



BRAINWARE UNIVERSITY

Term End Examination 2023-2024

Programme – M.Sc.(BT)-2022

Course Name – Plant Biotechnology

Course Code - MBTC301

(Semester III)

Full Marks : 60

Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

- (i) Mark the potential limitation of relying solely on molecular techniques in crop improvement.
 - a) Reduced precision in trait selection
 - b) Increased genetic diversity
 - c) Ethical concerns related to genetic modification
 - d) Reduced crop productivity
- (ii) Name the growth of plant tissues in artificial media _____
 - a) Gene expression
 - b) Transgenesis
 - c) Plant tissue culture
 - d) Cell hybridization
- (iii) In the following given options, select the vector that is genetic.
 - a) Plasmid
 - b) Transposon
 - c) Phage
 - d) Anopheles
- (iv) Out of the following, identify which one is NOT the basic component of culture media used for plant cultivation?
 - a) Complex mixture of salts
 - b) Amino acids
 - c) Serum albumin
 - d) Sugar/ sucrose
- (v) Select the correct answer: By which mechanism does the transfer of genes into the chloroplast genome take place?
 - a) Replication
 - b) Homologous recombination
 - c) Restriction digestion
 - d) Apoptosis
- (vi) Cite which of the following is NOT a plant growth regulator?
 - a) Auxin
 - b) Cytokinins
 - c) Abscisis acid
 - d) Polyphenols
- (vii) Which of the following plant hormone control fruit ripening?
 - a) Ethylene
 - b) Auxin
 - c) Gibbrellins
 - d) Abscisis acid

12. Examine the potential applications of plant-based vectors in environmental remediation. (5)

OR

Write down the key technologies and methods used in the development of marker-free plants? Provide examples of these methods. (5)
