

**Sree Chitra Tirunal Institute for Medical Sciences & Technology,**

**Thiruvananthapuram-695011**

**WRITTEN TEST FOR THE POST OF TECHNICAL ASSISTANT (LAB) - A**

Roll Number: .....

1. Factor – XII of clotting mechanism is known as
  - A. Tissue factor
  - B. Pro-converitin
  - C. Hageman factor
  - D. Stuart Prower factor
2. The No. of RBCs present in each cubic millimeter of blood is
  - A. 50,00,000
  - B. 40,00,000
  - C. 3,50,000
  - D. 8,000
3. Bilirubin is **not** excreted in urine in
  - A. Obstructive jaundice
  - B. Hepatic Jaundice
  - C. Hemolytic Jaundice
  - D. Cholecystitis
4. Sickle cell anemia occurs due to a single amino acid change in the following chain.
  - A.  $\alpha$  - chain
  - B.  $\gamma$  - chain
  - C.  $\delta$  - chain
  - D.  $\beta$  - chain
5. The amount of Albumin present in each 100 ml of blood is
  - A. 2 to 3 gm
  - B. 3 to 5 mg
  - C. 3 to 5 gm
  - D. 2 to 3 mg
6. Vitamin – B12 & folic acid are mainly responsible for the synthesis of
  - A. Mature WBC
  - B. Platelets
  - C. Mature RBC
  - D. Hepatocytes

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7. Heme is mainly synthesized in
- Bone Marrow
  - Liver
  - Kidney
  - Mitochondria
8. The lipoprotein possessing the highest quantity of phospholipids.
- HDL
  - LDL
  - VLDL
  - Chylomicrons
9. The end product of protein metabolism is
- Uric acid
  - Urea
  - Amino acids
  - None of these
10. 'Phenylketonuria' is caused due to the deficiency of
- Phenylalanine Transaminase
  - Phenylalanine Kinase
  - Phenylalanine Hydrogenase
  - Phenylalanine Hydroxylase
11. Synthesis of urea occurs in
- Kidney
  - Liver
  - Muscle
  - Brain
12. The No. of leukocytes present per cubic millimeter of blood are
- 5000 to 10000 / cubic mm
  - 10000 to 20000 / cubic mm
  - 1000 to 5000 / cubic mm
  - 25000 to 50000 / cubic mm.
13. Lymphocytes normally comprise \_\_\_\_\_ % of the total WBC
- 10 %
  - 40 %
  - 30 %
  - 60 %
14. The Antibody present in the Blood Group 'A' is
- Anti - B
  - Anti - A
  - Anti - O
  - Anti - Rh

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15. The normal level of Blood glucose is
- A. 50 – 100 mg / dl
  - B. 120 – 140 mg / dl
  - C. 100 – 120 mg / dl
  - D. 60 to 120 mg / dl
16. Factor – II of the blood clotting mechanism is known as
- A. Fibrinogen
  - B. Prothrombin
  - C. Thromboplastin
  - D. Calcium (Ca<sup>+2</sup>)
17. "Gout" is the metabolic disease associated with over production of
- A. Urea
  - B. Urease
  - C. Uric acid
  - D. Urobilin
18. "Rickets" is mainly caused due to the low levels of the following vitamin
- A. Vitamin - D
  - B. Vitamin - K
  - C. Vitamin - A
  - D. Vitamin – B complex
19. The following element is mainly involved in wound healing process
- A. Calcium
  - B. Sodium
  - C. Zinc
  - D. Magnesium
20. Hypercholesterolemia is observed in following disorder
- A. Hypothyroidism
  - B. Diabetes Mellitus
  - C. Nephrotic syndrome
  - D. All of them
21. Most predominant anion of the extra cellular fluids.
- A. Cl<sup>-</sup>
  - B. HCO<sub>3</sub>
  - C. HPO<sub>4</sub><sup>-2</sup>
  - D. Protein
22. Normal Avg. platelet count is
- A. 1,00,000 / cubic mm
  - B. 3,50,000 / cubic mm
  - C. 4,50,000 / cubic mm
  - D. 5,00,000 / cubic mm



