

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) Papinicolou (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 |

86. The Second Ezhava Memorial presented by the Ezhava community to whom?  
(A) Lord Elgin (B) Lord Minto  
(C) Lord Curzon (D) Lord Landsdowne
87. The Planning commission Chairman who resigned recently:-  
(A) B.K. Chaturvedi (B) Mihir Shah  
(C) Narendra Jadhav (D) Montek Singh Abluwalia
88. Who won the Men's Italian Tennis Open 2014, held in Rome?  
(A) Novak, Djokovic (B) Nadal, Rafael  
(C) Wawrinka, Stan (D) Roger, Federer
89. Padma Vibhushan Award Winner 2014, Dr. Raghunath A Mashelkar belonged in the State of :  
(A) Gujarat (B) Madhya Pradesh  
(C) Maharashtra (D) Rajasthan
90. The Revolt of 1857 was described as the 'First War of Independence' by :  
(A) V.D. Savarkar (B) S.N. Sen  
(C) R.C. Majumdar (D) Bal Gangadhar Tilak
91. The freedom fighter who raised the slogans, "Jai Hind" and "Delhi Chalo" :  
(A) Arobindo Gosh (B) Subash Chandra Bose  
(C) Gandhiji (D) Bhagat Singh
92. The 'Reforms' which introduced 'Seperate Electorate System' for the Muslims :  
(A) Montague Chelmsford Reforms in 1919  
(B) The Reforms of 1935  
(C) Minto- Morley Reforms in 1909  
(D) None of these
93. Non Co Operation Movement was launched in connection with :  
(A) Lucknow Pact (B) Home Rule League  
(C) Khilafat Issue (D) Rowlatt Act

94. Which one of the session of Indian National Congress passed the historic resolution 'Poorna Swaraj'?
- (A) Lucknow Session (B) Kanpur Session  
(C) Calcutta Session (D) Lahore Session
95. Who among the following person attended the Three Round Table Conferences, held in London?
- (A) B.R. Ambedker (B) Gandhiji  
(C) N.M. Joshi (D) C.Y. Chintamani
96. Gandhiji started Salt Sathyagraha from Sabarmati Ashram to Dandi on :
- (A) March 10, 1930 (B) March 11, 1930  
(C) March 12, 1930 (D) March 13, 1930
97. Who among the following called the 'Father of Indian Economics' and 'Politics'?
- (A) R.C. Dutt (B) Jawaharlal Nehru  
(C) Dadabhai Naoroji (D) Gopala Krishna Gokhale
98. Who is considered as the 'National Teacher of India' and the 'Spiritual Successor of Gandhiji'?
- (A) Jawaharlal Nehru (B) Brahma Dutt  
(C) Lal Bahadur Shastri (D) Acharya Vinoba Bhave
99. The last Viceroy of British India :
- (A) Lord Mountbatten (B) Lord Wavell  
(C) Lord Linlithgow (D) C. Rajagopalachari
100. Which one of the following texts was not written by Annie Besant?
- (A) Study in Consciousness  
(B) The Arctic Home in the Vedas  
(C) The Ancient Wisdom  
(D) My Path of Atheism