

197/2014

Maximum : 100 marks

Time : 1 hour and 15 minutes

1. Autoanalysers in clinical laboratories employ :  
(A) Kinetic analysis (B) End-point analysis  
(C) Qualitative analysis (D) None of the above
2. The property of emission spectroscopy is employed in :  
(A) Fluorimeter (B) Photoelectric colorimeter  
(C) Spectrophotometer (D) Flame photometer
3. Normal range of specific gravity of urine :  
(A) 1.000-1.020 (B) 1.015-1.025  
(C) 0.510-0.910 (D) 1.310-1.415
4. Van den Bergh reaction is used for the analysis of :  
(A) Bilirubin (B) Calcium  
(C) Transaminase (D) Prothrombin
5. One letter code for an aminoacid that is optically inactive is :  
(A) G (B) S  
(C) A (D) E
6. Kary Mullis got Nobel Prize or his invention of :  
(A) Autoanalyzer (B) DNA sequencer  
(C) PCR (D) MRI
7. The term heterochromatin refers to :  
(A) Transcribing chromatin (B) Active chromatin  
(C) Histone bound chromatin (D) Inactive chromatin
8. In RIA the factor that is present in limiting quantities is :  
(A) Labelled antigen (B) Antigen  
(C) Antibody (D) None of the above

9. PAS stain is used in electrophoresis or the detection of :
- (A) DNA (B) Glycoproteins  
(C) RNA (D) Lipoproteins
10. A unit of radioactivity is :
- (A) Curie (B) Becquerel  
(C) Gray (D) All of the above
11. Catecholamine hormones bind to receptors present in :
- (A) Nuclear membrane (B) DNA  
(C) Intracellular compartments (D) Plasma membrane
12. Statins used for the treatment of hypercholesterolemia exhibit :
- (A) Competitive inhibition (B) Uncompetitive inhibition  
(C) Non-competitive inhibition (D) None of the above
13. The role of sugar nucleotides in biosynthesis of glycogen was discovered by :
- (A) Frederick Sanger (B) Albert Lehninger  
(C) Luis Leloir (D) Carl Cori
14. 2-amino, 6-oxo purine is :
- (A) Guanine (B) Adenine  
(C) Thymine (D) Cytosine
15. If an enzyme is having high affinity for its substrate, it denotes :
- (A) High  $K_m$  value (B) Low  $K_m$  value  
(C) Moderate  $K_m$  value (D)  $K_m = 0$
16. The technique used for preparing a DNA microarray :
- (A) DNA sequencing (B) Caligraphy  
(C) Photolithography (D) Freeze etching
17. \_\_\_\_\_ is not an inhibitor of electron transport chain.
- (A) Streptomycin (B) Antimycin A  
(C) Cyanide (D) Piericidin A

18. A plasma protein that binds haemoglobin :
- (A) Albumin (B) Hemopexin  
(C) Haptoglobin (D) None of the above
19. The concentration of a suspension of microorganisms can be measured using :
- (A) Turbidimeter (B) Nephelometer  
(C) Colorimeter (D) Spectrophotometer
20. The least dense lipoproteins are :
- (A) VLDL (B) LDL  
(C) Chylomicrons (D) HDL
21. Progesterone levels peaks during :
- (A) Luteal Phase (B) Menstrual phase  
(C) Follicular phase (D) None of the above
22. The immunoglobulin present in secretions :
- (A) Ig G (B) Ig D  
(C) Ig M (D) Ig A
23. The coenzyme of pyruvate carboxylase is :
- (A) Biotin (B) TPP  
(C) Coenzyme A (D) PLP
24. Caffeine acts by inhibiting the action of :
- (A) Phosphatase (B) Phosphodiesterase  
(C) Protein Kinase (D) ATP
25. An example of a vasodialator is :
- (A) Sodium hydroxide (B) Nitrogen  
(C) Nitric Oxide (D) Sodium chloride
26. Growth hormone is produced by :
- (A) Posterior Pituitary (B) Hypothalamus  
(C) Anterior pituitary (D) Thyroid gland

