1. Values at 3SD limits are called:
   (A) Action limit
   (B) Warning limit.
   (C) Assay is satisfactory.
   (D) None of the above.

2. Yeast ferment all of the following sugars, except:
   (A) Glucose.
   (B) Lactose.
   (C) Maltose.
   (D) Sucrose.

3. Lipoprotein containing highest quantity of phospholipid:
   (A) HDL.
   (B) LDL.
   (C) VLDL.
   (D) Chylomicrons.

4. HCl in gastric juice is produced by:
   (A) Chief cells.
   (B) Oxyntic cells.
   (C) Goblet cells.
   (D) Columner cells.

5. The β-hCG is secreted from:
   (A) Adrenal medulla.
   (B) Prostate gland.
   (C) Ovarian follicles.
   (D) Syncytictrophoblastic cells of the placenta.

6. Oxalate crystals are found in:
   (A) Acidic pH.
   (B) Alkaline pH.
   (C) Neutral pH
   (D) None

7. Donated blood undergoes screening for which diseases?
   (A) HIV.
   (B) Viral Hepatitis.
   (C) Diabetes.
   (D) A and B.

8. In which of the following phenomena of absorption of light at one wavelength and emission at a longer wavelength is used?
   (A) Visible spectroscopy.
   (B) Fluorescence spectroscopy
   (C) X-ray diffraction.
   (D) None

9. The concentration of oxalate used to prevent clotting:
   (A) 10mg/ml.
   (B) 20mg/ml.
   (C) 2mg/ml.
   (D) 15mg/ml.

10. Widal test is?
   (A) A precipitation test.
   (B) Agglutination test.
   (C) Passive agglutination test
   (D) CFT

11. The major source of extracellular cholesterol for human tissue is:
   (A) VLDL.
   (B) LDL.
   (C) HDL.
   (D) Albumin.

12. Which is the best stain for reticulocyte count?
   (A) Alcian blue.
   (B) Brilliant cressal blue
   (C) Toludine blue.
   (D) New methylene blue.

13. Which is needed for performing Direct Coomb's test?

(A) Patient's RBC.

(B) Patient's serum.

(C) Haemolysis.

(D) Cells from buffy coat.

14. The wavelength of an absorption is 495nm. In what part of the electromagnetic spectrum does this lie:

(A) Radiowave.

(B) Microwave.

(C) UV-visible.

(D) Infrared.

15. Fat is stained by:

(A) Prussian blue.

(B) Oil-red-O.

(C) Myeloperoxide

(D) Methylene Blue.

16. Leishman powder is dissolved in?

(A) Acetone.

(B) Methanol.

(C) Distilled water.

(D) None

17. An epitope is?

(A) Antigenic determining site.

(B) Antibody

(C) T-cell

(D) B-cell

18. Loeffler's serum slope is sterilised by:

(A) Autoclaving

(B) Inspissation.

(C) Boiling.

(D) None.

19. Which one of the following gives positive reation for Molisch's test?
    (A) Flavoproteins.
    (B) Lipoproteins.
    (C) Mucoproteins.
    (D) None of these

20. Plastic disposable syringe is sterillised by?
    (A) Autoclaving.
    (B) Hot air oven.
    (C) Ionising radiation.
    (D) Free steaming.

21. The fatty acid having 2 double bonds in it is:
    (A) Myristic acid.
    (B) Oleic acid
    (C) Linoleic acid.
    (D) Palmitic acid.

22. Heller's nitric acid test of urine is done to detect,
    (A) Sugar.
    (B) Protein.
    (C) Ketone bodies.
    (D) Bile salt.

23. Cardiolipin contains?
    (A) 3 molecules of glycerol.
    (B) 2 molecules of glycerol.
    (C) 2 molecules of glycerol and one sphingorine.
    (D) None.

24. Mononuclear phagocytic system comprises of:
    (A) Eosinophils.
    (B) Basophils.
    (C) Macrophages.
    (D) Neutrophils

25. In myxedema, serum findings are all except:
    (A) Low T3, T4.
    (B) High TSH.
    (C) Low cholesterol.
    (D) Normal creatinine

26. The strength of formaldehyde in 10% formalin:
    (A) 10%.
    (B) 0.40%.
    (C) 4%.
    (D) 44%

27. Routine coagulation test includes all, except:
    (A) Prothrombin time.
    (B) Activated partial thromboprotein time.
    (C) Bleeding test.
    (D) Thrombin time

28. Infective form of Taenia solium is:
    (A) Cysticercus cellulosae.
    (B) Both cysticercus cellulose and egg.
    (C) None.
    (D) Only egg.

