



श्री चित्रा तिरुनाल आयुर्विज्ञान और प्रौद्योगिकी संस्थान, तिरुवनंतपुरम्-11

SREE CHITRA TIRUNAL INSTITUTE FOR MEDICAL SCIENCES & TECHNOLOGY,

THIRUVANANTHAPURAM—695 011

ENTRANCE EXAMINATION: ACADEMIC SESSION 2020

PROGRAM: PG DIPLOMA BLOOD BANKING TECHNOLOGY

Duration: 90 Minutes

Maximum Marks: 100

(Select the most appropriate answer; Each question carries one mark)

(There are no negative marking for wrong answer)

1. The bacteria causing plague is
 - a. Yersinia pestis
 - b. Staphylococcus aureus
 - c. Campylobacter jejuni
 - d. Treponema pallidum

2. Functional and structural unit of kidney
 - a. Nephron
 - b. Seminiferous tubules
 - c. Loop of Henle
 - d. Acini

3. Aedes aegypti is a vector for
 - a. Dengue fever
 - b. Relapsing fever
 - c. Malaria
 - d. Filaria

4. Elbow joint is an example of
 - a. Ball and socket joint
 - b. Hinge joint
 - c. Pivot joint
 - d. Gliding joint

5. Down syndrome is due to
 - a. 21 trisomy
 - b. 25 trisomy
 - c. 18 trisomy
 - d. 31 trisomy

6. Genetic material of retrovirus is
 - a. DNA
 - b. RNA
 - c. Nucleoprotein
 - d. Nucleic acids

7. Which one of these is caused by virus?
 - a. Malaria
 - b. Mumps
 - c. Leishmaniasis
 - d. Tuberculosis

8. The chemical involved in parkinsons disease is
 - a. Acetyl choline
 - b. Adrenaline
 - c. Dopamine
 - d. Nonadreneline

9. Myelin sheath is the covering of
 - a. Muscle cell
 - b. Axon
 - c. Blood vessels
 - d. Osteocytes

10. The largest corpuscle in the blood
 - a. Neutrophil
 - b. Basophil
 - c. Monocyte
 - d. Eosinophil

11. Which is not a function of liver
 - a. Detoxification
 - b. Synthesis of coagulation factors
 - c. Storage of glycogen
 - d. Formation of insulin

12. Under normal conditions which one is completely reabsorbed in renal tubules
 - a. Urea
 - b. Uric acid
 - c. Salts
 - d. Glucose

13. Megakaryocytes take part in
 - a. Production of leucocytes
 - b. Production of platelets
 - c. Production of mesophils
 - d. Production of mesangium

14. Diuresis is a condition characterised by
 - a. Increased urine volume
 - b. Increased glucose excretion
 - c. Decreased urine volume
 - d. Decreased glucose excretion

15. Purpura is a condition due to defect in
 - a. Red blood cells
 - b. White blood cells
 - c. Platelets
 - d. Gangliosides

16. The power plant of the cell is
 - a. Ribosomes
 - b. Golgi apparatus
 - c. Endoplasmic reticulum
 - d. Mitochondria

17. Pleiotropism is
 - a. Single gene having single defect
 - b. Single gene with multiple effect
 - c. Multiple gene influence single effect
 - d. Single gene influence random effect

18. The chemical mediating allergic response is
 - a. Adrenaline
 - b. Nonadrenaline
 - c. Catecholamine
 - d. Histamine

19. Antisterility vitamin is
 - a. Vitamin K
 - b. Vitamin B
 - c. Vitamin C
 - d. Vitamin E

20. Erythropoietin is produced in
 - a. Pancreas
 - b. Kidney
 - c. Bone marrow
 - d. Spleen

21. Antibodies are produced by
 - a. Macrophages
 - b. T lymphocytes
 - c. B lymphocytes
 - d. Dendritic cells

22. Normal adult haemoglobin is

- a. Hemoglobin A
- b. Hemoglobin C
- c. Hemoglobin E
- d. Hemoglobin F

23. Which antibody commonly causes hemolytic disease of newborn?

- a. Anti A
- b. Anti B
- c. Anti D
- d. Anti H

24. The vitamin which is required for maturation of erythrocytes?

- a. B1
- b. B4
- c. B6
- d. B12

25. Breakdown product of haemoglobin is

- a. Iron
- b. Bilirubin
- c. Ferritin
- d. Calcium

26. The method of separation of proteins is

- a. Distillation
- b. Centrifugation
- c. Electrophoresis
- d. Heating

27. The term genetics was coined by

- a. Gregor mendel
- b. Hugo de Vries
- c. Alexander Fleming
- d. William Bateson

28. Anaplasia is a feature of

- a. Embryonic cells
- b. Cancerous cells
- c. Neuronal cells
- d. Hematopoietic cells

