



**GAO-036020**

Seat No. \_\_\_\_\_

**B. Sc. (Sem. VI) (Microbiology) Examination**

**March / April – 2019**

**BSCC - 605 (D) : Instrumentation and Biotechniques**

Time : 3 Hours]

[Total Marks : 70

**Instructions :**

1. All questions carry equal marks.
2. Draw a neat and labeled diagram when required.
3. Write the question numbers clearly
1. Write on any two of the following 14
  1. The principle and application of chromatography
  2. 2D paper chromatography process.
  3. Gel filtration chromatography
  4. HPLC
2. Write on any two of the following 14
  1. General principle and application of electrophoresis
  2. Native PAGE process
  3. Zymogram preparation
  4. Isoelectric focusing method
3. Write on any two of the following 14
  1. Give the general circuit of spectrophotometer.
  2. Sources of light and cuvette used on colorimeter
  3. UV spectrophotometer
  4. Turbidometer
4. Write on any two of the following 14
  1. What are the uses of preparative and analytical centrifuge ?
  2. Sedimentation coefficient
  3. Differential centrifugation
  4. Ultra centrifugation
5. Write in one-two sentences on 14
  1. Stationary phase and mobile phase
  2. R<sub>f</sub> value
  3. Use of GLC

4. Resins used in IEC
  5. One difference of spectrophotometer and colorimeter.
  6. Give two names of photocell used
  7. What is fixed bowl centrifuge?
  8. What are the solvent mixture used in sugar chromatography.
  9. What is development of chromatogram?
  10. What is the use of sucrose?
  11. Which molecular microbiologist used centrifuge to prove DNA as genetic material.
  12. Which method was used to prove semi conservative method of DNA replication?
  13. What dye is used to track DNA mobility during electrophoresis?
  14. What are the supports used for electrophoresis?
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