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23. Functional unit of kidney is known as
- A. Astrocyte
  - B. Nephron
  - C. Bladder
  - D. Golgi body
24. Iron in the mucosal cells binds with the a protein known as
- A. Transferrin
  - B. Ferritin
  - C. Cerulaplasmin
  - D. Hemosidesin.
25. "Goiter" is the disorder due to the abnormal metabolism of
- A. Iron
  - B. Copper
  - C. Zinc
  - D. Iodine
26. "Wilson's disease" is mainly due to abnormal metabolism of
- A. Magnesium
  - B. Iron
  - C. Copper
  - D. Manganese
27. Normal plasma creatinine value is
- A. 1.2 – 2.0 mg / dl
  - B. 5.0 – 10.0 mg / dl
  - C. 0.6 – 1.2 mg / dl
  - D. 10.0 – 20.0 mg / dl.
28. The plasma protein mainly involved in the maintenance of osmotic – pressure is
- A. Globulins
  - B. Albumin
  - C. Fibrinogen
  - D. All the above
29. Plasma Protein mainly involved in blood clotting mechanism.
- A. Albumin
  - B. Fibrinogen
  - C. Globulin
  - D. None of these
30. Haemoglobin present in blood is diminished during
- A. Leukemia
  - B. Leukopenia
  - C. Anemia
  - D. Hemosiderrhosis



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31. The composition of blood mainly consists of water, protein & salts in %
- A. Water – 91.0% + Protein – 8.0% + Slats – 0.9 % + other elements
  - B. Water – 92.0% + Protein – 7.0% + Slats – 0.9 % + other elements
  - C. Water – 90.0% + Protein – 9.0% + Slats – 0.9 % + other elements
  - D. Water – 91.0% + Protein – 7.0% + Slats – 1.9 % + other elements
32. "Albinism" is due to the disorder in the metabolism of
- A. Transaminase
  - B. Tynosinase
  - C. Tynosine Transaminase
  - D. None of these
33. "Hartnup disease" is mainly due to the disorder in
- A. Tyosine metabolism
  - B. Cystine Metabolism
  - C. Tryptophan Metabolism
  - D. Histidine Metabolism
34. The Normal range of Serum Cholesterol is
- A. 150 – 200 mg / dl
  - B. 100 – 150 mg / dl
  - C. 200 – 250 mg / dl
  - D. 75 – 125 mg / dl
35. The normal range of Albumin from the total serum proteins is
- A. 1.0– 2.0 gm / dl
  - B. 3.5 – 5.0 gm / dl
  - C. 5.0 – 7.5 mg / dl
  - D. 7.0 – 9.5 mg / dl
36. Conjugated bilirubin levels are increased during
- A. Hepatic Jaundice
  - B. Obstructive jaundice
  - C. Hemolytic jaundice
  - D. Cholecystitis
37. The half-life of serum Albumin is \_\_\_\_ days.
- A. 5-10 days
  - B. 10 – 15 days
  - C. 15-20 days
  - D. 20 – 25 days
38. Normal value of Bicarbonate present in the blood is
- A. 24 - 30 m.mol / lt
  - B. 30 - 35 m.mol / lt
  - C. 35 - 40 m.mol / lt
  - D. 40 - 43 m.mol / lt

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39. One of the following minerals is lacking in milk
- A. Calcium
  - B. Sodium
  - C. Iron
  - D. Potassium
40. The biochemical parameters increased in tuberculous meningitis
- A. Glucose
  - B. Protein
  - C. Sodium
  - D. Chloride
41. Functionally active form of vitamin – D is
- A. Cholecalcitriol
  - B. Ergocalcitril
  - C. Dehydro cholesterol
  - D. Calcitriol
42. The metabolite excreted in Urine in Thiamine deficiency
- A. Pyruvate
  - B. Glucose
  - C. Xanthouric acid
  - D. FIGLU
43. Folic acid antagonist used in the treatment of cancer
- A. Methotroxate
  - B. Thrimethopum
  - C. Sultonamide
  - D. Adenosine
44. Glass knives are used in
- A. Cryostat
  - B. Vibrotome
  - C. Rocking microtome
  - D. Ultramicrotome
45. Embedding medium used in Electron microscopy
- A. Gelatin
  - B. Carbonase
  - C. Celloidin
  - D. Epoxy resin
46. Monoclonal antibodies are produced by
- A. T lymphocytes
  - B. Hybridoma
  - C. Natural Killer cells
  - D. Dendrite cells

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47. Which of the following is the most sensitive assay?
- A. ELISA
  - B. Agglutination
  - C. Immunodiffusion
  - D. Radio immuno assay
48. The resolution of electron microscope is
- A. 200 nm
  - B. 0.2 nm
  - C. 20 nm
  - D. 2 nm
49. The gene for Factor VIII is present on
- A. Chromosome 6
  - B. Chromosome 16
  - C. X Chromosome
  - D. Chromosome II
50. In immunofluorescence the antibody is conjugated with
- A. Peroxidase
  - B.  $I^{124}$
  - C. FITC
  - D. Luminol
51. Which one is used as a "stain" in electron microscopy?
- A. Copper
  - B. Gold
  - C. Uramyl acetate
  - D. Lithium salt
52. Perls stain uses
- A. Mixture of Potassium Ferro cyanide and  $H_2SO_4$
  - B. Mixture of Potassium Ferro cyanide and HCl
  - C. Mixture of  $HNO_3$  and Sodium Ferro cyanide
  - D. Mixture of HCL and Sodium Ferro cyanide
53. Millipore filters are made of
- A. Nitrocellulose
  - B. Polycarbonate
  - C. Whatman No.1
  - D. Polystyrene
54. Screening test for Lactose
- A. Bial's test
  - B. Methylamine test
  - C. Seliwanoff's test
  - D. Hay's test

