



SREE CHITRA TIRUNAL INSTITUTE FOR MEDICAL  
SCIENCES & TECHNOLOGY,  
THIRUVANANTHAPURAM—695 011

ENTRANCE EXAMINATION : ACADEMIC SESSION JANUARY 2018

PROGRAMME: PG Diploma in Blood Banking Technology

Time: 90 min

Max.Marks: 100

(Select the most appropriate answer) No negative marks

1. One of the major components of cell wall of most fungi is
  - A. Chitin
  - B. Peptidoglycan
  - C. Cellulose
  - D. Hemicellulose
2. Which of the following animal is not viviparous?
  - A. Elephant
  - B. Platypus
  - C. Whale
  - D. Flying Box (Bat)
3. Vertebrate brain develops from
  - A. Endoderm
  - B. Mesoderm
  - C. Ectoderm
  - D. Blastoderm
4. The most abundant prokaryotes helpful to humans in making curd from milk and in production of antibiotics are the ones categorized as
  - A. Cyanobacteria
  - B. Archaeobacteria
  - C. Chemosynthetic autotrophs
  - D. Heterotrophic bacteria
5. The supportive skeletal structure in the human external ears and in the nose tip are examples of
  - A. Ligament
  - B. Areolar tissue
  - C. Bone
  - D. cartilage
6. Which of the following is not a viral disease
  - A. AIDS and Mumps
  - B. Small pox and herpes
  - C. Influenza
  - D. Cholera

7. The symbiotic association of fungi and algae is called
  - A. Lichen
  - B. Mycorrhiza
  - C. Rhizome
  - D. Endomycorrhiza
8. The genetic material of Virus includes
  - A. Only RNA
  - B. Only DNA
  - C. Both RNA and DNA
  - D. RNA or DNA
9. The kind of epithelium which forms the inner walls of blood vessel is
  - A. Cuboidal epithelium
  - B. Columnar epithelium
  - C. Ciliated Columnar epithelium
  - D. Squamous epithelium
10. The fibers of which of the following muscles are fusiform and do not show striations
  - A. Skeletal muscles
  - B. Cardiac muscles
  - C. Both A & B
  - D. Smooth muscles
11. Nervous tissue cells that play several supporting roles but do not transmit impulses are called
  - A. Glial cells
  - B. Dendrites
  - C. Nerve cells
  - D. Neurons
12. Difference between the prokaryotic and Eukaryotic cells is having
  - A. Cell Wall
  - B. Nuclear membrane
  - C. Ribosome
  - D. None of these
13. Chromosome having equal or almost equal arms are called
  - A. Metacentric
  - B. Acrocentric
  - C. Polycentric
  - D. Acentric
14. Which of the following is/are essential fatty acids
  - A. Linoleic acid
  - B. Linolenic acid
  - C. Arachidonic acid
  - D. All of the above
15. A nucleotide is formed of
  - A. Purine, pyrimidine and phosphate
  - B. Prine, sugar and phosphate
  - C. Nitrogen base, sugar and phosphate
  - D. Pyrimidine, sugar and phosphate
16. Parotid salivary glands are present
  - A. Below the tongue
  - B. Below the cheeks
  - C. In the angle between two jaws
  - D. Below the eye orbit

17. The entry of food into the larynx is prevented by
- Mitral valve
  - Diaphragm
  - Epiglottis
  - Frenulum
18. Approximately 70% of the carbon dioxide absorbed by the blood will be transported to the lungs
- As bicarbonate ions
  - In the form of dissolved gas molecule
  - By binding to RBC
  - As carbamino-haemoglobin
19. Carbon monoxide is a pollutant because
- Reacts with oxygen
  - Inhibits glycolysis
  - Reacts with haemoglobin
  - Makes nervous system inactive
20. Person with blood group AB is considered as universal recipient because he has
- Both A and B antigens on RBC but no antibodies in plasma
  - Both A and B antibodies in plasma
  - No antigen on RBC and no antibody in plasma
  - Both A and B antigens in plasma but no antibodies
21. Blood pressure in the mammalian aorta is maximum during
- Diastole of the right ventricle
  - Systole of the left ventricle
  - Diastole of the right atrium
  - Systole of the left atrium
22. Name the blood cell whose reduction in number can cause clotting disorder, leading to excessive loss of blood from the body
- Neutrophils
  - Thrombocytes
  - Erythrocytes
  - Leucocytes
23. In mammals, ammonia produced by metabolism is converted into Urea by
- Kidney
  - Liver
  - Spleen
  - Blood
24. The granulocytes which secrete histamine, serotonin and heparin are
- Eosinophils
  - Basophils
  - Lymphocytes
  - Monocytes
25. Osteoporosis, an age related disease of skeletal system, may occur due to
- Decreased level of estrogen
  - Accumulation of uric acid leading to inflammation of joints
  - Immune disorder affecting neuromuscular junction leading to fatigue
  - High concentration of  $Ca^{++}$  and  $Na^{+}$
26. Sickle cell anemia is caused by the substitution of
- Valine by glutamic acid at the sixth position of alpha chain of hemoglobin
  - Valine by glutamic acid at the sixth position of beta chain of hemoglobin

