131/2024

Maximum : 100 marks

Time : 1 hour and 30 minutes

1. Stain used for malaria survey :

(A) Perl's (B) Fields

(C) PAS (D) Giemsa

2. Hemoglobin formation starts in which stage of RBC formation?

(A) Orthochromatic normoblast (B) Polychromatic normoblast

(C) Reticulocyte (D) None

3. Neutrophil lobe counting is called :

(A) Arneth count (B) Addis count

(C) AEC (D) Differential count

4. Interleukins are secreted by :

(A) T cells (B) Dentritic cells

(C) Macrophages (D) All of these

5. Basophilia is common in :

(A) Allergy (B) CML

(C) Typhoid (D) Both (A) and (B)

6. Legal's test is done in detection of :

(A) Bile pigment (B) Bile salt

(C) Ketone bodies (D) Galactose

7. Which of the following is the most easiest and most common form of urine preservation?

(A) Boric acid (B) Sodium fluoride

(C) Freezing (D) Refrigeration

8. All of the following can cause Xanthochromia in CSF except :

(A) High concentrations of protein

(B) High concentration of bilirubin

(C) Increased number of leukocytes

(D) Erythrocytes from a traumatic tap

9. Synovial fluid contains :

(A) Acetic acid
(B) Ascorbic acid
(C) Hyaluronic acid
(D) Deoxyribonucleic acid

10. Fructose in seminal fluid assists in the evaluation of which of the following?

(i) The secretory function of the seminal vesicles.
(ii) The functional integrity of the epididymis
(iii) The functional integrity of vas deferens
(iv) The secretory function of the prostate gland

(A) (i), (ii) and (iii) are correct
(B) (i) and (iii) are correct
(C) (iv) is correct
(D) All are correct

11. Chemical used to prevent caramelisation of glucose in CPDA solution :

(A) Citric acid
(B) Di sodium hydrogen phosphate
(C) Dextrose
(D) Adenine

12. The locus of genes of ABO system is on chromosome :

(A) Chromosome 1
(B) Chromosome 9
(C) Chromosome 4
(D) None

13. Iron overload due to multiple transfusion is called :

(A) Haemosiderosis
(B) Circulatory overload
(C) Haemochromatosis
(D) HDN

14. Shelf life of platelets is :

(A) 1 day
(B) 3 days
(C) 5 – 7 days
(D) None

15. Which among the following is not a transfusion transmitted disease?

(A) Syphilis
(B) Malaria
(C) Typhoid
(D) HTLV

16. Break down of tissue by bacterial action is called :

(A) Autolysis
(B) Putrefaction
(C) Denaturation
(D) Deformation

17. The type of knife designed for cutting frozen sections :

(A) Plano Concave (B) Plane wedge

(C) Biconcave (D) Tool edge

18. An example for mercury containing fixative :

(A) Zenkers solution (B) Bouins solution

(C) Clarkes solution (D) Carnoys solution

19. PAS technique is used for the demonstration of :

(A) Iron (B) Mucin

(C) Glycogen (D) Lectin

20. An example for acquos mounting media :

(A) Canada Balsam (B) Apathys medium

(C) Dammar Balsam (D) DPX

21. Stain used for hormonal cytology :

(A) Shorr stain (B) Geimsa stain

(C) Wright Stain (D) Gram Stain

22. Saccomano's solution is used for :

(A) Fixation (B) Pre fixation

(C) Dehydration (D) Mounting

23. Commonly used fixative in cytology :

(A) 95% Ethyl alcohol (B) Isopropyl alcohol

(C) Denatured alcohol (D) Ether alcohol mixture

24. The Oil Red O stain is used for the demonstration of :

(A) DNA (B) Fat

(C) Glycogen (D) Iron

25. Father of Exfoliative cytology :

(A) Louis Pasteur (B) Anton VanLeeuwenhock

(C) George N Papanicolaou (D) Robert Hook

26. Inactivated X chromosome in epithelial cell is called :

(A) Drum sticks
(B) Barr Body
(C) L E Body
(D) None of the above

27. The interchange or transfer of chromosome segments between two non homologous chromosome is defined as :

(A) Translocation
(B) Ring chromosome
(C) Lampbrush chromosome
(D) B chromosome

28. Karyotype of Klinefelter Syndrome :

(A) 45,X
(B) 47,XX
(C) 47,XXY
(D) 48,XXXX

29. A chromosome in which the centromere is located at one end is called :

(A) Metacentric
(B) Acrocentric
(C) Sub metacentric
(D) Telocentric

30. A technique used to detect and locate specific DNA sequence on a chromosome :

(A) FISH
(B) G Banding
(C) Q Banding
(D) C Banding

31. The microscope which uses reflected light as light source to improve the contrast for viewing the object is :

(A) Phase contrast microscope
(B) Light microscope
(C) Dark field microscope
(D) Fluorescent microscope

