



Avinashilingam Institute for Home Science and Higher Education for Women

Deemed to be University under Category 'A' by MHRD, Estd. u/s 3 of UGC Act 1956 (now MoE)

Re-accredited with 'A+' Grade by NAAC. Recognised by UGC Under Section 12B

Coimbatore - 641 043, Tamil Nadu, India

Continuous Internal Assessment Test II - April 2025

SEMESTER II

Class : I PG
Major: BC/BT/Chemistry/FSN

Time : 2 hours
Max. Marks: 60

23MBOI01 – Microbial Technology and Herbal Drugs

Course Outcomes:

CO1. Analyze various secondary metabolites present in plants through preliminary screening tests

CO2. Observe the various natural colourants, nutritive and non-nutritive sweeteners and their principle

CO3. Understand the various types of drugs

CO4. Understand and apply the staining techniques for identification of microorganisms

CO5. Assess the serial dilution, Plate streaking, antimicrobial activity

Part A

Choose the correct answer

(6 X 1=6)

- 1 Identify the term that refers to traditional medicine **CO3K1**
(a) Alternative (b) Complementary (c) Synthetic (d) chemical
- 2 Recall the plant source from which cardiac glycosides are derived **CO3K1**
(a) *Digitalis* (b) *Strophantus* (c) *Gymnema* (d) *Tridax*
- 3 Recognize the type of media that enhances the growth of certain organisms while inhibiting others. **CO4K1**
(a) Differential (b) Selective (c) Enrichment (d) All-purpose
- 4 Identify the commonly used solidifying agent in culture media **CO4K1**
(a) Sulphur (b) Agar (c) Potato (d) Dextrose
- 5 Recall the substance used to inhibit bacterial overgrowth, fungi to grow **CO5K1**
(a) Agar (b) Chloramphenicol (c) Dextrose (d) Peptone
- 6 Identify the condition that indicates antibiotic sensitivity in a culture plate **CO5K1**
(a) No growth (b) slow growth (c) over growth (d) rapid growth

Part B

(3 x 6=18)

Answer any two questions (Answer should not exceed 400 words)

- 7a **Describe** any two traditional herbal dosage forms and explain their methods of preparation and use **CO3K2**
- (or)**
- 7b List any three herbal drugs with its bioactive compound isolated and medicinal uses **CO3K2**
- 8a Explain the types of culture media based on consistency & describe their specific uses **CO4K2**
- (or)**
- 8b Describe the composition of nutrient agar medium and explain its relevance in microbial culture. **CO4K2**
- 9a Analyze the purpose and technique of stab and slant (slope) culture methods. **CO5K4**
- (or)**
- 9b Describe the streak plate technique and compare its different types with examples. **CO5K2**

Part C

(3 x 12=36)

Answer any one question (Answer should not exceed 800 words)

- 10a Evaluate the process of standardization of herbal drugs and **explain** the methods involved in drug quality control. **CO3K5**
- (or)**
- 10b **Describe** any three plant-derived drugs and explain their active constituents along with their therapeutic applications. **CO3K2**
- 11a Describe the principle and procedure of any one biochemical test used for microbial characterization. **CO4K2**
- (or)**
- 11b Explain any one specific type of culture media, including its composition and application. **CO4K2**
- 12a Analyze the procedure of microbial isolation by serial dilution method and illustrate it with a neat, labeled diagram. **CO5K4**
- (or)**
- 12b Analyze the steps involved in the Kirby-Bauer disc diffusion method and explain how it determines antibiotic sensitivity. **CO5K4**