

D 123854

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Name.....

Reg. No.....

CALICUT UNIVERSITY CENTRALIZED ENTRANCE TEST (CU-CET)
APRIL 2025

M.Sc. MICROBIOLOGY

Time : Two Hours

Maximum : 200 Marks

Each question carries 4 marks.

One mark will be deducted for each wrong answer.

1. Helminthology deals with study of :
(a) Bacteria. (c) Algae.
(b) Protozoa. (d) Worms.
2. Acid fast staining which among is the primary stain :
(a) Methylene Blue. (c) Malachite Green.
(b) Carbol Fuchsin. (d) Crystal violet.
3. The membrane lipids present in Archaeobacteria are :
(a) Ester linked. (c) Ether linked.
(b) Peptide linked. (d) N acetyl glucosamine linked.
4. Selman Waksman received the Nobel prize for the discovery of :
(a) Tetracycline. (c) Penicillin.
(b) Amoxicillin. (d) Streptomycin.
5. Feulgen stain is a staining method used to stain :
(a) Virus. (c) RNA.
(b) DNA. (d) Capsule.
6. Which type of sterilization method is used to sterilize Lowenstein- Jensen medium ?
(a) Inspissation. (c) Pasteurization.
(b) Tantalization. (d) Filtration.

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7. Which among is a Purple Sulphur Bacteria ?
- (a) Thiospirillum. (c) Beggiatoa.
(b) Chlorobacterium. (d) Bacillus radicola.
8. Which statement is more accurate to eutrophication ?
- (a) Loss of nutrients in the water bodies.
(b) The excessive growth of algae.
(c) Low level of oxygen content.
(d) The most common nutrients causing eutrophication are carbon and calcium.
9. Which among is not a water borne disease ?
- (a) Typhoid Fever. (c) Hepatitis A.
(b) Cholera. (d) Pneumonia.
10. Major components of Biogas :
- (a) Methane > carbon dioxide > Hydrogen > Nitrogen.
(b) Methane > carbon dioxide > Nitrogen > Hydrogen.
(c) Methane > carbon dioxide > Hydrogen > Sulphur.
(d) Methane > carbon dioxide > Nitrogen > Sulphur.
11. Which one is positive biological interaction ?
- (a) Mutualism. (c) Amensalism.
(b) Commensalism. (d) Symbiosis.
12. Which one is Non-symbiotic Nitrogen fixator ?
- (a) Frankia. (c) Azospirillum.
(b) Azotobacter. (d) Nostoc.
13. Causative agent of Wilt of tomato :
- (a) Fusarium oxysporum. (c) Alternaria solani.
(b) Colletotrichum falcatum. (d) Aspergillus niger.

14. A non-selective, non-differential microbiological growth medium :
- (a) LB medium. (c) TSA.
(b) Blood agar. (d) Mueller-Hinton agar.
15. Which among is not an anerobic medium ?
- (a) Thioglycolate medium. (c) Cooked meat medium.
(b) Tryptic Soy Agar. (d) Brewbr agar medium.
16. Which is the highest rank in biological classification ?
- (a) Kingdom. (c) Phylum.
(b) Domain. (d) Order.
17. Volutin granules are present in :
- (a) Diphtheria bacilli. (c) Hemophilus.
(b) Borrelia. (d) Chlamydia.
18. Precursor used for Penicillin production :
- (a) Glucose. (c) Fructose.
(b) Phenyl acetic acid. (d) Acetic acid.
19. What is the ratio of ABE fermentation ?
- (a) 6 : 3 : 1. (c) 3 : 6 : 1.
(b) 1 : 3 : 6. (d) 6 : 1 : 3.
20. The typical temperature for an autoclave :
- (a) 121°C. (c) 100°C.
(b) 63°C. (d) 73°C.
21. A worm as model organism :
- (a) Caenorhabditis elegans. (c) Neurospora crassa.
(b) Drosophila melanogaster. (d) Arabidopsis thaliana.
22. The immunoglobulin class with secretory component is :
- (a) Ig A. (c) Ig D.
(b) Ig M. (d) Ig E.