27. A gene that has got introns in it :
- (A) Globin (B)  $\beta$ -adrenergic receptor  
(C) Histone (D) Interferon
28. A non-ionic media used for density gradient centrifugation :
- (A) Sodium Bromide (B) Caesium Chloride  
(C) Caesium Sulphate (D) Ficoll
29. When blood sample has to be collected simultaneously for glucose and urea analysis, the preferred anticoagulant is :
- (A) Sodium fluoride (B) Iodoacetate  
(C) EDTA (D) Citrate
30. The standard free energy change for ATP hydrolysis to ADP and Pi is :
- (A) -30.5 kJ/mol (B) -45.6 kJ/mol  
(C) -10.9 kJ/mol (D) -61.9 kJ/mol
31. Reynolds-Braude phenomenon is seen in :
- (A) *Candida albicans* (B) *Candida tropicalis*  
(C) *Histoplasma* (D) *Cryptococcus*
32. Epidermophyton effects :
- (A) skin and nail (B) skin and hair  
(C) hair and nail (D) skin, hair and nail
33. Reservoir of *Leptospira* :
- (A) cat (B) dog  
(C) rat (D) monkey
34. Medium for growth of anaerobic bacteria :
- (A) Blood agar (B) LJ medium  
(C) RCM (D) MacConkey Agar medium
35. Flame cells are seen in :
- (A) protozoa (B) cestode  
(C) nematode (D) none

36. Chaga's disease is caused by :
- (A) *Trypanosoma cruzi* (B) *Trypanosoma brucei*  
(C) *Trypanosoma gambiense* (D) *Trypanosoma rhodesiense*
37. Schuffner's dot is seen in :
- (A) *Plasmodium vivax* (B) *Plasmodium falciparum*  
(C) *Plasmodium ovale* (D) *Plasmodium malariae*
38. Holding period of autoclave is :
- (A) 150°C for 15 mts at 15 lbs (B) 100°C for 1 hr  
(C) 121°C for 15 mts at 15 lbs (D) 161°C for 30 mts
39. Endotracheal tubes are best sterilised by :
- (A) Ethylene oxide (B) Glutaraldehyde  
(C) Mercuric chloride (D) Ethyl alcohol
40. Blood agar is an example of :
- (A) Enrichment media (B) Indicator media  
(C) Differential media (D) Enriched media
41. The transfer of a portion of the DNA from bacterium to another by a bacteriophage is known as :
- (A) transformation (B) transduction  
(C) lysogenic conversion (D) conjugation
42. Who coined the term vaccine?
- (A) Robert Koch (B) Alexander Fleming  
(C) Louis Pasteur (D) Leeuwenhoek
43. When flagella is arranged all around the cell it is called :
- (A) Lophotrichous (B) Amphitrichous  
(C) Peritrichous (D) Monotrichous

44. Melioidosis is caused by :
- (A) Burkholderia pseudomallei (B) Burkholderia mallei  
(C) Burkholderia cepacia (D) Stenotrophomonas maltophilia
45. Which is a DNA virus?
- (A) Polio virus (B) Hepatitis A virus  
(C) Influenza virus (D) Hepatitis B virus
46. "Fried Egg" appearance is a characteristic feature of :
- (A) Brucella (B) Spirochetes  
(C) Mycoplasma (D) Chlamydiae
47. Coagulase enzyme is produced by :
- (A) Staphylococcus (B) Streptococcus  
(C) Pneumococcus (D) None of the above
48. Gas gangrene is produced by :
- (A) Clostridium tetani (B) Clostridium perfringens  
(C) Clostridium botulinum (D) Clostridium difficile
49. Regarding fungal cell wall all are true except :
- (A) contains chitin (B) prevent osmotic damage  
(C)azole's act on them (D) does not contain peptidoglycan
50. Which among of these is not an oncogenic virus?
- (A) Human papilloma virus (B) Epstein-Barr virus  
(C) Hepatitis A virus (D) Herpes simplex virus Type I and II
51. Whey agglutination test is done for :
- (A) Tubercle bacillus (B) Brucella  
(C) E. Coli (D) Campylo bacter jejuni
52. Gram variable bacteria is seen in which phase of growth curve :
- (A) Lag phase (B) Log phase  
(C) Stationary phase (D) Phase of decline

53. "Traveller's diarrhea" is caused by :
- (A) Entero pathogenic E. Coli (B) Entero invasive E. Coli  
(C) Entero hemorrhagic E. Coli (D) Entero Toxigenic E. Coli
54. Immunoglobulin which crosses the placenta normally :
- (A) Ig G (B) Ig A  
(C) Ig M (D) Ig D
55. The following are acid fast organisms except :
- (A) Mycobacterium tuberculosis (B) Nocardia  
(C) Cryptosporidium (D) Cryptococcus
56. Criteria for diagnosis for acute leukemia is :
- (A) 15% blasts (B) 20% blasts  
(C) 30% blasts (D) 50% blasts
57. Plasma trapping is seen during estimation of :
- (A) ESR (B) Hemoglobin  
(C) Osmotic fragility (D) Hematocrit
58. Light scatter and impedance counting are the basic principles of :
- (A) Immunohistochemistry  
(B) Fluorescent insitu hybridisation  
(C) Flow cytometry  
(D) Polymerase chain reaction
59. Heparin is used in estimation of :
- (A) Blood group (B) Osmotic fragility  
(C) ESR (D) Hematocrit
60. The antibody specific for Systemic lupus erythematosus is :
- (A) ANA (B) Anti Ro  
(C) Anti ds DNA (D) Anti mitochondrial

