

D.K.M. COLLEGE FOR WOMEN (AUTONOMOUS), VELLORE-1

GENERAL MICROBIOLOGY (15CMB1A)

UNIT – I SECTION –A

(2 Marks)

1. Microbiology
2. Microorganism
3. Bacteria
4. Fungi
5. Algae
6. Parasite
7. Virus
8. Microscope
9. Microscopy
10. Biogenesis
11. Abiogenesis
12. Spontaneous generation
13. Germ theory
14. Koch's postulates
15. Resolution
16. Resolving power
17. Total magnification
18. Magnification
19. Refractive index
20. Working distance
21. Numerical aperture
22. Parfocal
23. Light microscope
24. Dark field microscope
25. Phase contrast microscope
26. Fluorescence microscope
27. TEM

28. SEM

SECTION-B (5 Marks)

1. Describe Koch's postulates.
2. Write the contributions of Louis Pasteur.
3. Write the contributions of Robert Koch.
4. What do you know about Germ theory of disease?
5. Briefly explain Gram staining.
6. Describe about simple staining.
7. Add a note on acid fast staining.
8. Write about capsule staining.
9. Describe spore staining.
10. Explain the principle of Dark field microscope.
11. Explain Redy's experiment.
12. Describe the scope of microbiology.

SECTION-C (10 Marks)

1. Disprove spontaneous generation.
2. Give an account on history of microbiology.
3. Explain: Light microscope.
4. Write about the principle of phase contrast microscope.
5. Write in detail: Fluorescent microscope.
6. TEM
7. SEM

UNIT – II SECTION-A (2 Marks)

1. Anatomy
2. Prokaryote
3. Eukaryote

4. Taxonomy
5. Classification
6. Binomial nomenclature
7. Cell wall
8. PG
9. LPS
10. Capsule
11. Outer membrane
12. Flagella
13. Slime layer
14. Pili
15. Fimbriae
16. Cytoplasmic inclusions
17. Protoplasm
18. Storage granules
19. Mitochondria
20. Five kingdom classification

SECTION-B (5 Marks)

1. Write a note on Whittaker's five kingdom classification.
2. Add a note on bacterial capsule.
3. Write about bacterial flagella.
4. What do you know about the pili of bacteria?
5. Write about the arrangements of bacterial flagella.
6. Give an account on bacterial cell wall.
7. Add a note on bacterial cytoplasmic inclusions.
8. Binomial nomenclature – explain.

SECTION-C (10 Marks)

1. Write in detail – anatomy of procaryotes.

2. Write in detail – anatomy of eucaryotes.
3. Sporulation – explain

UNIT – III (2 MARKS)

1. Sterilization
2. Disinfection
3. Disinfectant
4. Antisepsis
5. Antiseptic
6. Flaming
7. Incineration
8. Moist heat
9. Dry heat
10. Thermal death time
11. Pasteurization
12. Tyndallization
13. Filtration
14. Radiation
15. Antibiotic
16. Chemotherapy
17. ABST
18. Spheroplast
19. Protoplast
20. THFA
21. PABA

SECTION-B (5 MARKS)

1. Add a brief note on sterilization by moist heat.
2. Describe - dry heat sterilization.
3. Write a note on sterilization by filtration.

4. What do you know about radiation sterilization?
5. Explain the mode of action of antibiotics.
6. Give the classification of antibiotics.
7. Briefly explain about the microbial resistance for antibiotics.

SECTION-C (10 MARKS)

1. Write in detail: sterilization by heat.
2. Describe the chemical method of sterilization.
3. Describe in detail: mode of action of antibiotics.
4. Write a note on disc diffusion method.
5. Describe the well diffusion method of ABST.

UNIT – IV SECTION-A (2 MARKS)

1. Aerobe
2. Anaerobe
3. Capnophilic
4. Microaerophilic
5. Acidophiles
6. Alkalophiles
7. Neutrophils
8. Thermophiles
9. Mesophiles
10. Psychrophiles
11. Candle jar
12. Anaerobic chamber
13. Pure culture
14. Colony
15. CFU
16. Staining
17. Differential staining

18. Special staining
19. Simple staining
20. Capsule staining
21. Negative staining
22. Flagella staining
23. Spore staining
24. MCG
25. Stain
26. Dye
27. Basic dyes
28. Acidic dyes
29. Flurochromes
30. Spore
31. Sporogenesis
32. Sporulation
33. Mycolic acid
34. Acid fastness
35. Acid fast
36. Gram staining
37. Media
38. Solid medium
39. Liquid medium
40. Semi-solid medium
41. Basal medium
42. Simple medium
43. Differential medium
44. Selective medium
45. Enriched medium
46. Enrichment medium
47. Transport medium
48. Sugar medium

49. Anaerobic medium

SECTION-B (5 MARKS)

1. Describe anaerobic chamber with neat diagram.
2. How will you cultivate aerobes?
3. Describe anaerobic jar.
4. Add a note streaking & its types.
5. Write a note on serial dilution.
6. Explain: spread plate method.
7. Explain: pour plate method.
8. Give an account on microbial culture preservation.
9. Write about the types of medium.
10. Give an account on stains & its types.
11. Write a note on media nutrients

SECTION-C (10 MARKS)

1. Write in detail: cultivation of anaerobes.
2. Explain pure culture techniques with neat diagram.
3. Write elaborately: Media & its types.
4. Represent the types of streaking with neat diagrams.
5. Write in detail: Gram staining

UNIT – V SECTION-A (2 MARKS)

1. Co-transport
2. Symport
3. Facilitated diffusion
4. Passive diffusion
5. Active transport
6. Group translocation
7. ETC
8. Respiration

9. Glycolysis
10. TCA
11. HMP Shunt
12. Fermentation
13. Photosynthesis
14. Cyclic Photosynthesis
15. Anoxygenic Photosynthesis
16. Oxygenic Photosynthesis
17. Non-cyclic Photosynthesis
18. BGA
19. Cyanobacteria
20. Cyst
21. Agar
22. Plasmid

SECTION-B 5 MARKS QUESTIONS

1. Add a note on passive diffusion.
2. Explain facilitated diffusion.
3. Give the schematic representation of Group translocation.
4. Glycolysis.
5. How the microorganism obtain energy through fermentation?
6. HMP Shunt – Describe
7. What do you mean by anoxygenic photosynthesis?
8. What do you mean by oxygenic photosynthesis?
9. Give an account on Cyanobacteria/BGA.
10. Write a note on fungi.
11. Describe the features of algae.
12. Describe the features of protozoa.
13. Describe the features of virus.

SECTION-C**10 MARKS QUESTIONS**

1. Bacterial growth curve – explain with neat diagram
2. Describe the features of fungi, algae and virus with diagram.
3. Add a note on Active transport with neat diagram.
4. Glycolysis – explain
5. Explain – TCA Cycle
6. Describe ETC
7. Write a detailed note on Photosynthesis.
8. Give an account on Nutritional types of microorganisms.