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23. Which acid have preservative effect ?
- (a) Acetic acid. (c) Citric acid.
(b) Tartaric acid. (d) Malic acid.
24. First amino acid commercially produced by fermentation :
- (a) L- Glutamic acid. (c) Pheny alanine.
(b) L-Lysine. (d) Aspartic acid.
25. The term antibiotic is coined by :
- (a) Alexander Fleming. (c) Selman Waksman.
(b) Pasture. (d) Lister.
26. A disease outbreak that occurs within a specific geographical are :
- (a) Sporadic. (c) Pandemic.
(b) Epidemic. (d) Endemic.
27. Rancidity in spoiled foods is due to :
- (a) Lipolytic organisms. (c) Proteolytic organisms.
(b) Toxigenic microbes. (d) Saccharolytic microbes.
28. Discontinuous heating is called :
- (a) Pasteurization. (c) Sterilization .
(b) Fermentation. (d) Tyndallization.
29. A segment of DNA that reads from the same forward and backward is called :
- (a) Palindromic DNA. (c) Complementary DNA.
(b) Plasmid DNA. (d) Copy DNA 127.
30. Which one of the following organisms is used for the large-scale production of recombinant insulin ?
- (a) Plasmodium. (c) Agrobacterium.
(b) Rhizobium. (d) E. coli.

31. Medium used in the conformed test of bacteriological analysis of water :
- (a) Nutrient agar.
 - (b) MacConkey broth.
 - (c) Nutrient broth.
 - (d) BGLB medium.
32. T cells are :
- (a) Neutrophils.
 - (b) Eosinophils.
 - (c) Basophils.
 - (d) Lymphocytes.
33. Catalytic RNAs are called :
- (a) SiRNA.
 - (b) Ribozyme.
 - (c) Micro RNA.
 - (d) Antisense RNA.
34. The by-product of dairy industry used as a good source of carbon in fermentation media :
- (a) Whey.
 - (b) Dextrin.
 - (c) Molasses.
 - (d) Methanol.
35. The by-product during streptomycin production is :
- (a) Vitamin A.
 - (b) Vitamin B12.
 - (c) Proline.
 - (d) None of these.
36. Which one is chemolithoautotrophy ?
- (a) Methanogens
 - (b) Green sulfur bacteria.
 - (c) Cyanobacteria.
 - (d) Purple sulfur bacteria.
37. Which one is not a selective differential media ?
- (a) MacConkey agar.
 - (b) Mannitol salt agar.
 - (c) EMB agar.
 - (d) Blood agar.
38. Incomplete antigens are known as :
- (a) Immunogen.
 - (b) Epitope.
 - (c) Haptens.
 - (d) Paratop.
39. Sauerkraut is a fermented product of :
- (a) Beetroot.
 - (b) Cabbage.
 - (c) Cauliflower.
 - (d) Broccoli.

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40. Health benefit microorganisms are known as :
- (a) Antibiotics.
 - (b) Prebiotics.
 - (c) SCP.
 - (d) Probiotics.
41. The causative agent of ergotism :
- (a) *Aspergillus fumigates*.
 - (b) *Claviceps purpurea*.
 - (c) *Penicillium chrysogenum*.
 - (d) *Actinomyces*.
42. The oncogene over expressed in breast cancer :
- (a) HER2.
 - (b) EGFR.
 - (c) MCR-7.
 - (d) NMYC.
43. Heat labile substances are sterilized by _____.
- (a) Boiling.
 - (b) Hot air oven.
 - (c) Freeze drying.
 - (d) Membrane filtration.
44. Reverse vaccination indicates :
- (a) From antibody to vaccine development.
 - (b) From genome sequence to vaccine development.
 - (c) From antigenic polypeptide to vaccine development.
 - (d) From antigenic protein to vaccine development.
45. Which among possess endospore ?
- (a) *Bifidobacteria*.
 - (b) *Klebsiella*.
 - (c) *Clostridium*.
 - (d) *Pseudomonas*.
46. Which among is not a secondary lymphoid tissue ?
- (a) Tonsil.
 - (b) Bone marrow.
 - (c) Spleen.
 - (d) GALT.
47. Who introduced vaccination ?
- (a) Koch.
 - (b) Edward Jenner.
 - (c) Pasture.
 - (d) Alexander Fleming.

48. Chocolate agar is an example of :

- (a) Simple media.
- (b) Synthetic media.
- (c) Complex media.
- (d) Natural media.

49. BOD used for the measurement of :

- (a) Atmospheric pollution.
- (b) Sewage pollution.
- (c) Nuclear pollution.
- (d) Thermal pollution.

50. Which among is an Antifoam agent ?

- (a) Silicon compounds.
- (b) Soybean oil.
- (c) Corn oil.
- (d) All of these.