

SREE CHITRA TIRUNAL INSTITUTE FOR MEDICAL SCIENCES & TECHNOLOGY, TRIVANDRUM

ENTRANCE EXAMINATION: NOVEMBER, 2016

PROGRAMME: PG Diploma in Blood Banking Technology

Duration: 90 Minutes

Total Marks: 100

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

(There is no negative marking)

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1. The mineral required for enzyme activity necessary for the synthesis of oligosaccharides and glycoproteins
 - a) Manganese
 - b) Molybdenum
 - c) Copper
 - d) Magnesium

 2. Ketone bodies are excreted in urine in incomplete metabolism of
 - a) Carbohydrate
 - b) Proteins
 - c) Fats
 - d) Nucleic acids

 3. Di George's syndrome is
 - a) Absence of thymus gland
 - b) Absence of thyroid gland
 - c) Absence of pituitary gland
 - d) Absence of gall bladder

 4. Saltatory propagation is a feature of
 - a) Nerve fibre
 - b) Skeletal muscle
 - c) Heart muscle
 - d) Brain

 5. The function of insulin
 - a) Fat metabolism
 - b) Protein metabolism
 - c) Carbohydrate metabolism
 - d) Digestion of food

 6. The chemical mediating allergic response
 - a) Adrenaline
 - b) Nor adrenaline
 - c) Histamine
 - d) Acetyl choline

 7. Hering Bruer receptors are associated with

- a) Respiration
- b) Flow of blood in arteries
- c) Digestion
- d) Production of urine

8. The process of break down of fatty acids is known as

- a) Beta oxidation
- b) Alfa oxidation
- c) Deamination
- d) Transamination

9. The enzyme nuclease, which hydrolyses nucleic acid, is produced by

- a) Liver
- b) Kidney
- c) Pituitary
- d) Pancreas

10. One gene one-character theory was postulated by

- a) De Vries
- b) Morgan
- c) Bateson
- d) Mendel

11. Calcitonin is a hormone produced by

- a) Pancreas
- b) Kidney
- c) Pituitary
- d) Thyroid

12. Villikin is a

- a) Gastrointestinal hormone
- b) Renal hormone
- c) Cardiac stimulant
- d) Respiratory stimulant

13. The psychic area is

- a) Frontal & temporal lobe
- b) Occipito parietal lobe
- c) Pituitary
- d) Medulla

14. Pacinian corpuscles are

- a) Touch receptors
- b) Taste receptors
- c) Photoreceptors
- d) Olfactory receptors

15. The term electroencephalogram was introduced by
- Hans Berger
 - Huxley
 - Hanson
 - Hales
16. Prions are pathogens, which cause
- Typhoid
 - Yellow fever
 - Creutzfeldt Jacobs Disease
 - Syphilis
17. The power plant of the cell
- Golgi apparatus
 - Endoplasmic reticulum
 - Mitochondria
 - Nucleus
18. Anticoagulant used to collect blood for transfusion
- Sodium citrate
 - Sodium oxalate
 - EDTA
 - Sodium chloride
19. Systolic pressure coincides with
- Ventricular systole
 - Atrial systole
 - Ventricular diastole
 - Atrial diastole
20. The function of calcium ions in blood
- Anticoagulation
 - Blood clotting
 - Nutrition
 - Maintenance of blood pressure
21. Chromosomal abnormality of an unborn can be determined by
- CAT scan
 - Ultrasound scan
 - Tissue culture
 - Amniocentesis
22. Pleiotropism is
- Single gene having single effect
 - Single gene with multiple effect
 - Multiple gene influence single effect
 - Always inherited as dominant

23. Erythroblastosis Fetalis is a condition due to
- ABO group discrepancy between mother & fetus
 - Rh incompatibility
 - Other blood group incompatibility
 - All the above
24. Anti sterility vitamin is
- Vitamin A
 - Vitamin B
 - Vitamin D
 - Vitamin E
25. Purpura is a condition due to defect in
- Red cells
 - White cells
 - Platelets
 - Blood vessels
26. Erythropoietin is reduced in diseases of
- Liver
 - Kidney
 - Bone marrow
 - Spleen
27. Pellagra is a disease caused by deficiency of
- Thiamine
 - Riboflavin
 - Nicotinic acid
 - Pyridoxine
28. Blood group of an individual is determined by
- Shape of RBC
 - Nature of hemoglobin
 - Genetic material carried by the individual
 - RBC WBC ratio
29. Antibodies are produced by
- Eosinophils
 - Macrophages
 - T Lymphocytes
 - B Lymphocytes
30. Excess production of growth hormone during growing stage result in a condition

called

- a) Acromegaly
- b) Gigantism
- c) Pituitary dwarf
- d) Cretinism

31. Uric acid is synthesized by the metabolism of

- a) Adenine & Guanine
- b) Adenine & Cytosine
- c) Thiamine & Guanine
- d) Thiamine & Cytosine