- C. Glutamic acid by valine at the sixth position of alpha chain of hemoglobin  
 D. Glutamic acid by valine at sixth position of beta chain of hemoglobin
27. Multiple alleles are present
- At different loci on the same chromosome
  - At the same locus of the chromosome
  - On sister chromatids
  - On different chromosomes
28. An abnormal human baby with XXX sex chromosome was born due to
- Formation of abnormal ova in the mother
  - Formation of two ova and one sperm
  - Fusion of two sperms and one ovum
  - Formation of abnormal sperms in the father
29. Human genome project (HGP) is closely associated with the rapid development of a new area in biology called as
- Biotechnology
  - Bioinformatics
  - Biogeography
  - Bioscience
30. Which RNA picks up specific amino acid from acid pool in the cytoplasm to the ribosome during protein synthesis
- tRNA
  - mRNA
  - rRNA
  - snRNA
31. The backbone of RNA consists of which of the following sugars
- Deoxyribose
  - Ribose
  - Sucrose
  - Maltose
32. People administered with preformed antibodies get
- Active immunity
  - Innate immunity
  - Autoimmunity
  - Passive immunity
33. The immunoglobulin abundant in colostrum is
- IgG
  - IgA
  - IgM
  - IgE
34. The enzyme required to catalyze the polymerization of deoxy nucleotides is
- DNA Ligase
  - DNA Polymerase
  - Beta – galactosidase
  - Transacetylase
35. Vaccine for Tuberculosis is
- PAS vaccine
  - BCG vaccine
  - OPV vaccine
  - DPT vaccine

36. A patient brought to a hospital with myocardial infarction is normally immediately given
- Penicillin
  - Streptokinase
  - Cyclosporine A
  - Statins
37. In gobar gas the maximum amount is that of
- Butane
  - Methane
  - Propane
  - Carbondioxide
38. Chloramphenicol and Erythromycin, Broad spectrum antibiotics are produced by
- Streptomyces
  - Nitrobacter
  - Rhizobium
  - Penicillin
39. Morphine used as an analgesic is obtained from
- Erythoxylum coca
  - Atropa belladonna
  - Papaver somniferum
  - Cannabis sativa
40. The first human hormone produced by recombinant DNA technology is
- Insulin
  - Estrogen
  - Thyroxin
  - Progesterone
41. Which is the National aquatic Animal of India
- Gangetic shark
  - River Dolphin
  - Blue Whale
  - Sea Horse
42. High value of BOD ( Biological Oxygen Demand) indicates that
- Water is highly polluted
  - Water is less polluted
  - Consumption of organic matter in the water is higher by the microbes
  - Water is pure
43. A lake which is rich in organic waste may result in
- Increased population of fish due to lots of nutrients
  - Mortality of fish due to lack of oxygen
  - Increased population of aquatic organism due to minerals
  - Drying of lake due to algal bloom
44. Which of these is not an advantage of CNG over diesel?
- Burns more efficiently
  - It is cheap
  - Cannot be adulterated
  - Ease to lay down pipeline for delivery
45. Covering of heart is
- Pleural sac
  - Peritonium
  - Pericardium
  - Perichondrium

