

- (c) Fluid mosaic model of plasma membrane 2.5
(d) Typical Plant Cell (diagram only) 2.5
(e) Nuclear Membrane 2.5
(f) Structure of Nucleolus. 2.5

2. Write on :

- (a) Structure and functions of Mitochondria 5
(b) Structure and functions of Chloroplast. 5

OR

Write short notes on :

- (c) Golgi Complex 2.5
 (d) Vacuole 2.5
 (e) Types of Ribosomes 2.5
 (f) Glyoxysomes. 2.5

3. Write on :

- (a) Stages of Mitosis 5
 (b) Morphology of Chromosome 5

OR

Write short notes on :

- (c) XY–Chromosomes in *Melandrium* 2.5
 (d) Nucleosome Model 2.5
 (e) Karyotype 2.5
 (f) Cell Cycle. 2.5

4. Write on :

- (a) Hybridization technique 5
 (b) Calculate the mean and median from the following data indicating weight of brinjal fruits in gms :
 42, 48, 46, 42, 50, 47, 45, 44, 43. 5

OR

Write short notes on :

- (c) Pureline Selection 2.5
 (d) Heterosis 2.5
 (e) Clonal Selection 2.5
 (f) Neo-Darwinism 2.5

5. Write in **two** or **three** lines only (any **Ten**) on (Diagrams are not necessary).

- (a) Plasmodesmata
 (b) RER
 (c) Unit membrane
 (d) Peroxisome
 (e) Quantasome
 (f) Tonoplast
 (g) Synapsis
 (h) Terminalization
 (i) Cell division
 (j) Mode
 (k) Plant breeding
 (l) Standard deviation. $1 \times 10 = 10$