

(FOR THE CANDIDATES ADMITTED
DURING THE ACADEMIC YEAR 2023 ONLY)

23PBY311

REG.NO.:

N.G.M.COLLEGE (AUTONOMOUS) : POLLACHI
END-OF-SEMESTER EXAMINATIONS : NOVEMBER-2024
COURSE NAME: M.Sc.-BOTANY **MAXIMUM MARKS: 75**
SEMESTER: III **TIME : 3 HOURS**

PLANT BIOTECHNOLOGY

SECTION – A (10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS. K1
MULTIPLE CHOICE QUESTIONS.

1. Cellular respiration takes place by _____
a) Mitochondria b) chloroplast c) Golgi complex d) plasma membrane.
2. Protein synthesis occurs inside the _____
a) cytoplasm b) Mitochondria c) chloroplast d) Nucleus.
3. Artificial seed was First produced by _____
a) Murashige b) Weissman c) Gronenborn d) Lederberg.
4. Ti plasmid present in _____
a) Agrobacterium tumefaciens b) Salmonella c) Cyanobacteria d) Helicobacter.
5. Example of Nanocatalyst ____
a) Zinc oxide b) Zinc chloride c) Zinc oxalate d) Zinc sulphide.

ANSWER THE FOLLOWING IN ONE (OR) TWO SENTENCES. K2

6. Define molecular markers.
7. What is gene Amplification?
8. What is Callus?
9. Define crown gall.
10. What are Nanoadsorbents?

SECTION – B (5 X 5 = 25 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. K3

11. a) Describe the mitochondrial genome organization.
(OR)
b) Describe the nuclear genome organization.
12. a) Explain the semiconservative mode of DNA Replication?
(OR)
b) Describe the PCR.

(CONTD.....2)

13. a) Write about the media preparation in tissue culture?
(OR)
b) Describe the meristem culture?
14. a) Describe the structure of Ti plasmid.
(OR)
b) Explain the Electroporation gene transfer methods to plant cells.
15. a) Write about the nano rods, nano wires & nano particles.
(OR)
b) Describe the methods of preparation of nano material.

SECTION – C**(5 X 8 = 40 MARKS)****ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. K4 & K5**

16. a) Discuss about RAPD.
(OR)
b) Discuss about RFLP.
- 17.a) Describe the Eukaryotic DNA Replication.
(OR)
b) Explain the DNA sequencing methods (Sanger & Maxam & Gilbert)
18. a) Explain about cryopreservation.
(OR)
b) Discuss about Artificial seeds.
- 19.a) Describe the insect resistant plants.
(OR)
b) Write about IPR.
- 20.a) Explain the biosensors?
(OR)
b) Explain the treatment of industrial waste water using nano particles.
