

004/2024

Maximum : 100 marks

Time : 1 hour and 30 minutes

1. Bilirubinuria is not seen in :
(A) Dubin Johnson Syndrome (B) Obstructive jaundice
(C) Haemolytic jaundice (D) Hepatocellular jaundice
2. Name the condition where polymorphs are predominant in CSF :
(A) Tuberculosis meningitis (B) Bacterial meningitis
(C) Viral meningitis (D) Cryptococcal meningitis
3. Colour of urine in alkaptonuria is :
(A) Milky (B) Yellow
(C) Red (D) Brownish black
4. Which of the following is a carcinogen?
(A) O – Toluidine (B) Naphthylamine
(C) Nitrosamines (D) All of the above
5. Pick out the odd one from the following :
(A) LMS (B) CAP
(C) NABH (D) NABL
6. Occult blood in stool is positive in :
(A) Carcinoma of GIT (B) Hookworm infection
(C) Peptic ulcer (D) All of the above
7. The instrument used to measure sodium and potassium in serum sample :
(A) Flame photometer (B) Spectro photometer
(C) Colorimeter (D) Fluorimeter
8. Urine crystal resembling fern-leaf shape :
(A) Calcium sulphate (B) Triple phosphate
(C) Cystine crystal (D) Calcium carbonate

9. Ion - Exchange resins are used to prepare :
- (A) Demineralised water (B) Distilled water
(C) Buffered water (D) None of the above
10. Which test detects ketone bodies in urine?
- (A) Schlesinger's test (B) Hays test
(C) Toluene Sulfonic acid test (D) Legal's test
11. Find out the incorrect statement regarding electrical hazard :
- (A) The electrical equipment must be properly grounded
(B) Lab personnel should know the location of fuse box/circuit breakers
(C) In case of electric fire, use water to extinguish the fire
(D) Do not attach a two-or three-way outlet to a single outlet
12. Name the urine preservative which causes precipitation of crystals when used in large amounts :
- (A) Boric acid (B) Thymol
(C) Formalin (D) Toluene
13. Which is an example for kinetic assay?
- (A) Total protein - Biuret method (B) Serum albumin – BCG method
(C) Estimation of SGPT (D) Urea – Berthelot method
14. Curschmann's spirals are seen in :
- (A) Ascitic fluid (B) Sputum
(C) Stool (D) Urine
15. Icto test is a tablet test to detect _____ in urine.
- (A) Bilirubin (B) Bile salt
(C) Urobilinogen (D) Ketone body
16. Pick out the wrong statement :
- (A) Semen has a grey opalescent appearance
(B) Semen sample should be collected after a minimum of 3-5 days of sexual abstinence.
(C) If condom is used to collect the sample it must be washed well and dried
(D) Liquefaction time of semen is 90 minutes

17. The preferred sample for testing hcG in urine is :
- (A) Morning sample (B) 24-hour sample
(C) Random sample (D) Afternoon sample
18. Find out the incorrect statement regarding 24-hour urine sample :
- (A) A suitable preservative should be added to the collection container
(B) Collect the first morning urine sample in the container and note the time
(C) Collect all urine passed during the rest of the day and night in the container
(D) Morning urine sample of the next day is also collected in the container
19. Black tarry stool is seen in :
- (A) Obstructive jaundice (B) Excessive fat intake
(C) Barium meal x-ray (D) Bleeding from upper GIT
20. Which enzyme is measured in semen to evaluate the secretory function of prostate?
- (A) Acrosin (B) Acid phosphatase
(C) Hyaluronidase (D) Beta galactosidase
21. Which statement is true in the case of post hepatic jaundice?
- (A) Conjugated and unconjugated bilirubins are increased
(B) Only unconjugated bilirubin is increased
(C) Only conjugated bilirubin is increased
(D) Alkaline phosphatase is increased
22. The enzyme involved in Liver Function Test :
- (A) Enolase (B) Hexokinase
(C) Alkaline phosphatase (D) Uricase
23. Normal range of SGOT in blood is :
- (A) 10 – 50 IU/L (B) 5 – 30 IU/L
(C) 5 – 45 IU/L (D) 15 – 65 IU/L
24. Malloy – Evelyn method is used for detecting :
- (A) Bilirubin (B) ALT
(C) AST (D) Cholesterol

