A

17835 120 MINUTES

1.	Whic	ch among the following is not t	aken	into account under the five kingdom classification?							
	A)	Plantae	B)	Animalia							
	C)	Viridae	D)	Monera							
2.		NA bar code analysis for molection molections of the code analysis for molection molecular transfer molecular processing and the code analysis for molecular molecular processing and the code analysis for molecular molecular processing and the code analysis for molecular molecular molecular processing and the code analysis for molecular molecula		taxonomy, the material recommended for							
	A)	18S RNA	B)	16S RNA							
	C)	Mitochondrial DNA	D)	Plasmid DNA							
3.	Gene	es coding for is an examp	le of p	polymorphic DNA in human beings.							
	A)	Histone proteins	B)	Cyclo-oxygenase							
	C)	Gonadial development	D)	Haemoglobin							
4.	Micr	osatellite DNA were first obser	rved:								
	A)	A) When DNA fragments were separated by centrifugation									
	B)										
	C)	When RAPD was carried out									
	D) During DNA sequence analyses										
5.	In disputes concerning homonyms, according to the ICZN rules										
	A)										
	B)	The 'senior' homonym must always be retained									
	C)	The 'senior' homonym can be replaced with the 'junior' homonym if it is scientifically more valid and appropriate.									
	D)			given preference since, being more recent, it							
6.	Clad	Cladistic Taxonomy gives information on which of the following?									
	1.	Ancestral history	2.	Divergence from a common ancestor							
	3.	Convergent evolution	4.	Common traits across different Phyla							
	A)	1, 2, 3 and 4	B)	1 and 2 only							
	C)	1, 2 and 3 only	D)	1, 3 and 4 only							
7.	Whic	ch among the following is cons	idered	d as a direct descendent of dinosaurs?							
	A)	Aves	B)	Mammals							
	C)	Mammoths	D)	Rhinoceros							
8.		=		s (1)while their forelimbs are referred to as (2)							
	A)	(1) Analogous structures	(2)	•							
	B)	(1) Homologous structures	(2)	Analogous structures							
	C)	(1) Paralogous structures	(2)								
	D)	(1) Orthologous structures	(2)	Paralogous structures							

9.	Replication in prokaryotes is known as:										
	A)	D-loop replication	B)) Ф re _l	plication						
	C)	Reverse transcription) Hoog	gsteen replica	ntion					
10.	In immunology, 'CD' stands for										
	A)) Clust	ter of Differe	ntiation					
	C)	Cytological Determina	ant D) Com	plement Dive	ergence					
11.		feeding organ lophophore		-			-				
	1.	Phoronida	2. Bi	rachiopoda	a 3.	Bryo	ozoa				
	A)	1 only B)	3 only	C)	1 and 2 on	nly D)	1, 2 and 3				
12.	Find	the correct match:									
	1.	Placoid scale	p.	Dent	ine						
	2.	Ganoid scale	q.	Cara	ngidae						
	3.	Elasmoid scale	r.	Sturg	geons						
	4.	Scutes	S.	Coe	lacanth						
			t.	Eels							
	A)	1-p; 2-t; 3-q; 4-s	B)		1-p; 2-s; 3-r; 4-t						
	C)	1-t; 2-r; 3-s; 4-q	D) 1-p;	2-r; 3-s; 4-q						
13.	Elect	troreception as a means o	f navigati	on and loc	ating the pos	ition of its	s prey is seen in				
	A)	Elasmobranchs and bats) Teleo	osts						
	C)	Honey bees and bats	D) Elası	mobranchs ar	nd Monot	remes				
14.	Ident	tify the limbless amphibia	an								
	A)	Gongylophis	B)		iyostega						
	C)	Gegeneophis	D) Nasil	kabatrachus						
15.	A tax	A taxonomic clade considers:									
	A)	Monophyletic groups	alone								
	B)	Paraphyletic groups al	one								
	C)	Polyphyletic groups al	one								
	D)	, , , , , , , , , , , , , , , , , , , ,									
16.	Goos	se barnacles come under:									
	A)	Crustacea B)	Mollusca	C)	Aves	D)	Annelida				
17.	Matc	ch the taxonomic arranger	ment:								
	1.	Phylum	r.	Spor	ozoa						
	2.	Class	S.	Proto	ozoa						
	3.	Sub-phylum	t.	Telo	sporea						
	4.	Sub-class	u.	Cocc	cidia						
	5.	Genus	v.	Euco	ccidia/(Haen	nosporidi	da)				
	6.	Order	W	. Plasr	nodium						
	A)	1-s; 2-r; 3-t; 4-v; 5-u; (6-w. B)) 1-s; 2	2-r; 3-v; 4-t; :	5-w; 6-u.					
	C)	1-s; 2-t; 3-r; 4-u; 5-w;			2-u; 3-s; 4-t;						