29. Which of the following is a supravital stain?
    (A) Geimsa stain.
    (B) Wright stain.
    (C) Jenner's stain.
    (D) Brilliant cresyl blue.

30. Which of the following is absent in normal person's serum ?
    (A) Albumin.
    (B) γ-globulin.
    (C) Fibrinogen.
    (D) α2-globulin

31. Catalase test is negative in:
    (A) Staphylococcus aureus.
    (B) Escherichia coli.
    (C) Streptococcus pyogenes.
    (D) Klebsiella pneumoniae.

32. CSF- Glucose is markedly decreased in?:
    (A) Pyogenic meningitis.
    (B) Tubercular meningitis.
    (C) Viral meningitis
    (D) Encephalitis

33. Bacillus thuringiensis produces a toxin called:
    (A) δ-endotoxin.
    (B) α-endotoxin.
    (C) β-endotoxin
    (D) γ-endotoxin

34. Screening test for HIV in blood donated for transfusion is
    (A) Western Blot.
    (B) ELISA.
    (C) Southern Blot.
    (D) Northern Blot.

35. Which of the following is rapid acting?
    (A) T4.
    (B) TBG.
    (C) T3.
    (D) Thyroglobulin

36. RBCs are microcytic and hyperchromic in?:
    (A) Iron definiency anemia
    (B) Thallassemia.
    (C) Both
    (D) None

37. Average life span of platelet in human is:
    (A) 3-5 days.
    (B) 7-10 days.
    (C) 12-15 days.
    (D) 16-20 days.

38. The measure of closeness of the estimated value to the true value:
    (A) Precision.
    (B) Accuracy.
    (C) Internal quality
    (D) External quality

39. Eosinophilia is found in all, except:
    (A) Allergic condition.
    (B) Parasitic condition.
    (C) Typhoid.
    (D) Skin disease.

40. Storage of blood bag bellow 2-8 degrees Celsius causes:
    (A) Increased WBC counts.
    (B) Increased RBC counts.
    (C) Increased platelet counts.
    (D) Hemolysis

41. Ideal thickness of coverslip commonly used for counting chamber?
    (A) 0.4mm.
    (B) 0.3mm.
    (C) 0.2mm.
    (D) 0.1mm

42. Which is diagnosed by positive Direct Coomb's test?
    (A) Pre transfusion blood typing.
    (B) Iron deficiency aneamia.
    (C) Megaloblastic anaemia
    (D) Erythroblastosis fetalis

43. If 500mg glucose is dissolved in 100mL water then the concentration of glucose in 2mL solution is:

(A) 5mg.

(B) 200mg

(C) 10mg

(D) 20mg

44. Salah's needle is used for:

(A) Lumber puncture.

(B) Bone marrow aspiration.

(C) FNAC

(D) Collection of blood

45. In peripheral smear, LD Bodies are found in:

(A) Neutrophils.

(B) Monocytes.

(C) Eosinophils

(D) Basophils.

46. Which antibody type protects against bacteria, virus and toxins in secondary immune response?

(A) Ig A.

(B) Ig D.

(C) Ig E.

(D) Ig G.

47. Swarming movement is characteristic of

(A) Salmonella.

(B) Proteus

(C) Escherichia.

(D) Treponema.

48. Decalcification is commonly done by?

(A) Distilled water.

(B) Nitric acid.

(C) Formalin.

(D) Ether.

49. Elevated phosphorus levels are seen in?
    (A) Renal failure protein.
    (B) Vit-D overdosage.
    (C) Pancreatitis.
    (D) Chronic Liver Disease

50. Stool is pale colour in:
    (A) Hemolytic Jaundice
    (B) Obstructive Jaundice.
    (C) Both.
    (D) None.

51. In which of the following phases of growth of a Gram-positive Bacterium most susceptible to the action of penicillin?
    (A) Lag.
    (B) Exponential.
    (C) Stationary.
    (D) Death

52. Graveyard of RBC is:
    (A) liver
    (B) Spleen
    (C) Stomach.
    (D) Pancreas.

53. Cell lysis in complement pathway is initiated by:
    (A) Membrane destruction complex
    (B) Membrane degradation complex.
    (C) Membrane attacking complex Southern blotting.
    (D) Membrane lysis complex

54. How long can blood stored with CPDA?
    (A) 12 days.
    (B) 21 days.
    (C) 28 days.
    (D) 48 days.

55. Which of the following is an example for derived lipids?

(A) Steroids.