25. Which among the following lipoprotein has the lowest density?
(A) VLDL (B) Chylomicrons
(C) LDL (D) HDL
26. Which among the following is not a cardiac marker?
(A) Troponin I (B) CK MB
(C) AST (D) ALT
27. Blood calcium level is increased in :
(A) Rickets (B) Hypoparathyroidism
(C) Bone tumor (D) Renal failure
28. The micromineral among the following is :
(A) Potassium (B) Magnesium
(C) Sodium (D) Zinc
29. Which of the following is used to detect prostatic carcinoma?
(A) Acid phosphatase (B) Alkaline phosphatase
(C) Alanine aminotransferase (D) Aspartate aminotransferase
30. The quality in a clinical laboratory is not influenced by :
(A) Staff competency (B) Equipment calibration
(C) Chemical storage (D) None of the above
31. IV solutions can be sterilized by :
(A) Autoclave (B) Membrane filter
(C) Hot air oven (D) Chemical sterilization
32. Select incorrect statement from the following :
(A) Depyrogenation is done by Hot air oven
(B) Pasteurization kills pathogens in the milk
(C) Inoculating wire is sterilized by red heat method
(D) Antibiotic solutions are sterilized by Autoclave
33. Which is not a moist heat sterilization method?
(A) Hot air oven (B) Autoclave
(C) Tyndallization (D) Inspissation

34. Who is the father of Modern Bacteriology?
(A) Louis Pasteur (B) Robert Koch
(C) Alexander Fleming (D) Leeuwenhoek
35. In a bacterial cell, infoldings of plasma membrane is called :
(A) Cytoplasm (B) Ribosome
(C) Mesosome (D) Mitochondria
36. Which of the following is a spirochaete?
(A) Leptospira (B) Staphylococcus
(C) Spirillum minus (D) Streptococcus
37. Increase in HbA1c level indicates :
(A) Decreased risk of diabetes (B) Diabetes under control
(C) Diabetes not under control (D) Not related with diabetes
38. The most routine and specific test employed for blood glucose estimation:
(A) Benedict's test (B) GOD - POD method
(C) Folin Wu Method (D) Ortho toluidine method
39. Which is not a Renal function test?
(A) C-peptide (B) Uric acid
(C) Cystatin C (D) Creatinine
40. Which is the end product of Purine metabolism?
(A) Urea (B) Creatinine
(C) Uric acid (D) Micro albumin
41. Light emission reaction is employed in which assay :
(A) RIA (B) HPLC
(C) ELISA (D) CLIA
42. A solid medium which contains inhibiting substances that suppress the growth of unwanted bacteria and enables the growth of required bacteria to form colonies is called as a :
(A) Enrichment media (B) Selective media
(C) Enriched media (D) Differential media
43. The transport media used for Gonococci is :
(A) Hiss Serum Sugar media (B) Tetrathionate broth
(C) Selenite F broth (D) Stuart's medium

44. In bacterial growth curve, the phase in which the cell division comes to half due to depletion of nutrients and accumulation of toxic substances is :
- (A) Log phase (B) Phase of decline
(C) Lag phase (D) Stationary phase
45. The routine laboratory test which is done to differentiate *Staphylococcus aureus* from other *Staphylococci* is :
- (A) Catalase test (B) Coagulase test
(C) Oxidase test (D) Urease test
46. Kovac's reagent used in Indole test contains the following ingredients :
- (i) Paradimethyl amino benzaldehyde
(ii) Con. HCL
(iii) Amyl alcohol
(iv) Methyl red
- (A) only (i) and (ii) (B) only (i) and (iii)
(C) only (i), (ii) and (iii) (D) only (i), (iii) and (iv)
47. A competitive binding assay in which fixed amounts of antibody and radiolabelled antigen react in the presence of unlabelled antigen is :
- (A) ELISA (B) RIA
(C) Complement fixation test (D) Immunofluorescence test
48. VDRL test for Syphilis is an example of :
- (A) Slide flocculation test
(B) Tube flocculation test
(C) Ring test
(D) Immunodiffusion technique
49. The only maternal immunoglobulin that is normally transported across the placenta and provides natural immunity to newborn is :
- (A) IgA (B) IgM
(C) IgG (D) IgD
50. The bacterial colonies which shows 'Medusa head' appearance on agar plates and 'Inverted fir tree' appearance in gelatin stab culture :
- (A) *Corynebacterium diphtheria* (B) *Bacillus anthracis*
(C) *Pneumococci* (D) *Mycobacterium tuberculosis*