61. Fixed specific gravity of 1.010 is called :  
(A) Hypoesthenuria (B) Hyperesthenuria  
(C) Normoesthenuria (D) Isothenuria
62. Specific test for glycosuria is :  
(A) Bial's test (B) Glucose oxidase test  
(C) Benedict's test (D) Seliwanoff's test
63. Microtome useful for taking full mount sections is :  
(A) Base sledge (B) Rotary  
(C) Rocking (D) Vibrating
64. Which of the following is a neutrophil inclusion?  
(A) Cabot ring (B) Heinz body  
(C) Dohle body (D) Pappenheimer body
65. The percentage of formaldehyde in concentrated formalin is :  
(A) 40% (B) 60%  
(C) 33% (D) 80%
66. Pattern of staining of her 2 neu is :  
(A) Cytoplasmic (B) Membrane  
(C) Nuclear (D) Mitochondrial
67. Which special stain requires thick sections?  
(A) Periodic acid schiff's (B) Van Gieson  
(C) Reticulin (D) Perl's
68. Which is a clearing agent?  
(A) Alcohol (B) Chloroform  
(C) Acetone (D) Celloidin
69. Fixative for sputum is :  
(A) Bouin's (B) Methanol  
(C) Carbowax (D) Saccomano's



70. Nuclear details of cells are better seen with which stain :
- (A) Papinicoloau (B) Giemsa  
(C) Leishmann (D) Field's
71. The agent used for both fixation and decalcification is :
- (A) Formic acid (B) Trichloroacetic acid  
(C) Sulphuric acid (D) Nitric acid
72. Dezinkerization means removal of :
- (A) wax (B) formalin pigment  
(C) mercury pigment (D) alcohol
73. Which is a proliferation marker?
- (A) Cytokeratin (B) Ki67  
(C) p53 (D) CD20
74. All are used in electron microscopy except :
- (A) Glutaraldehyde (B) Epoxy resin  
(C) Osmium tetroxide (D) Celloidin
75. Positive staining with Sudan Black B indicates \_\_\_\_\_ origin.
- (A) Lymphoid (B) Erythroid  
(C) Myeloid (D) Monocytic
76. Technique useful for CNS lesions is :
- (A) Imprint (B) Squash  
(C) Frozen section (D) Cell block
77. High Performance Liquid Chromatography is useful in diagnosing :
- (A) Sickle cell anemia  
(B) Hereditary Spherocytosis  
(C) Paroxysmal nocturnal hemoglobinuria  
(D) G6PD deficiency

78. Factors missing in Aged plasma :
- (A) V & VII (B) I & V  
(C) III & VII (D) V & VIII
79. Which test is positive in normal urine?
- (A) Fouchet's (B) Hay's  
(C) Ehrlich (D) Benzidine
80. Karyotype in Kline filter' syndrome is :
- (A) 45XO (B) 47XXY  
(C) 46XY (D) 47XXX
81. Who among the following Social reformer earlier known as 'Muthukutty'?
- (A) Dayananda Saraswathi (B) Ayya vaikunder  
(C) Pandit Karuppan (D) E.V. Ramaswami Naicker
82. The daily known as 'Atmavidyakahalam' is started by :
- (A) Vagbhatananda (B) C.P. Rama Nayar  
(C) P. Raghavan (D) T.V. Ananda
83. SNDP Yogam came into existence on :
- (A) May 15, 1901 (B) May 15, 1902  
(C) May15, 1903 (D) May 15, 1904
84. Who among the following social reformer founded 'Sidhasramam' at Alathur in Palakkad District?
- (A) Brahmananda Sivayogi (B) Vaikunda swami  
(C) Vagbhatananda (D) Chattampi swamikal
85. In which year Ayyankali founded 'Sadhu Jana Paripalana Yogam' :
- (A) 1904 (B) 1905  
(C) 1906 (D) 1907