32. Pneumotaxis and inhibitory centers are associated with

- a) Breathing
- b) Digestion
- c) Circulation
- d) Sleeping

33. Instrument for counting RBC

- a) Hematocrit
- b) Hemocytometer
- c) Hemoglobinometer
- d) Hemogram

34. Oxytocin is secreted by

- a) Adrenals
- b) Ovary
- c) Pituitary
- d) Uterus

35. Histones are absent in

- a) Virus
- b) Fungus
- c) Bacteriophage
- d) Bacteria

36. Normal adult Hemoglobin is

- a) Oxyhemoglobin
- b) Hemoglobin A
- c) Hemoglobin F
- d) Myoglobin

37. In man magnesium deficiency causes

- a) Dental disorder
- b) Nervousness
- c) Irregular heart beat

- d) Poor muscular control
- 38. Bone forming cells are
 - a) osteoclasts
 - b) osteoblasts
 - c) chondroblasts
 - d) chondroclasts
- 39. Megakaryocytes take part in
 - a) production of leucocytes
 - b) production of blood platelets
 - c) transport of oxygen
 - d) transport of oxygen and carbon dioxide
- 40. Heart beat is initiated by
 - a. AV node
 - b. Bundle of His
 - c. purkinje fibers
 - d. SA node
- 41. Largest and thickest heart chamber is
 - a) Left ventricle
 - b) Left atrium
 - c) Right atrium
 - d) Right ventricle
- 42. RBCs burst when kept in
 - a) Glycerol
 - b) Isotonic saline
 - c) Hypertonic saline
 - d) Hypotonic saline
- 43. PH of human blood varies from
 - a) 6.0 and 7.0
 - b) 7.3-7.45
 - c) 8 and 8.5
 - d) 7.5 and 8
- 44. Diuresis is a condition characterized by
 - a) Increase in urine volume
 - b) Increased glucose excretion
 - c) Decrease in urine volume
 - d) Decrease in electrolyte balance
- 45. Which cranial nerve supplies heart?
 - a) Vagus
 - b) Facial
 - c) Trochlear
 - d) Auditory
- 46. Metabolic rate is controlled by
 - a) Liver
 - b) Thyroid
 - c) Pituitary
 - d) Pancreas

47. Hormone that stimulates heart rate is
- Thyroxin
 - Adrenalin
 - Glucagon
 - Gastrin
48. Platelets have a life span of
- 3-4 weeks
 - 4-5 weeks
 - 7-10 days
 - 3-4 days
49. Under normal conditions which one is completely reabsorbed in the renal tubule.
- Urea
 - Uric acid
 - Salts
 - Glucose
50. A protein deficiency disease
- Kwashiorkor
 - Marasmus
 - Pellagra
 - Cheilosis
51. Bile acids are
- Steroids
 - Carbohydrates
 - Modified proteins
 - Vitamins
52. Which is not a function of liver
- Detoxification
 - Synthesis of coagulation factors
 - Storage of glycogen
 - Formation of insulin
53. Which one is a salivary gland?
- Brunners gland
 - Sublingual
 - Lacrimal
 - Adrenal
54. Ammonia is converted into urea in
- Liver
 - stomach
 - Pancreas
 - Intestine
55. Vitamin required for maturation of erythrocytes
- B₁₂
 - B₂
 - Vitamin C
 - Vitamin K

56. The largest corpuscle in the blood is
- Basophil
 - Acidophil
 - Monocyte
 - Lymphocyte
57. Myelin sheath is the covering of
- Muscle cells
 - Nerve cells
 - Blood vessels
 - Osteocytes
58. Acetyl choline is the secretion of
- Pituitary gland
 - Sympathetic Nervous system
 - Parasympathetic Nervous system
 - None of the above
59. Formation of blood cells is known as
- Hemolysis
 - Rouleaux
 - Haemopoiesis
 - phagocytosis
60. In case of active immunity
- Killed pathogens are inoculated
 - Antibodies are injected
 - Antitoxins are injected
 - All the above
61. The cerebellum is concerned with
- Co ordination of muscle movement
 - Perception
 - Memory
 - Vision
62. In Parkinson's disease there is degeneration of
- Acetyl choline
 - Adrenalin
 - Dopamine
 - Nor adrenaline
63. Appetite and satiety centers of brain are present in
- Cerebral hemisphere
 - Hypothalamus
 - Cerebellum
 - Medulla oblongata
64. Under secretion of thyroxin in children causes
- Acromegaly
 - Cretinism
 - Goitre
 - Addisons disease
65. There is an increase in number of RBC s at higher altitudes

