

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

**SET  
A**

[USE OMR SHEET FOR OBJECTIVE PART]

Duration: 3 hrs.

Full Marks: 70

( Objective )

Time: 30 mins.

Marks: 20

Choose the correct answer from the following:

1 × 20 = 20

1. What is plant biotechnology?
  - a. Cell division and multiplication
  - b. Creating thousands of plants through tissue culture
  - c. Somatic Hybridization
  - d. Introduction of desirable traits into the plant parts through genetic modification
2. The Plant tissue culture is a/an:
  - a. *In vivo* culture
  - b. *In vitro* culture
  - c. Either a or b
  - d. None of the above
3. What role do phytohormones play in plant biotechnology?
  - a. Improving plant taste
  - b. Controlling plant color
  - c. Regulating plant growth and development
  - d. Enhancing plant fragrance
4. A widely cultivated rice variety which has solved food problem in Asia and has been developed by IRRRI Manila (Philippines):
  - a. Norin-10
  - b. IR-36
  - c. Sonara-64
  - d. Remei
5. In gene bank, genetic material is stored in the form of:
  - a. Seeds
  - b. Vegetative materials
  - c. Both a and b
  - d. None
6. The ability of single cells to divide and produce all differentiated cells in the entity:
  - a. Totipotency
  - b. Multipotent
  - c. Pluripotent
  - d. Unipotent
7. Integrated pest management (IPM) is based on:
  - a. Biological control of pest
  - b. Mechanical control
  - c. Carefully timed used of pesticides
  - d. All of the above
8. Each germplasm accession is given an accession number. In India, this number is prefixed with either:
  - a. EC, IC and IW
  - b. EC, BC, IC and SC
  - c. Both a and b
  - d. None of the above
9. The purpose of plant introduction are the following except:
  - a. New Crop
  - b. New Varieties
  - c. Utilization in Scientific studies
  - d. Conservation

10. 'Kalyan Sona' is variety of:  
 a. Wheat  
 b. Rice  
 c. Maize  
 d. None of these
11. What is the other name of Auxin?  
 a. IAA  
 b. IBA  
 c. NAA  
 d. 2-4-D
12. Giberellafujikuroi is a:  
 a. Bacteria  
 b. Lichen  
 c. Virus  
 d. Fungus
13. Who discovered Abscission II?  
 a. Addicott and Larry A. Davis  
 b. Hardy Weinberg  
 c. Warmolt Went  
 d. Johann Mendel
14. Which of the following is not a function of gibberellic acid?  
 a. Bolting  
 b. Delayed senescence  
 c. Seed germination  
 d. Ripening
15. Auxin is most commonly used for:  
 a. Root regeneration  
 b. Shoot regeneration  
 c. Inducing somatic embryogenesis  
 d. All of the above
16. Which of the following is a nutritional advantage of edible mushrooms?  
 a. Low calorific value  
 b. Contain no cholesterol  
 c. Have high protein content  
 d. All of the above
17. The first mushroom to be cultivated in India is:  
 a. *Volvariellavolvacea*  
 b. *Pleurotustreatatus*  
 c. *Agaricusbisporus*  
 d. *Lentinulaedodus*
18. In mushroom cultivation formulations, urea supplement acts as:  
 a. Calcium source  
 b. Nitrogen source  
 c. Carbon source  
 d. All of the above
19. In the short method of mushroom cultivation:  
 a. Outdoor condition is required for the entire process  
 b. Indoor condition is required for the entire process  
 c. Pasteurization is required  
 d. Pasteurization is not required
20. Which is not a method for mushroom spawning?  
 a. Thorough spawning  
 b. Surface spawning  
 c. Cropping spawning  
 d. Layer spawning

( Descriptive )

Time : 2 hr. 30 mins.

Marks : 50

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

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| 1. Discuss the physiological effects of Auxin.   | 10       |
| 2. What is mushroom cultivation? What are the advantages of mushroom cultivation? Write short note about the history of mushroom cultivation.      | 2+4+4=10 |
| 3. Briefly describe the various sterilization techniques used in plant tissue culture.   | 10       |
| 4. Define Plant domestication and the different methods of selection.  | 2+8=10   |
| 5. What is the purpose of plant quarantine and acclimatization of the selected plants under domestication?   | 5+5=10   |
| 6. What are the different methods used for preparation of compost? Explain in brief the steps involved in the short method of compost preparation. | 2+8=10   |
| 7. Discuss the physiological effects of Cytokinins.  | 10       |
| 8. What is a gene bank? Describe briefly the different types of gene bank.   | 2+8=10   |

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