29. Sandfly is the vector for

- a. Yellow fever
- b. Kala azar
- c. Malaria
- d. Filaria

30. The constituent of blood that retain the fluid inside the blood vessel

- a. Globulin
- b. Albumin
- c. Hemoglobin
- d. Glucose

31. Leishmann stain is a mixture of eosin and ____

- a. Methylene blue
- b. Prussian blue
- c. Alcian blue
- d. Giemsa

32. Anticoagulant used to collect and store blood in blood bags is

- a. Citrate
- b. Oxalate
- c. EDTA
- d. Heparin

33. Sleeping sickness occurs due to

- a. Trypanosome
- b. Leishmania
- c. Plasmodium
- d. Borellia

34. Islets of Langerhans are present in

- a. Brain
- b. Stomach
- c. Ovary
- d. Pancreas

35. The pH of blood is

- a. 6.1
- b. 6.4
- c. 7.1
- d. 7.4

36. The apparatus used to measure the amount of inhaled air

- a. Calorimeter
- b. Spirometer
- c. Barometer
- d. Ventilator

37. Father of Immunology is

- a. Jenner
- b. Pavlov
- c. Bernard
- d. Landsteiner

38. The function of kupffer cells is

- a. Secretion of bile
- b. Storage of bile
- c. Haemoglobin degradation
- d. Phagocytosis

39. Specific gravity of blood is

- a. 1.01
- b. 1.05
- c. 3.01
- d. 3.05

40. The brain centre which regulates body temperature is

- a. Hypothalamus
- b. Cerebellum
- c. Medulla
- d. Pons

41. Saliva converts starch into

- a. Maltose
- b. Glucose
- c. Lactose
- d. Fructose

42. The acid present in gastric juice is

- a. Sulphuric acid
- b. Hydrochloric acid
- c. Nitric acid
- d. Oxalic acid

43. Roentgen unit is a measure of ____ rays

- a. Beta
- b. Ultraviolet
- c. Infrared
- d. Gamma

44. Infective stage of plasmodium in man is

- a. Schizont
- b. Merozoite
- c. Sporozoite
- d. Trophozoite

45. Increase in haematocrit is seen in

- a. Polycythemia
- b. Leukemia
- c. Anemia
- d. Myeloma

46. Thalassemia is a disease due to defect in
- Red cell membrane
 - Bone marrow
 - Haemoglobin
 - Spleen
47. Glucagon in pancreas is produced by
- Acinar cells
 - Alpha cells
 - Beta cells
 - Gamma cells
48. The father of transfusion medicine is
- Landsteiner
 - Harvey
 - Fleming
 - Koch
49. Reticulocyte refers to
- Immature RBCs
 - Immature WBCs
 - Immature platelets
 - Immature nerve cells
50. The most abundant element found in our body is
- Nitrogen
 - Oxygen
 - Carbon
 - Hydrogen
51. The generation of glucose from certain non-carbohydrate carbon substrates is
- Glycolysis
 - HMP pathway
 - Gluconeogenesis
 - Ketogenesis
52. The immunoglobulin abundant in colostrum is
- IgA
 - IgG
 - IgM
 - IgE
53. The life span of RBC is ___ days
- 30
 - 60
 - 90
 - 120

54. Lengthening of long bones in humans occurs in an area of the bone is called
- Epiphysis
 - Periosteum
 - Medullary canal
 - Cancellous region
55. Which structure does NOT play a part in the motion of cells?
- Cilia
 - Flagellum
 - Microvilli
 - Pseudopodia
56. All are antigen antibody reaction except
- Precipitation
 - Flocculation
 - Immobilization
 - Agglutination
57. ELISA stands for
- Enzyme lowered Immuno Sorbent Assay
 - Enzyme linked Immune Solvent Assay
 - Enzyme linked Immuno Sorbent Assay
 - Enzyme lowered Immune Solvent Assay
58. The minimum time period between two consecutive blood donations is
- 6 weeks
 - 8 weeks
 - 10 weeks
 - 12 weeks
59. Bacteriophage are
- Viruses
 - Bacteria precursors
 - Prions
 - Protozoan
60. Which immunoglobulin has the maximum molecular weight?
- IgM
 - IgG
 - IgE
 - IgA
61. Agar agar is obtained from which algae
- Fucus
 - Geledium
 - Polysiphonia
 - Laminaria

62. Which is the most primitive form of algae
- Blue green algae
 - Red algae
 - Brown algae
 - Green algae
63. A cell without a cell wall is termed as
- Tonoplast
 - Protoplast
 - Apoplast
 - Symplast
64. The function of the centrosome is
- Formation of spindle fibres
 - Osmoregulation activity
 - Binding of cell nucleus
 - Protein synthesis
65. An example of a food borne toxin is
- Diphtheria toxin
 - Tetanus toxin
 - Shigella toxin
 - Botulinum toxin
66. The human genome project was launched in the year
- 1990
 - 1993
 - 1995
 - 1997
67. Haemoglobin has a _____ structure
- Primary
 - Secondary
 - Tertiary
 - Quarternary
68. In which of the following an anticodon occurs
- t-RNA
 - m-RNA
 - r-RNA
 - s-RNA
69. Which is the largest cell in the human body?
- Macrophage
 - Monocyte
 - Ovum
 - Osteocyte