(B) Terpenes.

(C) Cartenoids.

(D) Multiple recombination at multiple loxP sites usually more than two leading to addition, insertion or deletion of the DNA.

56. A premature baby, 4 days old, has developed a white coating on her buccal mucosa extending onto her lips. It appears to be painful. What is the most likely causative agent?

(A) Aspergillus.

(B) Fusobacterium

(C) Candida

(D) Microsporum

57. Which of the following component cause coagulation if introduced to the blood stream:

(A) Fibrinogen.

(B) Prothrombin

(C) Heparin.

(D) Thromboplastin.

58. Injection of anti-venom to a patient for snake bite is an example of:

(A) Naturally acquired active immunity.

(B) Artificially acquired active immunity.

(C) Naturally acquired passive immunity.

(D) Artificially acquired passive immunity

59. Advantage of blood donation:

(A) Free health check-up.

(B) Reduce iron in body.

(C) Decrease heart disease.

(D) All of above.

60. Most abundant membrane lipid in the biosphere is:

(A) Phospholipid.

(B) Galactolipid.

(C) Sphingolipid

(D) Ether lipid

61. When the entire CBC is suppressed due to either anemia, infection, or haemorrhage is called:

(A) Erythroplasia.

(B) Thrombocytopenia.

(C) Pancytopenia.

(D) Leukopenia.

62. A burn patient has an infected area with odiferous, blue-green pus.What is the most likely causative agent?

(A) Aspergillus fumigatus.

(B) Pseudomonas aeruginosa.

(C) Staphylococcus aureus.

(D) Streptococcus pyogenes.

63. Tissue for electron microscopy are fixed in:

(A) Carnoy's fixative.

(B) 10% buffered formalin.

(C) Saline.

(D) 4% glutaraldehyde.

64. During blood donation, the removal of blood components is called:

(A) Cytopheresis.

(B) Plasmapheresis.

(C) Apheresis

(D) Leucopheresis

65. Which of the following IgG is targeted against polysaccharides of encapsulated bacteria?

(A) IgG1.

(B) IgG2.

(C) IgG3.

(D) IgG4.

66. How is Leishmania donovani transmitted?
    (A) Anopheles mosquito bite.
    (B) Culex mosquito bite.
    (C) Sandfly bite.
    (D) Skin penetration by trauma.

67. Process of formation of blood corpuscles is called:
    (A) Haemolysis.
    (B) Haemopoeisis.
    (C) Haemozoin.
    (D) Haemolytic.

68. Fc region is involved in:
    (A) Cell surface receptor binding.
    (B) Complement activation.
    (C) Determining diffusivity of antibody molecule.
    (D) All of these.

69. Receptors for steroid hormones usually reside at:
    (A) Plasma membrane.
    (B) Cytoplasm.
    (C) Nuclear membrane.
    (D) Nucleoplasm.

70. Which rounworm is most likely to be transmitted by ingestion of food or water contaminated with faeces?
    (A) Enterobius vermicularis.
    (B) Necator americanus.
    (C) Taenia saginata.
    (D) Ascaris lumbricoides.

71. What is the major metabolically available storage form of iron in the body?:
    (A) Hemosiderin.
    (B) Ferritin.
    (C) Transferrin.
    (D) Haemoglobin.

72. What compound is only found in Gram-positive bacteria?:
    (A) Outer membrane.
    (B) Capsule.
    (C) Teichoic acid.
    (D) Peptidoglycan.

73. The DNA molecule is a double helical strand having the following nucleotide bases?
    (A) Cytosine, thymine, alanine, guanine.
    (B) Adenine, guanine, valine, thymine
    (C) Cytosine, lysine, adenine, guanine.
    (D) Adenine, guanine, cytosine, thymine

74. Which leucocytes release heparin and histamine into the blood?
    (A) Neutrophils.
    (B) Basophils.
    (C) Lymphocytes.
    (D) Monocytes.

75. Any substance that promotes phagocytosis of antigens by binding to them are called as:
    (A) Phagocytes.
    (B) Macrophages.
    (C) Opsonins.
    (D) Interleukins.

76. All are methods of cell proliferation analysis except?
    (A) Flow cytometry.
    (B) Immunohistochemistry.
    (C) PCR.
    (D) Microspectrophotometry.

