



श्री चित्रा तिरुनाल आयुर्विज्ञान और प्रौद्योगिकी संस्थान, त्रिवेंद्रम , केरल- 695 011

(एक राष्ट्रीय महत्व का संस्थान, विज्ञान एवं प्रौद्योगिकी विभाग, भारत सरकार)

SREE CHITRA TIRUNAL INSTITUTE FOR MEDICAL SCIENCES AND TECHNOLOGY, TRIVANDRUM
KERALA – 695 011

(An Institution of National Importance, Department of Science and Technology, Govt. of India)

टेलीफॉन नं. Telephone No. 0471- 2443152 -फाक्स /Fax- 2550728 , 0471- 2446433

ई-मेल/E-mail :sct@sctimst.ac.in वेबसाइट/ Website : www.sctimst.ac.in

ENTRANCE EXAMINATION - ACADEMIC SESSION JANUARY 2025

Program: PG Diploma in Blood Banking Technology

Time:90 Minutes

Max. Marks: 100

(Select the most appropriate answer)

(There are **no negative** marks for wrong answers)

1	Which of the following is due to a congenital defect in structure of hemoglobin?
a	Polycythemia
b	Methemoglobinemia
c	Sickle Cell Anemia
d	Sulphemoglobinemia
2	Number of WBC's present in 1 mm³ of blood is
a	4000-10000
b	500-1000
c	1000-2000
d	20000-30000
3	Proteins are hydrolyzed by
a	Amylase
b	Lipase
c	Pepsin
d	Zymase
4	Down's syndrome is a typical case of
a	Trisomy
b	Nulloosomy
c	Gene mutation
d	Monosomy
5	Mammals can regenerate
a	Brain
b	Liver
c	Lung
d	Spleen
6	Genetic material of retrovirus is
a	DNA
b	RNA
c	Both DNA and RNA
d	Nucleoprotein Complex
7	Which one is caused by virus?

	a	Malaria
	b	Polio
	c	Plague
	d	Tuberculosis
8	Adrenal gland is associated with	
	a	Pancreas
	b	Brain
	c	Kidney
	d	Pharynx
9	The cerebellum is concerned with	
	a	Coordination of muscle movement
	b	Perception
	c	Memory
	d	Vision
10	Hormone that stimulates heart rate is	
	a	Insulin
	b	Adrenalin
	c	Glucagon
	d	Gastrin
11	The function of calcium ions in blood	
	a	Anticoagulation
	b	Blood clotting
	c	Nutrition
	d	Maintenance of blood pressure
12	Erythroblastosis Fetalis is a condition due to	
	a	ABO group incompatibility
	b	Rh incompatibility
	c	Minor blood group incompatibility
	d	All of the above
13	Erythropoietin is reduced in diseases of	
	a	Liver
	b	Kidney
	c	Bone marrow
	d	Spleen
14	Antibodies are produced by	
	a	Eosinophils
	b	Macrophages
	c	T-Lymphocytes
	d	B-Lymphocytes
15	Oxytocin is secreted by	
	a	Adrenals
	b	Ovary
	c	Pituitary
	d	Thymus
16	Covering of heart is	
	a	Peritoneum
	b	Pericardium
	c	Perichondrium
	d	Pleural sac
17	Largest and thickest heart chamber is	