70. Wolffian duct is also known as _____
- Mesonephric duct
 - Ejaculatory duct
 - Major sublingual duct
 - Cystic duct
71. Cryptorchidism is a condition where _____
- One or both testes are not developed
 - One or both testes fail to descend into the scrotum
 - One or both testes are not formed
 - One or both testes are rudiment
72. Photosynthesis occurs in
- Chloroplast
 - Golgi body
 - Endoplasmic reticulum
 - Nucleus
73. Which enzyme is used in unwinding of DNA?
- Ligase
 - Topoisomerase
 - Helicase
 - Exonuclease
74. Which of the following base pairing rule is correct?
- Adenine with guanine and thymine with cytosine
 - DNA base pairing is non-specific
 - Adenine with cytosine and guanine with thymine
 - Adenine with thymine and guanine with cytosine
75. DNA is synthesised from RNA by the enzyme
- DNA polymerase
 - DNA synthetase
 - DNA convertase
 - Reverse transcriptase
76. Humans have _____ lobes in the left lung.
- 3
 - 2
 - 4
 - 1
77. Elephantiasis is caused by _____
- Filarial worms
 - Hook worms
 - Tapeworms
 - Round worm

78. Which class has the largest number of species?
- Fishes
 - Reptiles
 - Insects
 - Mammals
79. Alleles are
- Alternate forms of genes
 - Linked genes
 - Chromosomes that have crossed over
 - Homologous chromosomes
80. What is the correct sequence?
- Genus-species-order-kingdom
 - Genus-order-phylum-kingdom
 - Species-genus-order-phylum
 - Kingdom-phylum-class-order
81. The symbiotic association of fungi and algae is called
- Lichen
 - Rhizome
 - Endocarp
 - Tuber
82. Ribosomal RNA is synthesized in
- Lysozymes
 - Nucleolus
 - Nucleoplasm
 - Ribosomes
83. Which one of the following is the graveyard of RBCs?
- Gall bladder
 - Kidney
 - Spleen
 - Liver
84. Which of the following carries oxygenated blood?
- Renal vein
 - Splenic vein
 - Hepatic vein
 - Pulmonary vein
85. O blood group contains _____ antibody
- Anti A
 - Anti B
 - Both Anti A and Anti B
 - Anti H

86. The term Rh used in blood groups is derived from which animal
- Mice
 - Sheep
 - Monkey
 - Goat
87. Eosinophilia is common in
- Allergy
 - Cancer
 - Infection
 - Malnutrition
88. Pinworm infection is caused by
- Echinococcus granulosus
 - Enterobius vermicularis
 - Ancylostoma duodenale
 - Fasciola hepatica
89. Which of the following is NOT a vitamin?
- Folic acid
 - Ascorbic acid
 - Pantothenic acid
 - Oleic acid
90. Ornithology is the
- Study of insects
 - Study of birds
 - Study of reptiles
 - Study of fish
91. The number of chromosomes in human body is
- 42
 - 44
 - 45
 - 46
92. The red, blue and purple colours of most of the plants are due to a pigment called
- Anthocyanin
 - Carotene
 - Chlorophyll
 - Xanthophylls
93. Which vitamin is provided by the Sunlight to the human body?
- A
 - C
 - D
 - E

94. Of the following taxonomic categories which is the highest in hierarchy ?
- Order
 - Species
 - Order
 - Class
95. Plants developing in dry conditions are
- Xerophytes
 - Mesophytes
 - Lithophytes
 - Hydrophytes
96. The main buffer system of the human blood is
- $\text{H}_2\text{CO}_3 - \text{HCO}_3^-$
 - $\text{H}_2\text{CO}_3 - \text{CO}_3^{2-}$
 - $\text{CH}_3\text{COOH} - \text{CH}_3\text{COO}^-$
 - $\text{NH}_2\text{CONH}_2 - \text{NH}_2\text{CONH}^+$
97. Who among the following invented the smallpox vaccine?
- Robert Koch
 - Edward Jenner
 - Robert Hooke
 - Louis Pasteur
98. The fungal derivative used in the treatment of tuberculosis is
- Ketoconazole
 - Amphotericin
 - Streptomycin
 - Penicillin
99. Plasma cells are derived from
- B cells
 - T cells
 - NK cells
 - Neural cells
100. The confirmatory test for HIV infection
- Northern Blot
 - Eastern Blot
 - Western Blot
 - Southern Blot