77. In blood, lack of intrinsic factors causes:
    (A) Sickle cell anaemia.
    (B) Pernicious anaemia
    (C) Target cell anaemia.
    (D) Iron deficiency anaemia.

78. Bacteria are protected from phagocytosis by:

(A) Capsule.

(B) Lipopolysaccharide.

(C) Lipoprotein

(D) Outer Membrane.

79. Red blood cells can be frozen and stored up to?

(A) 3 years.

(B) 5 years.

(C) 7 years.

(D) 8 years.

80. Hybridoma technology was developed by:

(A) Kohler & Milstein.

(B) Khorana & Nirenberg

(C) Khorana & Korenberg.

(D) Beedle & Tautum.

81. Allergic reactions are frequently associated with an increase in the presence of:

(A) Lymphocytes

(B) Neutrophils.

(C) Eosinophil.

(D) Monocytes

.

82. What bacteria can use fermentation pathways but also contain superoxide dismutase?

(A) Obligate aerobes.

(B) Obligate anaerobes.

(C) Facultative anaerobes.

(D) Aerobic hetrotrophs.

83. Spirochaetes are most difficult to demonstrate in:

(A) Primary syphilis.

(B) Secondary syphilis.

(C) Tertiary syphilis.

(D) Congenital syphilis.

84. Immunological reactions of blood transfusion include all except:

(A) Allergic.

(B) Anaphylactic.

(C) Leak agglutinin.

(D) Circulatory overload.

85. Autoimmune haemolytic anaemia is an example of:

(A) Type I Hypersensitivity.

(B) Type II Hypersensitivity.

(C) Type III Hypersensitivity Erosion.

(D) Type IV Hypersensitivity

86. Which single feature of normal RBC's is most responsible for limiting their life span?

(A) Loss of mitochondria.

(B) Increased flexibility of the cell membrane.

(C) Reduction of Hb iron

(D) Loss of nucleus.

87. In the following pairs of organisms, which two are easiest to distinguish from each other by Gram stain?

(A) Bacillus & Clostridium.

(B) Listeria & Proteus.

(C) Salmonella & Shigella.

(D) Haemophillus & Lactobacillus.

88. All coagulation factors are stable at low freezing point except:

(A) Factors V & VIII.

(B) Factors IX & X.

(C) Factors IV & V .

(D) Factors II

89. Maltose is a disaccharide of ?

(A) Glucose & galactose.

(B) Glucose & Glucose.

(C) Glucose & Lactose.

(D) Fructose & Lactose.

90. MHC class I is a cell surface molecule present on:

(A) B cells.

(B) All nucleated cells

(C) APCs

(D) T cells.

91. The most common type of protein found in the cell membrane is:

(A) Lipoprotein.

(B) Mucoprotein.

(C) Glycoprotein.

(D) Nucleoprotein

92. Latent infection of neurons occurs with:

(A) Cytomegalovirus.

(B) Rabies virus.

(C) Herpes simples virus.

(D) Measles virus.

93. In the case of SARS in human beings, the mode of infection is:

(A) From mosquito.

(B) Person to person.

(C) Poultry birds.

(D) From Cattle.

94. Histones are rich in:

(A) Lysine

(B) Arginine

(C) Histidine.

(D) Lysine & Arginine.

95. Hepatitis is an example of:

(A) Subunit vaccine

(B) Killer vaccine.

(C) Toxoid vaccine

(D) Recombinant vaccine.

96. Which of the following would correlate with an elevated ESR value:

(A) Osteoarthritis.

(B) Polycythemia.

(C) Decreased globulins.

(D) Inflammation.

97. Which of the following childhood vaccines is most likely to prevent otitis media in young children?

(A) H.influenzae

(B) Measles, Mumps and Rubella

(C) Meningococcal.

(D) VZV.

98. Necrotic lesions of Entamoeba histolytica are due to:

(A) Cyst stage.

(B) Trophozoite stage.

(C) Both cyst and trophozoites.

(D) Neither cysts nor Trophozoites.

99. Enzymes for beta oxidation of fatty acids are located in:

(A) Mitochondria.

(B) Mitochondria & cytoplasm

(C) Mitochondria & Golgi bodies

(D) Mitochondria & peroxisome

100. Which of the following cells of the immune system do not perform phagocytosis:

(A) Macrophage.

(B) Neutrophils.

(C) Eosinophil.

(D) Basophil.