46. Breakdown products of Hemoglobin
- A. Bile
  - B. Bilirubin
  - C. Proteins
  - D. Calcium
47. Erythropoetin is synthesized by
- A. Liver
  - B. Kidney
  - C. Spleen
  - D. Thyroid
48. Nerve supplying heart is
- A. Vagus
  - B. Facial
  - C. Auditory
  - D. Trochlear
49. Roentgen unit is a measure of
- A. Sunlight
  - B. Radiation
  - C. Heat
  - D. Cold
50. The sum total of all the reactions occurring in our body is known as
- A. Metabolism
  - B. Growth
  - C. Regeneration
  - D. Reproduction
51. A co enzyme is
- A. Always a protein
  - B. Often a metal
  - C. Always an inorganic compound
  - D. Often a vitamin
52. The information in genetic nucleic acid resides in the
- A. Number of nucleotides
  - B. Kinds of nucleotides
  - C. Sequence of nucleotides
  - D. All of the above
53. When triglycerides are solid at ordinary temperature, they are called
- A. Oils
  - B. Water
  - C. Fats
  - D. None of the above
54. Enzyme trypsin is secreted by
- A. Duodenum
  - B. liver
  - C. Pancreas
  - D. Stomach
55. Muscular contraction in alimentary canal is called
- A. Deglutination
  - B. Mastication
  - C. Peristalsis
  - D. None of the above

56. End product of protein digestion is
- Sugar
  - Amino acid
  - Nucleotide
  - Ammonia
57. Removal of gall bladder in man would lead to
- Impairment of digestion of fats
  - Impairment of digestion of protein
  - Jaundice
  - Increased acidity in intestine
58. Respiratory mechanism is controlled by
- Central nervous system
  - Sympathetic nervous system
  - Parasympathetic nervous system
  - Autonomic nervous system
59. Asthma is caused by
- Infection of lungs
  - Spasm in bronchial muscles
  - Bleeding into pleural cavity
  - Infection of trachea
60. Pulmonary vein carrying oxygenated blood opens into
- Left auricle
  - Right auricle
  - Left ventricle
  - Right ventricle
61. Hardening of arteries due to deposition of cholesterol is called
- Thrombus
  - Atherosclerosis
  - Rhinitis
  - Angina
62. The pacemaker of human heart is
- SA node
  - Tricuspid
  - AV node
  - SV node
63. Which of the following has the thickest walls
- Right ventricle
  - Left ventricle
  - Right auricle
  - Left auricle
64. Which one of the following human organ is called the graveyard of RBC
- Gall bladder
  - Kidney
  - Spleen
  - Liver
65. Which circulation provides nutrients and oxygen to cardiac muscle tissue
- Pulmonary circulation
  - Systemic circulation
  - Lymphatic circulation
  - Coronary circulation

66. Which of the following carries oxygenated blood
- A. Renal vein
  - B. Hepatic portal vein
  - C. Hepatic vein
  - D. Pulmonary vein
67. What is true about leucocytes
- A. Their sudden fall in number is indicative of blood cancer
  - B. These are produced in thymus
  - C. These are enucleated
  - D. These can squeeze out through the capillary walls
68. 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
69. Which of the following is likely to accumulate in dangerous proportion in the blood of a person whose kidney is not working properly
- A. Ammonia
  - B. Urea
  - C. Lysine
  - D. Sodium chloride
70. A cup shaped cavity for articulation of femur head is
- A. Acetabulum
  - B. Glenoid cavity
  - C. Sigmoid notch
  - D. Obturator foramen
71. Which of the following vertebrae are fused
- A. Cervical
  - B. Sacral
  - C. Lumbar
  - D. Thoracic
72. Accumulation of uric acid crystals in the synovial joint causes
- A. Rheumatoid arthritis
  - B. Gout
  - C. Osteoarthritis
  - D. Muscular dystrophy
73. The amount of light that falls on retina is regulated by
- A. Lens
  - B. Cornea
  - C. Iris
  - D. Ciliary muscles
74. Centre for sense of smell is
- A. Cerebellum
  - B. Olfactory lobes
  - C. Pons
  - D. Midbrain
75. The thinned out portion of retina where only cones are densely packed is called
- A. Blind spot
  - B. Corpus leuteum
  - C. Macula lutea