51. The staining method used to demonstrate metachromatic granules in bacteria :
- (i) Albert's staining
 - (ii) Ponder's staining
 - (iii) Neisser's staining
 - (iv) Fontana's staining
- (A) only (i) (B) only (i) and (ii)
(C) only (iv) (D) only (i), (ii) and (iii)
52. A semi solid media used to test the ability of bacteria to ferment mannitol and to identify whether the bacteria is motile or non-motile is :
- (A) Loefflers's serum slope (B) Casteneda's medium
(C) Mannitol motility medium (D) Robertson's cooked meat medium
53. The causative agent of Weil's disease :
- (A) Treponema (B) Borrelia
(C) Leptospira (D) Mycoplasma
54. The inclusion bodies detected in the impression smears of brain of infected animal in Rabies Infection is :
- (A) Eosinophillic granules (B) Negri bodies
(C) Guarneri bodies (D) Metachromatic granules
55. An oval shaped, colourless egg containing a segmented ovum with blastomeres surrounded by a transparent shell membrane are the characteristic features of the egg of :
- (A) Ascaris lumbricoides (B) Ancylostoma duodenale
(C) Trichuris trichiura (D) Taenia saginata
56. A cellphane swab used to collect the eggs of Enterobius vermicularis from the perianal skin is :
- (A) Saline swab (B) Cotton swab
(C) NIH swab (D) Sterile swab
57. The different forms of Plasmodium vivax detected in the peripheral blood of human being is :
- (i) Trophozoites
 - (ii) Schizonts
 - (iii) Gametocytes
 - (iv) Ring form
- (A) only (i) and (ii) (B) only (i) and (iv)
(C) only (i) and (iii) (D) only (i), (ii) and (iii)

58. The quick method of staining of malarial parasite in thick films without fixation is :
- (A) Leishman's stain (B) Field's stain
(C) JSB stain (D) Giemsa stain
59. The appearance of nocturnally periodic Microfilariae in peripheral blood in the day time can be induced by :
- (A) Hetrazan Provocative test (B) Concentration method
(C) Intradermal test (D) Oral test
60. The following statements are true regarding the features of the cyst of *Entamoeba histolytica* :
- (i) Quadrinucleated
(ii) Thermal death point is 50°C
(iii) Glycogen mass stains brown with Iodine
(iv) Chromatoid bodies are seen as refractile in saline preparations
- (A) only (i) and (ii) (B) only (i), (ii) and (iii)
(C) only (i), (iii) and (iv) (D) All of the above (i), (ii), (iii) and (iv)
61. The process which involves the grinding of metal from the knife edge using abrasive substances to remove all nicks from the knife making it sharp and straight is called :
- (A) Sharpening (B) Polishing
(C) Honing (D) Stropping
62. The process of polishing an already fairly sharp edge of the microtome knife is called :
- (A) Honing (B) Sharpening
(C) Polishing (D) Stropping
63. In Rotary Microtome, which of the following is correct?
- (A) Knife is moving and tissue block is fixed
(B) Knife is fixed and tissue block is moving
(C) Used for cutting frozen sections
(D) Biconcave knife is used in it
64. In person having XY chromosome, the number of barrbody is :
- (A) One (B) Greater than one
(C) Zero (D) None of these
65. In papanicolaou stain the counter stain used is :
- (A) Haemataxylin (B) Methylene blue
(C) Eosin (D) OG-6

66. _____ connects muscles to the bone.
- (A) Cartilage (B) Tendons
(C) Ligaments (D) Tissues of fat
67. Sutures are :
- (A) Synarthrosis joints (B) Amphiarthrosis joints
(C) Diaarthrosis joints (D) None of these
68. Cavities of brain are called :
- (A) Mediastinum (B) Vasa recta
(C) Sinus (D) Ventricles
69. Breathing rate in humans are controlled by :
- (A) Thalamus (B) Cerebellum
(C) Medulla Oblongata (D) Lungs
70. Kupffer cells are present in :
- (A) Liver (B) Brain
(C) Pancreas (D) Lungs
71. Class A glasswares used in a Laboratory are made of :
- (A) Teflon glass (B) Soda Lime glass
(C) Borosilicate glass (D) None of these
72. Flame photometer is used for the detection of :
- (A) Drugs (B) Alkali metals
(C) Functional groups (D) Chemical structure
73. Class A type fire extinguisher can be used to treat fires involving _____ as fuel source.
- (A) Combustible metals (B) Electrical Equipments
(C) Flammable liquids (D) Ordinary combustible materials
74. Fluid part of coagulated blood is called :
- (A) Serum (B) Plasma
(C) Formed Elements (D) None of these

