



திருவள்ளூர் பல்கலைக்கழகம், வேலூர்
THIRUVALLUVAR UNIVERSITY, VELLORE

Ph.D., - COMMON ENTRANCE TEST (CET9) – JUNE SESSION 2022

Subject : APPLIED MICROBIOLOGY

Exam Date : 26.06.2022

Time : 11.00 A.M. TO 12.30. P.M

Maximum Marks : 50

NAME		REGISTER NO	
		HALL TICKET NO.	
MOBILE NO		EMAIL ID	
CANDIDATE SIGNATURE		HALL INVEGILATOR SIGNATURE WITH DATE	

SECTION – A (50 x 1 = 50 Marks)

All Questions carry equal marks.

1. What is the minimum distance for the eye to focus any object ?
a) 11 cm b) 25 cm c) 32 cm d) 42 cm
2. The refractive index of air is
a) 0.50 b) 0.75 c) 1.00 d) 1.25
3. The bacterium Yersinia pestis causes _____
a) Bubonic Plague b) Rubella c) Roseola d) Measles
4. How many types of antibodies are there ?
a) Five b) Three c) Two d) Four
5. Monoclonal antibodies recognize a single
a) Antigen b) Bacterium c) Epitope d) B cell
6. Which of the following microorganism have high vitamin content ?
a) Bacteria b) Yeast c) Algae d) Protozoa
7. Which of the following is not a major greenhouse gas ?
a) Ozone b) Water vapour c) Methane d) Carbon dioxide
8. UV radiations from sunlight cause a reaction producing _____
a) Carbon monoxide b) Ozone c) Fluorides d) Sulphurdioxide
9. Which of the following salts is the main cause of permanent hardness of water ?
a) Magnesium sulphate b) Magnesium bicarbonate
c) Magnesium carbonate d) None of the above
10. Bioterrorism group A agent
a) Q fever b) Typhus fever c) Brucella d) Anthrax

11. Which of the following is a chronic respiratory disorders caused by smoking ?
a) Asthma **b) Emphysema**
c) Respiratory alkalosis d) Respiratory acidosis
12. Which of the following organs only receives oxygenated blood ?
a) Lungs b) Gills c) Liver **d) Spleen**
13. This is the functional unit of the kidney
a) Hilum b) Neurons **c) Nephrons** d) Medulla
14. Which structure is encircled by the circle of willis ?
a) Carvernous sinus b) Pineal gland
c) Aqueduct of the midbrain **d) Pituitary stalk**
15. Where are the blood vessels found that supply the skin ?
a) Dermis b) Epidermis
c) Stratum lucidum d) Stratum corneum
16. The AVA Biothrax is the FDA approved vaccine for _____
a) Bacillus cereus b) Clostridium tetani
c) Bacillus anthrax d) Bacillus substilis
17. Which of the following is not the common specimen taken for the diagnosis of Cryptococcus spp ?
a) Urine b) Sputum **c) Skin tissues** d) Cerebrospinal fluid
18. The most likely source of the MERS – COV to humans is _____
a) Dogs b) Fishes **c) Camels** d) Birds
19. Dose of BCG vaccine is
a) 0.2 – 0.5 ml **b) 0.1 ml** c) 0.05 ml d) 0.2 to 0.3 ml
20. Which of the following is not related to congenitalsyphilis ?
a) Aneurys b) Saddle nose c) Still birth d) Hutchiso’s teeth
21. Which one of the following groups is responsible for the potency and the toxicity of local anesthetics ?
a) Ionizable group b) Intermediate chain
c) Lipophytic group d) All of the above
22. Hypnotic drugs are used to treat ?
a) Psychosis **b) Sleep disorders**
c) Narcolepsy d) Parkinsonian disorders
23. Which of the following drugs are ulcer protectives ?
a) Cimetidine b) Omeprazole **c) Sucralfate** d) Misoprostol
24. Crastic acid secretion is under the control of the following agents except :
a) Histamine b) Acetylcholine **c) Serotonin** d) Gastrin

25. Half – life of cyclosporine A is
 a) 25 – 35 minutes b) 21 days c) 4 – 16 hours **d) 19 hours**
26. All are sequence alignment tools except
a) Rasmol b) BLAST c) FASTA d) clustol w
27. In human _____ is the largest gene
a) Drystophin b) Titin c) Insulin d) None of these
28. Each record in a database is called an
a) Entry b) File c) Record d) Ticket
29. Submission to genbank are made using
a) Bankit and Sequin b) Bankit and Bankin
 c) Sequin and Bankin d) Entrez
30. Characterising molecular component is
 a) Genomics b) Cheminformatics c) Proteomics **d) Bioinformatics**
31. Which of the following is not a stage in Hershey – chase experiment ?
 a) Blending b) Centrifugation c) Infection **d) Conjugation**
32. The presence of which base in the place of uracil makes the DNA more stable
 a) Adenine b) Cytosine **c) Thymine** d) Guanine
33. How many restriction sites are contained by a plasmid ?
 a) 1 b) 2 c) 3 **d) morethan 1**
34. λZAP vector is an example of
 a) Phage **b) Phagemid** c) Casmid d) Plasmid
35. Charon 34 and Charon 35 can clone DNA upto
 a) 1 – 2 kb b) 6 – 7 kb **c) 9 – 20 kb** d) 30 – 35 kb
36. Which step is performed after the directed mutagenesis of the gene?
 a) gene recombination b) 2D NMR c) gene editing **d) expression**
37. The essence of protein engineering is
 a) modified protein b) modified mRNA
c) genetic modification d) modified aminoacids
38. Polymerase used for PCR is extracted from _____
 a) E.coli b) Homo sapiens
c) Thermusaquaticus d) Saccharomyces cerevisiae
39. At what temperature do denaturation of DNA double helix takes place?
 a) 60⁰ b) 54⁰ c) 74⁰ **d) 94⁰**
40. The effects of protein on an entire organism is described in _____
a) Phenotypic function b) cellular function
 c) molecular function d) structural genomics

41. Magnesium is required in the medium for _____
- a) membrane stabilization b) production of ATP
c) membrane structure and function d) aminoacid synthesis
42. What is the pore size of the nitrocellulose?
- a) 0.25 micron b) 0.28 micron **c) 0.22micron** d) 0.20micron
43. Sonti is
- a) Barley beer b) ginger beer c) wheat beer **d) rice beer**
44. Mannitol is a reserved food found in
- a) Gacillaria b) Porphyra c) Chara **d) focus**
45. Buckyballs are made up of _____
- a) Nickel b) DNA c)RNA **d) Carbon**
46. Which among the following has the maximum penetrating power?
- a) Radio waves b) microwaves c) UV radiation **d) Gamma rays.**
47. Radio carbon dating technique is used to estimate the age of
- a)rocks b)soil **c) fossils** d)buildings
48. Isotopes of an element have a different number of
- a) proton **b) neutron** c) electron d) atom
49. Who is known as father of molecular biology ?
- a) Linus carl pauling** b) James Watson c)Francis H. Crick d) B.Hoagland
50. Which of the following cannot be used for the separation of nucleic acid?
- a) northernblotting b) PAGE
c) SDS-PAGE d) none of the mentioned