	a	Left ventricle
	b	Left atrium
	c	Right ventricle
	d	Right atrium
18	Metabolic rate is controlled by	
	a	Liver
	b	Thyroid
	c	Pituitary
	d	Pancreas
19	Which one is found in the alimentary canal of humans?	
	a	Pseudomonas
	b	Rhizobium
	c	Bacillus
	d	Escherichia coli
20	Hormone present in the urine in pregnancy	
	a	Progesterone
	b	Follicle Stimulating Hormone
	c	Leutinizing hormone
	d	Chorionic gonadotrophin
21	Megakaryocytes take part in	
	a	Production of leucocytes
	b	Production of platelets
	c	Production of erythrocytes
	d	Production of lymphocytes
22	Blood protein that initiates clotting	
	a	Thromboplastin
	b	Prothrombin
	c	Fibrinogen
	d	Fibrin
23	Purpura is a condition due to defect in	
	a	Red Blood cells
	b	White Blood cells
	c	Platelets
	d	Plasma
24	Systolic pressure coincides with	
	a	Ventricular systole
	b	Atrial systole
	c	Ventricular diastole
	d	Atrial diastole
25	Centre for sense of smell is	
	a	Cerebellum
	b	Olfactory lobe
	c	Pons
	d	Midbrain
26	The chemical mediating allergic response	
	a	Adrenaline
	b	Nor adrenaline
	c	Histamine
	d	Acetylcholine
27	At the time of fertilization, chromosome number is	

	a	Half
	b	Becomes diploid
	c	Remains haploid
	d	Does not change
28	Excess production of growth hormone result in a condition called	
	a	Acromegaly
	b	Gigantism
	c	Pituitary dwarf
	d	Cretinism
29	Normal adult hemoglobin is	
	a	Hemoglobin C
	b	Hemoglobin A
	c	Hemoglobin F
	d	Hemoglobin S
30	Organ transplant rejection may be prevented by	
	a	Antibodies
	b	Immunosuppressive drugs
	c	New T Cells
	d	Immunostimulatory drugs
31	Pharynx is connected to tympanic cavity by	
	a	Glottis
	b	Gullet
	c	Eustachian tube
	d	Internal nares
32	Diabetes insipidus is a condition due to	
	a	Increased vasopressin
	b	Decreased vasopressin
	c	Increased insulin
	d	Decreased insulin
33	Bradycardia is a condition when	
	a	Heart rate is reduced
	b	Heart rate is increased
	c	Cardiac muscles are contracted
	d	Cardiac muscles are relaxed
34	Placenta in mammals is formed by	
	a	Allantois
	b	Amnion
	c	Yolk Sac
	d	Chorion
35	The constituent of blood which retain the fluid inside the blood vessel	
	a	Globulin
	b	Albumin
	c	Hemoglobin
	d	Clotting factors
36	Increase in intraocular pressure cause	
	a	Color blindness
	b	Night blindness
	c	Glaucoma
	d	Cataract
37	Brain and spinal cord develop from	

	a	Endoderm
	b	Mesoderm
	c	Ectoderm
	d	Dermatome
38	Bilirubin and biliverdin are the degradation products of	
	a	Hemoglobin
	b	Myoglobin
	c	Albumin
	d	Plasma
39	Calcitonin is a hormone produced by	
	a	Pancreas
	b	Kidney
	c	Pituitary
	d	Parathyroid
40	Prions are pathogens, which cause	
	a	Typhoid
	b	Yellow fever
	c	Creutzfeldt disease
	d	Syphilis
41	Mumps is a viral disease with painful swelling of	
	a	Thyroid
	b	Thymus
	c	Sublingual glands
	d	Parotid glands
42	Instrument for counting RBC	
	a	Hematocrit
	b	Hemocytometer
	c	Hemoglobinometer
	d	Hemogram
43	Heart beat is initiated by	
	a	AV node
	b	Bundle of His
	c	Purkinje fibers
	d	SA node
44	A protein deficiency disease	
	a	Kwashiorkor
	b	Marasmus
	c	Pellagra
	d	Cheilosis
45	Formation of blood cell is known as	
	a	Hemolysis
	b	Rouleaux
	c	Hemopoiesis
	d	Phagocytosis
46	Increase in number of RBC at higher altitude to compensate for	
	a	High rate of destruction
	b	Lower turn over
	c	Low level of oxygen
	d	Higher requirement of energy
47	Islets of Langerhans are present in	