- to compensate for
- a) High rate of destruction
 - b) Lower turn over
 - c) Low level of oxygen
 - d) Higher requirement of energy
66. Adrenal gland is associated with
- a) Pharynx
 - b) Pancreas
 - c) Kidney
 - d) Brain
67. Erythropoetin is released by
- a) Bone marrow
 - b) Spleen
 - c) Kidney
 - d) Liver
68. Nerve transmission is
- a) Mechanical process
 - b) Chemical process
 - c) Biological process
 - d) Physical process
69. The exposed transparent portion of eyeball represents
- a) Uvea
 - b) Conjunctiva
 - c) Fibrous coat
 - d) Cornea
70. Islets of langerhans are present in
- a) Brain
 - b) Stomach
 - c) Ovary
 - d) Pancreas
71. Semicircular canals of internal ear contain a fluid called
- a) Lymph
 - b) endolymph
 - c) Perilymph
 - d) Haemolymph
72. Mammalian thymus is mainly concerned with
- a) Regulation of body temperature
 - b) Regulation of body growth
 - c) Immunological function
 - d) Secretion of thyrotrophin
73. Pharynx is connected to tympanic cavity through
- a) Glottis
 - b) Gullet
 - c) Eustachian tube
 - d) Internal nares
74. Hormone present in the urine of pregnant woman is

- a) Progesterone
 - b) FSH
 - c) Leutinising hormone
 - d) Chorionic gonadotrophin
75. Bacteriophage is
- a) Virus attacking bacteria
 - b) Virus attacking virus
 - c) Bacterium attacking virus
 - d) Stage in bacterial life cycle
76. Which one is caused by virus?
- a) Malaria
 - b) polio
 - c) Plague
 - d) Tuberculosis
77. Genetic material of retrovirus is
- a) DNA
 - b) RNA
 - c) DNA & RNA
 - d) Nucleoprotein complexes
78. Which one is found in the alimentary canal of humans?
- a) Pseudomonas
 - b) Rhizobium
 - c) Bacillus
 - d) Eschericia coli
79. Botulism caused by clostridium botulinum affects
- a) Spleen
 - b) Intestine
 - c) Neuromuscular junction
 - d) Lymph glands
80. Aedes is a carrier of
- a) Dengue fever
 - b) Relapsing fever
 - c) Malaria
 - d) None of the above
81. The most modern technique of vaccine preparation is
- a. Extraction of antigens from pathogens
 - b. Multiplication of antigen through rDNA technique
 - c. Weakening of pathogen through chemical treatment
 - d. Attenuation of pathogen through heat
82. Mammals can regenerate
- a) Brain
 - b) Liver
 - c) Lung
 - d) Urinary bladder
83. Mendel was

- a) Plant breeder
 - b) Cytologist
 - c) Physiologist
 - d) Taxonomist
84. Lungs have a large number of narrow tubes called
- a) Alveoli
 - b) Bronchioles
 - c) Bronchi
 - d) Alveolar ducts
85. Down's syndrome is a typical case of
- a) Trisomy
 - b) Nullosomy
 - c) Gene mutation
 - d) Monosomy
86. The first mammal clone Dolly was created by
- a) Gregor Mendel
 - b) Ian Wilmut
 - c) Robert Briggs
 - d) Thomas King
87. Elbow joint is
- a) Ball & socket joint
 - b) Hinge joint
 - c) Pivot joint
 - d) Gliding joint
88. Genes for colour blindness are located on
- a) X -chromosome only
 - b) Y - chromosome only
 - c) Either X or Y chromosome
 - d) Both X&Y chromosome
89. Sickle cell anemia is due to defect in
- a) Alfa chain
 - b) Beta chain
 - c) Gamma chain
 - d) Delta chain
90. Proteins are hydrolyzed by
- a) Amylase
 - b) Lipase
 - c) Pepsin
 - d) Zymase
91. Normal frequency range of sounds audible to the ear is from
- a) 0-10,000 Hz
 - b) 10-10,000 Hz
 - c) 10-20,000Hz
 - d) 20-20,000 Hz
92. Demography is concerned with
- a) Vital statistics

- b) Water purification
 - c) Rodent control
 - d) None of the above
93. Pace maker is meant for
- a) Initiation of heart beat
 - b) Regulation of blood flow
 - c) Transplanting heart valves
 - d) Transplanting heart
94. Number of WBC 's present in 1 mm³ of blood is
- a) 4000-10000
 - b) b) 500-1000
 - c) 1000-2000
 - d) 20,000 –30,000
95. Which is correct about leucocytes
- a) They are red coloured
 - b) They can cross cappillaries
 - c) They are enucleate
 - d) Decrease in their number causes leukemia
96. Functional and structural unit of kidney is
- a) Nephron
 - b) seminiferous tubule
 - c) Acini
 - d) Loop of Henle
97. Biliverdin and bilirubin are excreted along with
- a) Urine
 - b) Faeces
 - c) Both
 - d) None
98. Which of the following is due to a congenital defect in structure of hemoglobin
- a) Polycythemia
 - b) Methemoglobinemia
 - c) Sickle cell anemia
 - d) Sulphaemoglobinemia
99. In Deoxy ribonucleic acid adenine binds with
- a) Cytosine
 - b) Guanine
 - c) Thymine
 - d) Uracil
100. Right atrioventricular aperture is guarded by
- a) Tricuspid valve
 - b) Semilunar valve
 - c) Mitral valve
 - d) Bicuspid valve