



KERALA AGRICULTURAL UNIVERSITY
B.Tech.(Food Technology) 2023 Admission
I Semester Final Examination – February 2024

Pafe.1101

General Microbiology (2+1)

Marks: 50
Time: 2 hours

I State True or false

(10x1=10)

1. Autoclaving is a method of dry sterilization.
2. A differential staining method that is used to differentiate *Mycobacterium* from other bacterial species.

Fill in the blanks

3. The resolution power of the compound microscope is micron.
4. The viruses that live as parasites on bacteria are.....
5. A population of cells derived from a single cell are called
6. Secondary metabolites are produced during this phase of growth curve
7. Fungi are called heterotrophic organisms because they require compounds for nutrition.
8. The study of algae is termed
9. Bacterial fimbriae present on the outer cell surface are used for
10. The reason that bacterial cells are more resistant to osmotic shock than are eukaryotic cells is that they contain in the cell wall.

II Write short notes on ANY FIVE of the following

(5x2=10)

1. Brief the Koch's postulates
2. What is the principle of differential staining?
3. What are psychrophiles? And provide two examples.
4. What are Conidiospores? and their role in asexual reproduction in fungi.
5. What are the different morphologies algae have?
6. What is frameshift mutation?
7. What are examples of major chemical antimicrobial agents?

III Answer ANY FIVE of the following

(5x4=20)

1. What are the methods used to characterize the bacteria?
2. What is passive diffusion and its importance in Nutrient transport?
3. How do you isolate pure culture from a given multicultural sample?
4. What are the components that make a scanning electron microscope?
5. Analyze the differences between Gram-positive and Gram-negative bacteria.
6. What is transduction? And how it is performed?
7. Analyse Filtration as an effective sterilization method.

IV Write an essay on ANY ONE of the following

(1x10=10)

1. Analyze the different quantitative methods being used in the measurement of bacterial growth.
2. What are antibiotics? Discuss their classification and mechanism of action in inhibiting bacterial growth.