75. The mechanism of action of anticoagulant in light grey coloured vacutainer tube is :
(A) Inhibit glycolysis (B) Chelates calcium ions
(C) Both (A) and (B) (D) Prevent microbial growth
76. Prolonged application of tourniquet causes elevation of :
(A) Potassium (B) Protein
(C) Glucose (D) All the above
77. Anticoagulant of choice for coagulation studies is :
(A) EDTA (B) Trisodium citrate
(C) Heparin (D) Double oxalate
78. Which blood cell produces antibodies?
(A) Neutrophils (B) T lymphocytes
(C) B lymphocytes (D) Basophils
79. The area of a square of RBC counting area of an Improved Neubauer counting chamber is :
(A) $1/200 \text{ mm}^2$ (B) $1/100 \text{ mm}^2$
(C) $1/400 \text{ mm}^2$ (D) 1 mm^2
80. The granules of this blood cell contain heparin and histamine :
(A) Basophil (B) Eosinophil
(C) Neutrophil (D) Lymphocyte
81. Haematocrit value and RBC count are needed to calculate :
(A) MCH (B) MCHC
(C) MCV (D) None of these
82. Microcytes and macrocytes in the same blood smear is called
(A) Anisocytosis (B) Poikilocytosis
(C) Erythrocytosis (D) Spherocytosis
83. Erythrocytopenia can be seen in all of the following conditions except :
(A) anaemia (B) bone marrow failure
(C) leukaemia (D) dehydration

84. Which among the following is a platelet diluting fluid?
(A) Dungen's fluid (B) 1% ammonium oxalate
(C) Hayem's fluid (D) Tuerk's fluid
85. Stain used for reticulocyte count is :
(A) Wright strain (B) Leishman's stain
(C) Brilliant Cresyl Blue (D) MGG Stain
86. pH of Drabkin's solution is:
(A) 4.5 – 6 (B) 7.0 – 7.4
(C) 8 – 9.4 (D) 9 – 10.5
87. Following are all Romanowsky's stain except :
(A) Giemsa stain (B) Leishman's stain
(C) Jenner's stain (D) Perl's stain
88. Which is the internationally recommended method for haemoglobin estimation?
(A) Acid haematin method (B) Oxy haemoglobin method
(C) Alkali haematin method (D) Cyan meth haemoglobin method
89. ESR is elevated in following diseases except :
(A) osteo arthritis (B) rheumatic fever
(C) rheumatoid arthritis (D) pyogenic infection
90. Which tube is used for the determination of macro hematocrit?
(A) Westergren's tube (B) Wintrobe's tube
(C) Sahli's tube (D) Capillary tube
91. INR (International normalized ratio) is a calculation based on the result of
(A) Prothrombin time
(B) Bleeding time
(C) Clotting time
(D) Activated partial thromboplastin time
92. Anti haemophilic factor is :
(A) coagulation factor V (B) coagulation factor III
(C) coagulation factor VIII (D) coagulation factor IX

93. Anticoagulant of choice for Erythrocyte sedimentation rate is :
- (A) heparin (B) EDTA
(C) potassium oxalate (D) 3.8% trisodium citrate
94. A person can receive blood only from a donor of his/her blood group if the blood group of the person is :
- (A) A (B) B
(C) AB (D) O
95. Bombay blood group individuals may have the following antibodies except :
- (A) Anti. a (B) Anti. b
(C) Anti. h (D) Anti. o
96. Colouring agent of Anti B anti serum is :
- (A) Methylene blue (B) Acriflavin
(C) Pink (D) No colouring agent
97. 'A' blood group of father and 'B' blood group of mother could have children with blood group :
- (A) A, O (B) A, B, O
(C) A, AB, B, O (D) A, AB
98. For patients having thrombocytopenia which blood component is transfused?
- (A) Platelet rich plasma (B) Whole blood
(C) Washed red cells (D) Cryoprecipitate
99. Which is not a phase of cross matching?
- (A) Saline phase (B) Globulin phase
(C) Albumin phase (D) Anti globulin phase
100. In blood bank which colour coded label is used to identify B blood group blood bag?
- (A) Red (B) Pink
(C) Blue (D) White

SPACE FOR ROUGH WORK

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