

Q.P. Code :19280

[Time: 2½ Hours]

[Marks:75]

Please check whether you have got the right question paper.

- N.B:
1. All questions are compulsory.
 2. Figures to the right indicates full marks.
 3. Draw neat and labeled diagrams wherever necessary.

- Q. 1** Attempt **any two** **15**
- a) What are antioxidants? Explain their health benefits.
 - b) Explain the role of different nutrients in anaemia.
 - c) Discuss the symptoms, causes and diet to control obesity.
 - d) Describe the technique of preparation of spawn of edible mushrooms. Add a note on nutritive value of mushrooms.
- Q. 2** Attempt **any two**. **15**
- a) Explain the aspects of micro propagation with reference to floriculture.
 - b) Describe in detail plant cell suspension culture. Add a note on its applications.
 - c) Describe protoplast fusion and its technique.
 - d) What is Somatic embryogenesis? Explain the technique in detail.
- Q. 3** Attempt **any two** **15**
- a) Give a brief account of principle and working of a colorimeter.
 - b) Discuss in detail working of a spectrophotometer. Add a note on its applications.
 - c) Describe the technique of column chromatography.
 - d) What is HPLC? Explain its principle and technique.
- Q. 4** Attempt **any two**. **15**
- a) Describe the method of processing and storage of *Allium sativum*. Add a note on its pests and diseases.
 - b) Give a brief account of propagation method and harvesting of *Curcuma longa*. Add a note on its marketing.
 - c) Discuss in detail macroscopic, microscopic characters of *Senna* leaf. Add a note on its adulterants.
 - d) Give biological source, geographical distribution and microscopic characters of *Clove* bud.
- Q. 5** Attempt **any three**. **15**
- a) Grading and Marketing of Mushrooms
 - b) Skin disorders
 - c) Advantages of synthetic seeds
 - d) Application of ion exchange chromatography
 - e) Chemical constituents of *Acorus calamus*
 - f) Microscopic characters of *Strychnos* seeds