- D. Fovea
76. Corpus callosum connects
- A. Two cerebral hemisphere
  - B. Two ventricles of brain
  - C. Two cerebellar hemisphere
  - D. Two Optic thalamus
77. Bony labrynth of ear contains a fluid known as
- A. Endolymph
  - B. Perilymph
  - C. Aquous humor
  - D. Synovial fluid
78. For seeing nearby objects, the lens becomes convex by
- A. Relaxation of iris muscles
  - B. Contraction of iris muscles
  - C. Contraction of ciliary muscles
  - D. Relaxation of ciliary muscles
79. When we move from light to dark, we fail to see for sometime but soon the visibility becomes normal. We call it
- A. Accommodation
  - B. Adaptation
  - C. Photoperiodism
  - D. Mutation
80. Glycogenesis is the result of the hormone produced from
- A. Alpha cells of pancreas
  - B. Beta cells of pancreas
  - C. Thyroid gland
  - D. Adrenal gland
81. Oxytocin hormone is produced by
- A. Pituitary
  - B. Adrenals
  - C. Hypothalamus
  - D. Thyroid
82. Which of the following endocrine glands grows to the maximum size at puberty and then diminishes gradually
- A. Thymus
  - B. Pituitary
  - C. Thyroid
  - D. Adrenal
83. Secretion of milk from mammary gland towards the end of the pregnancy is called
- A. Lactation
  - B. Parturition
  - C. Fertilization
  - D. Implantation
84. Menstrual cycle is controlled by
- A. LH & FSH only
  - B. Estrogen ,LH & FSH only
  - C. Estrogen & progesterone only
  - D. LH , FSH, Estrogen & progesterone
85. At the time of fertilization chromosome number
- A. Is halved

- B. Remains haploid
  - C. Becomes diploid
  - D. Does not change
86. Which of the following disease is completely curable if detected early and treated properly
- A. Syphilis
  - B. Hepatitis B
  - C. Genital herpes
  - D. HIV infection
87. In humans the dominance relationship between A & B alleles of the ABO blood group gene is an example of
- A. Complete dominance
  - B. Incomplete dominance
  - C. Co dominance
  - D. Epistasis
88. Which of the following disease is confirmed by widal test
- A. Tuberculosis
  - B. Typhoid
  - C. Plague
  - D. Tetanus
89. The fetus gets immunized after receiving antibodies from mother through placenta. This type of immunization is called
- A. Active immunity
  - B. Innate immunity
  - C. Passive immunity
  - D. Humoral immunity
90. The exaggerated response of the immune system to certain antigens is called
- A. Primary response
  - B. Secondary response
  - C. Immune suppression response
  - D. Allergy
91. Immunoglobulins are
- A. Antigen
  - B. Antibodies
  - C. Antiseptics
  - D. Antibiotics
92. Metastasis is
- A. Part of regeneration
  - B. Transfer of cancer cells from one part of the body to another
  - C. Fast mitosis in cancer cells
  - D. All of the above
93. Mumps is a viral disease and painful swelling of
- A. Parotid glands
  - B. Thyroid
  - C. Thymus
  - D. Sublingual glands
94. Which of the following disease is not transmitted through contaminated water
- A. Typhoid
  - B. Diphtheria
  - C. Amoebiasis
  - D. Hepatitis A

95. Organ transplant rejection may be prevented by using
- A. Antibodies
  - B. New T cells
  - C. Immunosuppressive drug
  - D. Immunostimulatory drug
96. Which gas is responsible for the puffed up appearance of dough
- A. Co<sub>2</sub>
  - B. O<sub>2</sub>
  - C. So<sub>2</sub>
  - D. No<sub>2</sub>
97. Which of the following fungi is found useful in biological control of plant disease.
- A. Muccor mucido
  - B. Trichderma viridae
  - C. Phytothora parasitica
  - D. Penicillium notatum
98. Enzymes used in detergents are
- A. Amylase
  - B. Lipase
  - C. Proteases
  - D. Glucoisomerases
99. A few organisms can tolerate and thrive a wide range of temperature. Such animals are called
- A. Stenothermal
  - B. Euthermal
  - C. Thermophilic
  - D. Endothermal
100. Which of the following results in fever when released in body during disease.
- A. Pyrogens.
  - B. Antibodies
  - C. interferons
  - D. Interleukins

