

Shree Manibhai Virani and Smt. Navalben Virani Science College (Autonomous)
Affiliated to Saurashtra University, Rajkot

SEMESTER END EXAMINATION APRIL – 2017

B.Voc. Medical Laboratory and Molecular Diagnostics Technology

MLMDT 2.3 - GENERAL MICROBIOLOGY

Duration of Exam – 2.30 hrs

Semester – II

Max. Marks – 70

Que. 1 Answer the following Questions

[20]

1. Give the names of rod shaped and cocci shaped bacteria.
2. Enlist the cytoplasmic inclusion bodies in bacteria.
3. Draw the structure of lophotrichous flagella on bacteria.
4. Under which conditions bacterial spore is produced?
5. Define lag phase of bacteria.
6. Generation time of *E. coli* is _____
7. For continuous culture Turbidostat device is used. (True/ False)
8. Define chemolithotroph..
9. An organism which can grow up to maximum 40⁰C temperature is _____ . (Mesophile/ Thermophile)
10. The temperature and pressure in autoclave is _____ and _____ lbs
11. Give two examples of dyes as antimicrobial agents.
12. Define Bacteriostasis.
13. Mode of action of tetracycline is protein synthesis inhibition. (True/ False)
14. Give two examples of differential media.
15. Gram's iodine used in Gram staining acts as_____.
16. _____ is used for the collection of samples from alimentary canal.
(Intubation/ Swab)
17. How spore producing bacteria can be isolated from the soil?
18. Pathological wastes are discarded in _____colored bags.
19. Full form of GPCB.
20. _____ is used for collection of urine specimen.

Que. 2 (A) Answer the following Questions (Any Three)

[06]

1. What are the different arrangements of bacteria?
2. What are pilli? Write its functions.
3. Write any two nutritional types of bacteria.
4. What happens in stationary phase of growth in bacteria?
5. What is sterility testing in autoclave?
6. Define selective media with one example.

Que. 2 (B) Answer the following Questions (Any Three) [09]

1. Write the composition of cell wall of gram positive bacteria.
2. Write the use of iodine as antimicrobial agent.
3. Define growth rate and generation time with equation.
4. How are the anaerobic bacteria cultivated?
5. What are the various methods of counting of microorganism?
6. Write a note on penicillin.

Que. 2 (C) Answer the following Questions (Any Two) [10]

1. Discuss radiation as cold sterilization
2. Describe structure and function of bacterial flagella.
3. Discuss various phases of growth curve of bacteria.
4. Describe different types of culture media for cultivation of bacteria.
5. What are the ideal characteristics of chemical agent as antimicrobial agents? Give the classification of various chemical agents with examples.

Que. 3 (A) Answer the following Questions (Any Three) [06]

1. Define and explain: CFU
2. How anaerobic bacteria are isolated?
3. White and yellow color containers are used for which type of waste disposal?
4. Enlist physical methods used for selection of bacteria.
5. Write the mode of action of streptomycin and tetracycline
6. Explain catheter technique of specimen collection.

Que. 3 (B) Answer the following Questions (Any Three) [09]

1. Write the principle of gram staining?
2. What are the different methods of isolating pure culture?
3. What are the rapid methods of identification of bacteria?
4. Enlist the various methods of specimen collection.
5. What is culture collection? Give its example and application.
6. What is freeze drying method of culture preservation?

Que. 3 (C) Answer the following Questions (Any Two) [10]

1. Describe various methods of identification of microorganisms from specimen.
 2. Give detailed outline on categories of biomedical wastes as per government of India.
 3. Write a note on techniques of preservation of pure culture.
 4. Discuss the colony characteristics as tool for identification of organism.
 5. Discuss staining methods.
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