

**B.Sc. BOTANY  
SIXTH SEMESTER  
APPLIED BOTANY  
BSB-602**

**SET  
B**

[USE OMR SHEET FOR OBJECTIVE PART]

Duration: 3 hrs.

Full Marks: 70

Time: 30 mins.

Marks: 20

**( Objective )**

*Choose the correct answer from the following:*

*1 × 20 = 20*

- Artificial selection was first proposed by:
  - Carolus Linnaeus
  - Robert Bakewell
  - Gregor Mendel
  - Charles Darwin
- Which of the following is not derived from wild mustard *Brassica oleraceae*?
  - Cabbage
  - Tomato
  - Broccoli
  - Cauliflower
- The technical name of Mushroom's cap is called:
  - Stalk
  - Pileus
  - Volva
  - None of the above
- What is the scientific name of Bleeding tooth?
  - Hericium erinaceus*
  - Flammulina velutipes*
  - Hydnellum peckii*
  - Volvariella volvacea*
- The technical name of Mushroom's stem is called:
  - Stipe
  - Cup
  - Veil
  - Annulus
- Which of the following is not well associated with cryopreservation?
  - Dimethylsulphoxide (DMSO)
  - Liquid nitrogen
  - Recalcitrant seeds
  - Ex-situ hybridization
- The sum total of hereditary material present in a plant and its wild relatives is known as:
  - DNA library
  - Genome
  - Germplasm
  - Gene bank
- The plants hormones which affect the fruit ripening is:
  - Auxin
  - Cytokinin
  - Ethylene
  - All of the above
- Which is the stress tolerance agent use in seed coating?
  - IAA
  - IBA
  - HYBM
  - All of the above
- Seed priming is a pre-sowing seed treatment that allows:
  - Controlled hydration
  - Controlled dehydration
  - Unlimited hydration
  - Unlimited dehydration

11. Which of the following is not a true plant breeding technique?
  - a. Crossing over
  - b. Hybridization
  - c. Genome editing
  - d. Asexual reproduction
12. Plant hybrids adapted to a particular eco-geographical area are called as:
  - a. Landraces
  - b. Domestication
  - c. Acclimatization
  - d. Cultivars
13. The grafting technique in which both the rootstock and scion are sliced is called:
  - a. Sliced approach grafting
  - b. Tongue grafting
  - c. Veneer grafting
  - d. Cleft grafting
14. Mushroom is low in:
  - a. Protein and fiber
  - b. Potassium and zinc
  - c. Sodium and calories
  - d. Selenium and magnesium
15. When the gills extend down the stem to a greater or lesser degree is known as:
  - a. Decurrent
  - b. Adnexed
  - c. Sinuate
  - d. Adnate
16. Which of the following is involved in micropropagation?
  - a. Embryo culture
  - b. Plant tissue culture
  - c. Somatic embryogenesis
  - d. Organogenesis
17. The largest gene bank in the world is:
  - a. National Bureau of Plant Genetic Resources
  - b. International Board of Plant Genetic Resources
  - c. The Svalbard Global Seed Vault
  - d. International Seed Bank
18. Which of the following method is useful for indefinite storage and preservation?
  - a. Micropropagation
  - b. Cryopreservation
  - c. In situ conservation
  - d. None of the above
19. The plant growth hormone which is involved in phototropic and gravitropic reaction is:
  - a. Auxin
  - b. Cytokinin
  - c. Gibberellins
  - d. Abscisic acid
20. Osmopriming mean:
  - a. Treatment of seeds with matrices
  - b. Soaking in solution of different organic osmotica
  - c. Hydration using biological compounds
  - d. Soaking in solution of different inorganic osmotica

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**( Descriptive )**

Time : 2 hr. 30 mins.

Marks : 50

[ Answer question no.1 & any four (4) from the rest ]

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| 1. What are the differences between asexual and sexual reproduction?<br>With appropriate figure, discuss in detail the different mode of grafting in plants. | 2+8=10 |
| 2. Write short note on:<br>a) Plant breeding<br>b) Plant introduction  | 5×2=10 |
| 3. What is spawn? Write the different techniques in mushroom cultivation.  | 2+8=10 |
| 4. Write short note on:<br>a) General morphology of mushroom<br>b) Nutritional properties of mushroom  | 5×2=10 |
| 5. Write short note on:<br>a) Plant tissue culture<br>b) Gene banks  | 5×2=10 |
| 6. What is cryopreservation? Discuss on the role of cryopreservation in conservation of plant genetic resources.   | 10     |
| 7. What are plant growth regulators? Give the main function of some of the important plants growth regulators.   | 2+8=10 |
| 8. Write short note on:<br>a) Pre sowing soaking treatment<br>b) Foliar application  | 5×2=10 |

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