32. Which of the following is a 'transport media'?

(A) Robertson's cooked meat medium
(B) Stuart's medium
(C) Mac Conkey medium
(D) Blood agar

33. The special staining technique used to demonstrate Volutin granules is :

(A) Gram's stain
(B) Albert's stain
(C) Leishman's stain
(D) Ziehl -Neelsen stain

34. The sterilization method used for the rapid destroyal of soiled dressing, bedding and pathological materials is :

(A) Flaming
(B) Hot Air Oven
(C) Tyndallisation
(D) Incineration

35. The following statements are true regarding Koch's postulates:

(i) The bacterium should be constantly associated with the lesions of the disease.

(ii) The bacterium can be isolated in pure culture from the lesion.

(iii) Inoculation of such pure culture into lab animals should produce the lesions of the disease.

(iv) The bacterium can be reisolated in pure culture from the lesions of lab animals.

(A) (i) and (ii) only
(B) (i), (ii) and (iii) only
(C) (ii) and (iii) only
(D) (i), (ii), (iii) and (iv)

36. Lowenstein – Jensen's medium is sterilized at a temperature of:

(A) 80-85°C for 30 minutes on 3 successive days
(B) 60°C for one hour
(C) 100°C for 20 minutes on 3 successive days
(D) 72°C for 15-20 seconds

37. Naeglaria is a free living amoebae found in fresh water, mud and moist soil. Identify the disease caused by it:

(A) Pulmonary amoebiasis
(B) Hepatic amoebiasis
(C) Cutaneous amoebiasis
(D) Primary amoebic meningo-encephelatis

38. A clinical manifestation of Falciparum malaria occurring in previously infected subjects characterised by sudden intravascular haemolysis followed by fever and haemoglobinuria is :

(A) Black Water Fever
(B) Pernicious Malaria
(C) Anaemia
(D) None of the above

39. The distinctive features of the eggs of Trichuris trichiura are :

(i) Bile stained

(ii) Barrel shaped with mucous plug at each pole

(iii) Contains an unsegmented ovum

(iv) Does not floats in saturated solution of common salt

(A) (i), (ii) and (iii)
(B) (i), (iii) and (iv)
(C) (i) and (ii)
(D) (ii), (iii) and (iv)

40. The eggs of Enterobius vermicularis are collected from the perianal skin using :

(A) Slide
(B) NIH SWAB
(C) Normal saline
(D) Syringe and needle

41. The large or giant intestinal fluke is :

(A) Fasciolopsis buski
(B) Gastrodiscoides hominis
(C) Fasciola hepatica
(D) Clonorchis sinensis

42. The causative agent of Amoebic dysentery is :

(A) Giardia Intestinalis
(B) Entamoeba histolytica
(C) Shigella dysentriae
(D) Trichomonas vaginalis

43. An example of anaerobic culture medium is :

(A) Selenite F broth
(B) Nutrient broth
(C) Tetrathionate broth
(D) Thioglycolate broth

44. Liquid paraffin can be sterilized by :

(A) Autoclave
(B) Hot air oven
(C) Filtration
(D) Inspissation

45. Cold agglutination test is the serological test for :

(A) Haemophilus
(B) Mycobacteria
(C) Mycoplasma
(D) Chlamydiae

46. Which one of the following method is used to detect Minimum Inhibitory Concentration?

(A) Tube dilution method
(B) Kirby Baur method
(C) ICS method
(D) Stoke's method

47. What is the color of colonies of staphylococcus aureus on nutrient agar?

(A) Pink
(B) Violet
(C) Red
(D) Yellow

48. An indicator medium used for the diagnosis of urinary tract infection is :

(A) Tellurite agar
(B) Chocolate agar
(C) Mac Conkey agar
(D) Blood agar

49. What is true about fungi?

(A) Algae like organism
(B) Eukaryotic organism
(C) Prokaryotic organism
(D) Unicellular organism

