

(6 pages)

Reg. No. :

Code No. : 7071

Sub. Code : KMBM 11

M.Sc. (CBCS) DEGREE EXAMINATION,
APRIL 2018.

First Semester

Microbiology

GENERAL MICROBIOLOGY AND DIVERSITY

(For those who joined in July 2016 and afterwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer:

1. Which of the following is bactericidal?

(a) Ionizing radiation

(b) Freeze-drying

(c) Deep freezing

(d) All of these processes kill bacteria

2. Which of the following is most effective for sterilizing mattresses and plastic Petri plates?
- (a) Ethylene oxide
(b) Glutaraldehyde
(c) Autoclave
(d) Ultraviolet radiation
3. Which is the most SENSITIVE method of enumerating microbes?
- (a) Turbidity measurement
(b) Direct microscopic count
(c) Viable plate count
(d) dry weight basis
4. Hanging drop method is used to observe _____ of microorganisms.
- (a) motility (b) germination
(c) fusion (d) all of the above
5. Which of the following antibiotics inhibits bacterial folic acid synthesis?
- (a) Streptomycin (b) Penicillin
(c) D-cycloserine (d) sulfadruugs
6. A cluster of polar flagella is called
- (a) lophotrichous (b) amphitrichous
(c) D- monotrichous (d) petritrichous

7. The cocci which mostly occur in single or pairs are
(a) Streptococci (b) Diplococci
(c) Tetrads (d) None of these
8. The phospholipids present in cytoplasm membrane of the archaeo-bacteria is
(a) phosphoglycerides
(b) polyisoprenoid
(c) polyisoprenoid branched chain lipids
(d) none of these
9. The oldest eukaryotic organisms are considered to be
(a) diplomonads like Giardia
(b) archaea
(c) fungi
(d) animals
10. Which were the investigators lived at the same time?
(a) Koch and Pasteur
(b) Darwin and Woese
(c) Van Leeuwenhoek and Ricketts
(d) Berg and Hooke

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Write about origin of microbiology.
Or
(b) Discuss about phylogenetic tree.
12. (a) What is working principle of light microscope.
Or
(b) Discuss about applications of fluorescence microscope.
13. (a) Write about moist and dry heat sterilization methods.
Or
(b) Brief account on Indicator of microorganisms for sterilization methods.
14. (a) Discuss about general characters of fungi.
Or
(b) Details about Zygomycetes.

15. (a) Write in detail about General characters of algae.

Or

- (b) Write about uses of Blue green algae.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Write briefly on scope, history and development of microbiology

Or

- (b) Discuss about biochemical characterization of microorganisms.

17. (a) Discuss about SEM working principle and applications.

Or

- (b) Discuss details about different staining methods.

18. (a) Write about different types of culture media.

Or

- (b) Write about bacterial isolation methods (plate method).

19. (a) Details about Basidiomycetes.

Or

- (b) Give an account on Medicinal applications of fungi?

20. (a) Write about economical importance and applications of algae.

Or

- (b) Discuss about nutrition and reproduction system of algae.
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