	a	Brain
	b	Stomach
	c	Ovary
	d	Pancreas
48	Lungs have a large number of narrow tubes called	
	a	Alveoli
	b	Bronchioles
	c	Bronchi
	d	Lingula
49	Which is correct about leucocytes	
	a	They are red colored
	b	They can cross capillaries
	c	They are anucleate
	d	Decrease in their number causes leukemia
50	In Deoxy ribonucleic acid adenine binds with	
	a	Guanine
	b	Cytosine
	c	Thymine
	d	Uracil
51	Tetanus is caused by	
	a	Bacteria
	b	Virus
	c	Parasite
	d	Fungus
52	The number of chromosome pairs in human beings	
	a	22
	b	23
	c	24
	d	26
53	The mode of inheritance of Christmas disease is	
	a	Autosomal Dominant
	b	Autosomal Recessive
	c	X Linked Recessive
	d	X Linked Dominant
54	The pigment which determines skin colour	
	a	Serotonin
	b	Melatonin
	c	Melanin
	d	Glucagon
55	The vitamin required for calcium absorption is	
	a	Vitamin A
	b	Vitamin C
	c	Vitamin D
	d	Vitamin E
56	The chemical secreted by gastric mucosal cells	
	a	HCl
	b	NaCl
	c	H ₂ SO ₄
	d	NaOH
57	The mature blood cell which has a nucleus	

	a	RBC
	b	WBC
	c	Platelets
	d	All of the above
58	Transcription is the conversion of	
	a	RNA to DNA
	b	RNA to protein
	c	DNA to RNA
	d	Protein to RNA
59	Agglutination of blood refers to	
	a	Clot formation
	b	Sticking together of RBCs
	c	Rupture of RBCs
	d	Inability to form clot
60	Number of bones in adult human is	
	a	306
	b	204
	c	206
	d	300
61	Turner's syndrome is	
	a	46 XY
	b	45 XO
	c	46 XX
	d	47 XXY
62	The muscle present in eye ball	
	a	Stapedius
	b	Ciliary muscle
	c	Buccinator
	d	Interossei
63	The bone of the thigh region	
	a	Humerus
	b	Fibula
	c	Femur
	d	Radius
64	The disease caused by point mutation	
	a	Thalassemia
	b	Hemophilia
	c	Sickle cell anemia
	d	Hereditary spherocytosis
65	The ABO blood group system was discovered by	
	a	Landsteiner
	b	Weiner
	c	Pasteur
	d	Coombs
66	Thrombocytes are formed in	
	a	Liver
	b	Spleen
	c	Muscle
	d	Bone marrow
67	Type of WBC that is increased in parasitic infections	

	a	Neutrophil
	b	Basophil
	c	Eosinophil
	d	Lymphocyte
68	The type of immunoglobulin that crosses placenta	
	a	IgA
	b	IgM
	c	IgG
	d	IgE
69	Pseudostratified epithelium is found in	
	a	Trachea
	b	Larynx
	c	Nephron
	d	Urinary bladder
70	If RBC is placed in distilled water, they	
	a	Shrink
	b	Stick together
	c	Swell
	d	Remain normal
71	Kupffer's cells are seen in	
	a	Brain
	b	Kidney
	c	Liver
	d	Spleen
72	The majority of CO₂ in the body is transported to lungs as	
	a	Carbonates
	b	Bicarbonates
	c	Dissolved in blood
	d	Attached to hemoglobin
73	The respiratory centre is located in	
	a	Cerebellum
	b	Spinal cord
	c	Medulla oblongata
	d	Diencephalon
74	Arteries carry oxygenated blood except for	
	a	Cardiac
	b	Systemic
	c	Hepatic
	d	Pulmonary
75	A person undergoing prolonged fasting will have ___ in urine.	
	a	Fats
	b	Amino acids
	c	Glucose
	d	Ketones
76	Sarcolemma is the membrane which covers	
	a	Muscle fibers
	b	Nerve fibers
	c	Viscera
	d	Spinal cord
77	Parkinson's disease is caused by degeneration of neurons that secrete	