50. One of the routine microscopic laboratory identification methods of fungal specimen is done by using :

(A) 10% formalin (B) 30% H_2O_2

(C) 10% KOH (D) 20% HCl

51. Which one of the following special medium is used to isolate fungi?

(A) Sabouraud's dextrose agar (B) CLED agar

(C) TCBS agar (D) Deoxy cholate citrate agar

52. Technique used to study intact fungal morphology is:

(A) Germ tube technique (B) Hair root technique

(C) Wood lamp technique (D) Slide culture technique

53. Which of the following dimorphic fungi is medically important human pathogen that can cause severe respiratory infection?

(A) Aspergillus niger (B) Histoplasma capsulatum

(C) Cryptococus neoformans (D) Mucor racemosus

54. Sulfur granules are characteristically present in infection by:

(A) Candida albicans (B) Nocardia asteroids

(C) Actinomyces israelii (D) Trichophyton rubrum

55. Which of the following is not an RNA virus?

(A) Adeno virus (B) Rota virus

(C) Entero virus (D) Hanta virus

56. Viruses can be cultured in all except:

(A) Chick embryo (B) Guinea pigs

(C) Blood agar (D) Cell culture

57. Which of the following method is used for the detection of Viral DNA?

(A) Northern blotting (B) Southern blotting

(C) Eastern blotting (D) Western blotting

58. Inclusion body produced by rabies virus is:

(A) Bollinger body (B) Guarneri body

(C) Molluscum body (D) Negri body

59. Dane particle is:

(A) Mature herpes virus
(B) Complete Hepatitis B virion
(C) Spherical viral surface antigen
(D) Tubular viral surface antigen

60. Paul Bunnel test is a screening test for:

(A) Infectious mononucleosis
(B) Brucellosis
(C) Rheumatoid arthritis
(D) Hepatitis C

61. Test for which of the following parameters show an increased value in a hemolysed sample:

(A) Lactate dehydrogenase
(B) Potassium
(C) Aspartate amino transferase
(D) All of the above

62. What is the normality of 1M solution of H_3PO_4 ?

(A) 1 N
(B) 2 N
(C) 3 N
(D) 0.5 N

63. In a Spectrophotometer the light source used for measurements in the visible portion of spectrum is:

(A) Tungsten light bulb
(B) Hydrogen lamp
(C) Deuterium lamp
(D) Mercury vapour lamp

64. Which of the following is true about laboratory glassware?

(A) New glassware should be soaked in 1% NaOH
(B) When glassware has been contaminated with material that is very difficult to remove, it is treated with Chromic acid solution
(C) Volumetric type of glassware is dried in hot air oven
(D) All of the above

65. Which of the following is not a Urine preservative?

(A) Thymol
(B) Formalin
(C) Phenol
(D) Toluene

66. Facility of autodilution is available in which type of autoanalyzer?

(A) Batch analyzer
(B) Random access analyzer
(C) Continuous flow analyzer
(D) Semiautomated discrete analyzer

67. During blood gas analysis, measured PCO_2 of the sample is found to be increased when:

(A) Too much heparin is added to the sample

(B) Air bubble is present in the sample

(C) There is delay in measurement

(D) The specimen is kept on ice

68. Most frequently used technique for measuring osmolality of clinical samples:

(A) Freezing point depression

(B) Refractive index

(C) Boiling point elevation

(D) Dipstick dry technique

69. Which of the following is **not** used as an adsorbent in Thin layer chromatography?

(A) Silica gel

(B) Alumina

(C) Cellulose

(D) Sephadex

70. The liquid that can be used for calibration of small volume pipettes:

(A) Mercury

(B) Normal saline

(C) Tap water

(D) Absolute alcohol

71. As per standard waste disposal procedure, non-biodegradable trash should be discarded in:

(A) Green colored bags

(B) Red colored bags

(C) Black colored bags

(D) Yellow colored bags

72. Test for which of the following parameters can be monitored with delta checks:

(A) Glucose

(B) Phosphate

(C) Alanine aminotransferase

(D) Total protein

73. The SI unit for expressing Serum Bilirubin is:

(A) μ mol/L

(B) mmol/L

(C) meq/L

(D) mg/dl

74. The anticoagulant that **does not** interfere with Alkaline phosphatase activity in a blood sample:

(A) Potassium oxalate

(B) Heparin

(C) Sodium citrate

(D) EDTA

75. Technique that can be used to detect and measure radioactivity:

(A) Autoradiography
(B) Gas ionization detectors
(C) Scintillation counting
(D) All of the above

