

25900519

Reg.No :

Name :

MAHATMA GANDHI UNIVERSITY, KOTTAYAM
MGU-UGP (HONOURS) Regular EXAMINATION October 2025

Third SEMESTER

**Discipline Specific Core Course (DSC) - MG3DSCMBG202 - TECHNIQUES
IN MICROBIOLOGY**

(2024 ADMISSION ONWARDS)

Duration: 1 Hour 30 Minutes

Maximum Marks: 50

***Remember(K), Understand(U), Apply(A), Analyse(An), Evaluate(E), Create(C), Skill(S), Interest(I)
and Appreciation(Ap)***

Students should attempt at least one question from each course outcome to enhance their overall outcome attainability.

Part A

Short Answer Type Questions

Answer any **10** questions

Each question carries **2** marks

1. Define sanitization. [K] / [CO1]
2. Define simple media. [K] / [CO2]
3. Mention two tools used for soil sample collection. [K] / [CO3]
4. What is the primary purpose of staining in microbiology? [K] / [CO4]
5. Name one cryoprotectant commonly used in cryopreservation. [K] / [CO3]
6. What is the mode of action of aldehydes in sterilization? [K] / [CO1]
7. Name two indicator media. [K] / [CO2]
8. Give an example for long-term microbial preservation method. [K] / [CO3]
9. Name the mordant used in Gram staining. [K] / [CO4]
10. Give a note on candle jar method. [K] / [CO2]

11. What is BSC? [K] / [CO1]
12. Name the oxygen indicator used in thioglycolate broth. [K] / [CO2]
- [2x10 = 20]**

Part B

Short Essay Questions

Answer any **4** questions

Each question carries **5** marks

13. Describe the method of preservation of microbial cultures by refrigeration. [U] / [CO3]
14. Explain in detail the steps involved in wet mount technique. [U] / [CO4]
15. Describe the sterilization controls used to test the effectiveness of a hot air oven. [U] / [CO1]
16. Explain the principle of oil immersion objective in a compound microscope. [U] / [CO4]
17. Write a short note on enriched media with examples. [K] / [CO2]
18. Explain the principle, procedure and types of streak plate method. [U] / [CO3]
- [5x4 = 20]**

Part C

Long Essay Questions

Answer any **1** questions

Each question carries **10** marks

19. Describe the different types of radiations and filtration techniques used in sterilization. [U] / [CO1]
20. Compare spread plate and pour plate techniques with neat diagrams. [U] / [CO3]
- [10x1 = 10]**