	a	Dopamine
	b	GABA
	c	Nor-epinephrine
	d	Acetylcholine
78	Which hormone has anti insulin effect?	
	a	Cortisol
	b	Aldosterone
	c	Calcitonin
	d	Oxytocin
79	Unconjugated bilirubin is also called	
	a	Prehepatic bilirubin
	b	Biliverdin
	c	Urobilinogen
	d	Total bilirubin
80	Destruction of all microorganisms including spores is called	
	a	Sanitation
	b	Antisepsis
	c	Sterilization
	d	Disinfection
81	The liquid portion of blood after a clot has formed is called	
	a	Buffy coat
	b	Serum
	c	Plasma
	d	Lymph
82	Blood group A individuals have	
	a	Anti A in serum
	b	Anti H in serum
	c	Anti D in serum
	d	Anti B in serum
83	Which test cannot be performed in serum sample?	
	a	Iron
	b	Vitamin B 12
	c	Total lipids
	d	Clotting factors
84	A biohazard container is used to discard	
	a	Lancet
	b	Band aid wrapper
	c	Both A and B
	d	Food waste
85	A test procedure that uses Westergren's tube is	
	a	Erythrocyte sedimentation rate
	b	Hematocrit
	c	Reticulocyte count
	d	Differential count
86	Glycosylated Hb	
	a	Causes sickle cell disease
	b	Causes Thalassemia
	c	Is affected by food intake on the day of testing
	d	Indicates blood glucose levels from preceding months

87	End products of protein digestion are	
	a	Glycerol
	b	Fatty acids
	c	Triglycerides
	d	Amino acids
88	Water free of charged particles is	
	a	Distilled
	b	Radioactive
	c	Deionized
	d	Heavy
89	Which is not an iron containing protein?	
	a	Lactoferrin
	b	Transferrin
	c	Hemosiderin
	d	Ceruloplasmin
90	Atypical lymphocytes are seen in	
	a	Malaria
	b	Infectious mononucleosis
	c	Hepatitis
	d	HIV
91	The symbiotic association of fungi and algae is called	
	a	Lichen
	b	Mycorrhiza
	c	Rhizome
	d	Endomycorrhiza
92	The difference between prokaryotic and Eukaryotic cells is	
	a	Cell wall
	b	Nuclear membrane
	c	Ribosome
	d	None of these
93	The entry of food into the larynx is prevented by	
	a	Diaphragm
	b	Mitral valve
	c	Epiglottis
	d	Frenulum
94	Osteoporosis, an age-related disease of skeletal system occur due to	
	a	Decreased level of estrogen
	b	Accumulation of uric acid leading to inflammation of joints
	c	Immune disorder affecting neuromuscular junction leading to fatigue
	d	High concentration of Calcium and Sodium
95	Human genome project (HGP) is associated with the rapid development of a new area in biology called	
	a	Biotechnology
	b	Bioinformatics
	c	Biogeography
	d	Bioscience
96	Vaccine for tuberculosis is	
	a	PAS vaccine
	b	BCG vaccine
	c	DPT vaccine

	d	OPV vaccine
97	High value of BOD (Biological oxygen Demand) indicates that	
	a	Water is highly polluted
	b	Water is less polluted
	c	Consumption of organic matter is higher by the microbes
	d	Water is pure
98	Which of the following disease is confirmed by Widal test	
	a	Tuberculosis
	b	Typhoid
	c	Plague
	d	Tetanus
99	Which of the disease is not transmitted by contaminated water	
	a	Typhoid
	b	Diphtheria
	c	Amoebiasis
	d	Hepatitis A
100	Corpus callosum connects	
	a	Two cerebral hemisphere
	b	Two ventricles of brain
	c	Two cerebellar hemisphere
	d	Two optic thalamus