76. What is the coefficient of variation if Standard deviation is ± 5 and Mean is 30?

(A) 16.7%
(B) 6%
(C) 1.6%
(D) 9.6%

77. According to the Hazards Identification System developed by National Fire Protection Association, Red diamond in the diamond symbol of chemical label represents:

(A) Health hazard
(B) Reactivity hazard
(C) Flammability hazard
(D) Specific hazard

78. Type III reagent grade water can be used for :

(A) Preparation of primary and secondary standards
(B) Glassware washing and qualitative tests
(C) Determination of serum electrolytes
(D) ELISA and RIA techniques

79. Which of the following indicates poor training of laboratory personnel?

(A) Delay in issue of results
(B) Frequent damage to equipment
(C) Greater incidence of lab acquired infection
(D) All of the above

80. Locating agent used in paper chromatography for separation of carbohydrates :

(A) Ninhydrin
(B) PAS
(C) Oil–red–O
(D) PABA

81. In haemolytic crisis bilirubin level is :

(A) normal
(B) increased
(C) decreased
(D) unchanged

82. The MM fraction of CPK (Creatine Phospho Kinase) is most abundant in :

(A) skeletal muscle
(B) cardiac muscle
(C) brain tissue
(D) none of the above

83. Alkaline phosphatase is a :

(A) liver enzyme (B) bone enzyme

(C) placental enzyme (D) all of the above

84. Fixation of specific gravity of urine to 1.010 is found in :

(A) diabetes mellitus (B) diabetes insipidus

(C) polyuria (D) chronic glomerulonephritis

85. Synovial fluid is a body fluid found in :

(A) lung (B) heart

(C) joints (D) small intestine

86. The most common type of urinary calculi is made up of :

(A) calcium and oxalate (B) cholesterol

(C) calcium and phosphate (D) uric acid

87. The immunoglobulin which rises in hyper sensitivity conditions :

(A) IgE (B) IgA

(C) IgD (D) IgM

88. Haematuria is :

(A) presence of haemoglobin in urine (B) presence of blood in urine

(C) presence of hematin in urine (D) presence of myoglobin in urine

89. Which type of WBCs, act as scavengers when they engulf and digest pathogen?

(A) Macrophages (B) B cells

(C) T cells (D) Lymphocytes

90. The hormone which lowers calcium levels in plasma :

(A) Insulin (B) Calcitonin

(C) PTH (D) Glucagon

91. The end product of protein metabolism is :

(A) urea (B) uric acid

(C) creatinine (D) bilirubin

92. Conversion of glycogen to glucose is called :

(A) Gluconeogenesis (B) Glycogenolysis

(C) Glycolysis (D) Glycogenesis

93. Electrophoresis is a separation technique mainly based on :

(A) size (B) charge of particles

(C) affinity (D) shape

94. In allergic conditions we commonly find an increase of :

(A) red cells (B) lymphocytes

(C) eosinophils (D) neutrophils

95. One of the following is a pancreatic enzyme :

(A) CPK (B) Amylase

(C) ALP (D) AST

96. Programmed cell death can be termed as :

(A) cell division (B) cell cycle

(C) apoptosis (D) oxidative stress

97. A PCR cycle consists of :

(A) three steps, initiation, elongation and termination

(B) three steps denaturation, initiation and elongation

(C) three steps denaturation, primer annealing and elongation

(D) none

98. PSA (Prostate Specific Antigen) :

(A) is very sensitive for colorectal cancer (B) used to screen ovarian cancer

(C) used to screen prostate cancer (D) used to screen breast cancer

99. The waste product of muscle metabolism which is excreted into the urine is :

(A) creatine (B) creatinine

(C) creatine phosphate (D) creatine kinase

100. The primary energy source of the brain is :

(A) fatty acids (B) glucose

(C) proteins (D) cholesterol

SPACE FOR ROUGH WORK

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