

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

(Use Separate Answer Scripts for Objective & Descriptive)

Duration : 3 hrs.

Full Marks : 70

[PART-A: Objective]

Time : 20 min.

Marks : 20

Choose the correct answer from the following:

1X20=20

1. The technical name of Mushroom's cap is called
 - a. Stalk
 - b. Pileus
 - c. Volva
 - d. None of the above
2. The technical name of Mushroom's stem is called
 - a. Stipe
 - b. Cup
 - c. Veil
 - d. Annulus
3. Mushroom is low in
 - a. Protein and fiber
 - b. Potassium and zinc
 - c. Sodium and calories
 - d. Selenium and magnesium
4. The Scientific name of Bleeding tooth is
 - a. Hydnellum peckii
 - b. Volvariella volvaceae
 - c. Agaricus bisporus
 - d. Flammulina velutipes
5. The optimum temperature requirement for Agaricus bisporus is between
 - a. 30°C - 35°C
 - b. 14°C - 18°C
 - c. 22°C - 30°C
 - d. None of the above
6. In spawn preparation, the aggregation of wheat grain is prevented by
 - a. Calcium carbonate
 - b. Calcium sulphate
 - c. Gypsum
 - d. All of the above
7. The plant growth hormone which involved in phototropic and gravitropic reaction is
 - a. Auxin
 - b. Cytokinin
 - c. Gibberellins
 - d. Abscisic acid
8. The plants hormones which affect the fruit ripening is
 - a. Auxin
 - b. Cytokinin
 - c. Ethylene
 - d. All of the above
9. Seed priming is a pre-sowing seed treatment that allows
 - a. Controlled hydration
 - b. Controlled dehydration
 - c. Unlimited hydration
 - d. Unlimited dehydration

10. Foliar application is beneficial because absorption takes place through
- Stomata
 - Epidermis
 - Soil
 - Both a and b
11. A technique of micropropagation
- Multiple root production
 - Somatic embryogenesis
 - Growth of microorganisms on culture medium
 - Multiple shoot production and embryo rescue
12. What are somaclones?
- Plants chemically identical to the original plant
 - Plants morphologically identical to the original plant
 - Plants anatomically identical to the original plant
 - Plants genetically identical to the original plant
13. Who is known as the Father of tissue culture?
- Bonner
 - Laibach
 - Haberlandt
 - Gautheret
14. What is callus?
- Tissues that grow to form an embryoid
 - An unorganized actively dividing the mass of cells maintained in a culture
 - An insoluble carbohydrates
 - A tissue that grows from an embryo
15. A centralized plant introduction agency was initiated in
- 1946
 - 1945
 - 1947
 - 1948
16. Production of microspores and megaspores is known as
- sporogenesis
 - sporofoms
 - megaspores
 - microspores
17. Anther has _____ pollen sacs, which contain numerous pollen mother cells
- three
 - two
 - five
 - four
18. Microgametogenesis refers to the production of _____
- nucleus
 - ovary
 - Pollen
 - sperm
19. Embryo sac is produced from the
- megaspore
 - microspore
 - meGasporogenesis
 - Microsporogenesis
20. The most common solidifying agent in micropropagation is
- agar
 - dextran
 - Mannan
 - All of these

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(PART-B : Descriptive)

Time : 2 hrs. 40 min.

Marks : 50

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

1. What is spawn? Write the different techniques in mushroom cultivation. 2+8=10
2. Write short note on 5+5=10
 - a. General morphology of mushroom
 - b. Nutritional properties of mushroom
3. What is plant growth regulators ? Give the main function of some of the important plants growth regulators 2+8=10
4. Write short note on 5+5=10
 - a. Pre sowing soaking treatment
 - b. Foliar application
5. Write short notes on the following :- 5+5=10
 - a. Plantlet regeneration
 - b. Requisites and constraints of gene bank
6. Define plant tissue culture. Briefly describe the general technique for plant tissue culture 2+8=10
7. Discuss the role of tissue culture techniques in germplasm conservation giving suitable examples 10
8. Write a short note on: 5+5=10
 - a. Sporogenesis
 - b. Gametogenesis

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