  
  
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55. Polymerase Chain Reaction is used for
- A. Identification of Bacteria
  - B. Detection of mutant genes
  - C. Diagnosis of AIDs
  - D. Sequencing DNA
56. Proteins can be precipitated by the following methods except
- A. Isoelectric precipitation
  - B. Using heavy metal ions
  - C. By organic solvents
  - D. By acids
57. The mobility of molecules during electrophoresis depends on the following factors, except
- A. PH of the medium
  - B. Net charge on the particles
  - C. Strength of electric field
  - D. Volume of buffer
58. Porphyrins are demonstrated by
- A. UV fluorescence
  - B. Spectroscopy
  - C. Electrophoresis
  - D. ELISA
59. Gram positivity of an organism is due to the cell wall content mainly
- A. Proteins
  - B. Polysaccharides
  - C. Lipids
  - D. Peptidoglycan
60. Bacterial spore can be demonstrated by
- A. Negative staining
  - B. Grams staining
  - C. Acid fast staining
  - D. Albert's staining
61. Melting point of agar agar is
- A. 100°C
  - B. 98°C
  - C. 56°C
  - D. 42°C
62. The immunoglobulin which is transported through placenta
- A. Ig G
  - B. Ig M
  - C. Ig A
  - D. Ig E

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63. The fungus which is not cultivable under ordinary culture media
- A. Histoplasma capsulatum
  - B. Sporothrix Schenckii
  - C. Cryptococcus neoformans
  - D. Rhinosporidium
64. Interferons are agents used against
- A. Bacteria
  - B. Fungus
  - C. Virus
  - D. Parasites
65. In Brucella agglutination test, the serum is diluted in
- A. Normal Saline
  - B. Glycerol Saline
  - C. Phenol Saline
  - D. Formol Saline
66. High levels of Alkaline phosphatase are seen in the following conditions, except
- A. Bone diseases
  - B. Alcoholism
  - C. Obstructive jaundice
  - D. Hyperparathyroidism
67. In myocardial infarction
- A. Serum cholesterol increases
  - B. Serum ALP increases
  - C. Serum CKMB level increases
  - D. Serum acid phosphatase increases
68. Most specific method for glucose estimation is
- A. Folin -Wu method
  - B. Hexokinase method
  - C. Nelson - Somogyi method
  - D. Glucose oxidase method
69. Proteins can be separated according to size by
- A. Isoelectric focusing
  - B. Poly-acrylamide gel electrophoresis
  - C. Ion exchange chromatography
  - D. Affinity chromatography
70. Western Blot analysis is for identifying
- A. DNA
  - B. RNA
  - C. Protein
  - D. Bacteria

  
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71. Preservatives for urine include all the following except
- A. Formalin
  - B. Toluene
  - C. HCl
  - D. H<sub>2</sub>SO<sub>4</sub>
72. Tuberculosis bacillus was discovered by
- A. Louis Pasteur
  - B. Robert Koch
  - C. Paul Ehrlich
  - D. Hansen
73. Demonstration of Negri body is a diagnostic method for the detection of
- A. CMV
  - B. Rabies
  - C. EBV
  - D. HIV
74. Which one of the following hemorrhagic disease is not transmitted by the vector mosquito
- A. Chickungunya
  - B. Dengue
  - C. Kyasannur forest disease
  - D. Yellow fever
75. The cell type primarily affected by HIV
- A. T4 cells
  - B. T8 cells
  - C. B cells
  - D. NK cells
76. The type of antigen – antibody reaction in VDRL test is
- A. Agglutination
  - B. Precipitation
  - C. Complement fixation
  - D. Neutralization
77. Significant titre of ASO is
- A. 50 units
  - B. 100 units
  - C. 200 units
  - D. 400 units
78. Wintrobe's method of ESR estimation uses
- A. Heparin
  - B. EDTA
  - C. Sodium Citrate
  - D. ACD

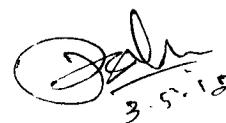
  
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79. Prothrombin Time will not be affected by deficiency of
- A. Factor VII
  - B. Factor V
  - C. Factor XIII
  - D. Factor II
80. Sodium dithionite is used in
- A. Reticulin stain
  - B. Electrophoresis
  - C. RBC count
  - D. Sickling test

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