18.	Which among the following is the pair with the lowest and highest thresholds of hearing in terms of frequency of sound waves?									
		<u> </u>		Elaphants and hats						
	A) C)	Humans and dogs Whales and dolphins	B) D)	Elephants and bats Whales and bats						
19.	With respect to Hemichordates and Annelids, which of the following statement is correct?									
	A)	Pharyngeal gill slits are absent in Hemichordates while they are present in Annelids.								
	B)	Heart is dorsal in Hemichordates while it is ventral in Annelids								
	C)			Hemichordates while they are absent in Annelids.						
	D) Pharyngeal gill slits are absent in both									
20.		Lissachatina fulica is the:								
	A)	Edible snail	B)	Predatory insect of African snail						
	C)	Marine slug	D)	African snail						
21.				combination of pests of agricultural plants?						
	A)	Trichogramma; Spodoptera; Helicoverpa								
	B)	Spodoptera; Callosobronchus; Coccinella								
	C)	Plocaederus; Scirpophaga; Opisina								
	D)	Trichogramma; Oryctes;	Coleomeg	gilia						
22.	The r	nervous system of mammals	s is derive	d from:						
	A)	Endoderm B) Me	esoderm	C) Ectoderm D) Mesogloea						
22										
23.		herited disorder of nucleoti								
	A)	Huntington's disease	B)	Sickle cell anaemia						
	C)	Cri-du-chat syndrome	D)	Lesh-Nyhan syndrome						
24.	Which among the following is used as a fumigant to protect stored grains?									
	A)	DDT	B)	Formaldehyde						
	C)	Ethidium tetroxide	D)	Phosphine						
25.		The commercial name of the hormone used to induce ovulation in fish for aquaculture								
		ices is:	•							
	A)	Nandrolone B) Ov	alute	C) Ovaprim D) Oxytocin						
26.	In composite aquaculture, the selection of fishes is made on the basis of minimising the									
	_	<u>=</u>	compatibi	lity. Which among the following is a suitable						
	-	position?								
	A)	Etroplus, Channa, Mugil	B)	Mugil, Anabas, Carp						
	C)	Catla, Rohu, Mrigal	D)	Clarias, Etroplus, Tilapia						
27.	The r	odents that commit mass su	icide by d	lrowning						
	A)	Capybara	B)	Chinese hamsters						
	C)	Lemmings	D)	Sewer rats						
28.	The 1	most important of all bio-ge	ochemical	cycles among the following is						
	A)	Nitrogen cycle	B)	Carbon cycle						
	C)	Water cycle	D)	Phosphorus cycle						

29.	An an A)	Gramicidin B)	Penic		Cias se	Streptomycin		Mannose			
30.	According to the Neutral Theory of Evolution, "the random nature of mutational processes will in time change a protein in such ways that do not significantly affect its function". The interpretations that can be made from this hypothesis is/ are that:										
	1. 2.	Genetic mutations in coding sequences are always evident in the expressed products. Unless mutations affect the functional domains and motifs of proteins its impact on									
	3.	the evolutionary process is insignificant. Neutral mutations do not affect an organism's ability to survive									
		Statements 1 2 and 2 and 4 mass									
	A)	Statements 1, 2 and 3 are true									
	B)	Statements 1 and 2 only are true									
	C)	Statements 2 and 3 only are true Statements 1 and 3 only are true									
	D)	Statements 1 and 3	only are	true							
31.	In cultural evolution theory, an idea, behaviour or style that spreads from person to person is known as:										
	A)	Replicator		B)	Habit	Ī					
	C)	Fixed action patter	n	D)	Mem	e					
22	Eind t	ha combination which	sh is not f	Carronnoh	da ta E	Iardy Wainhara	oguilib:				
32.	1.	he combination which Small population	ii is not i	2.		ed population	equino	i iuiii.			
	3.	Random mating		2. 4.		tion pressure					
	٥.	Kandom mating		4.	Sciec	tion pressure					
	A)	2 and 3 only B)	1 and	4 only	C)	3 and 4 only	D)	1 and 3 only			
33.	Choose possible outcomes of bottle-neck effect from the following:										
	1.	Loss of favourable	mutation	ıS	2.	2. Fixation of deleterious mutations					
	3.	Random distribution	on of gene	es	4. Heterosis						
	A)	1 and 3 only B)	1 and	2 only	C)	3 and 4 only	D)	2 and 4 only			
34.	Terrestrial Hermit Crabs come under the family:										
	A)	Diogenidae		B)	Coen	obitidae					
	C)	Paguridae		D)	Arter	niidae					
35.	Bioma	agnification of DDT	occurs be	ecause o	f its pr	opensity to:					
	A)	Be soluble in lipids			F-	- F					
	B)	Form complexes w									
	C)	Form complexes with protein									
	D)	Form complexes w	ith carbo	hydrates	S						
36.	Media	cal laboratory kits tha	at test for	pregnar	ncy loo	k for:					
	A)	Progesterone	101	B)	Oesti						
	C)	Chorionic gonadot	ropin	D)	Oxyt	-					
		_	-		-						

37.	Assertion: The pyramid of energy can never be inverted. Reason 1: Much of the biomass in any trophic level dies off without being eaten Reason 2: Primary producers cannot be exhausted Reason 3: Rate of conversion of biomass into the next trophic level is very small											
	A)	The assertion is false										
	B)	The assertion is true and reason 1 sustains the assertion										
	C)	The assertion is true and reason 2 sustains the assertion										
	D)	The assertion is true and rea	son 3 s	sustains the assertion								
38.	Whic	Which among the following is commensalism?										
	A)	Tree frog and trees	B)	Domestication of cattle								
	C)	Probionts in the human gut	D)	Microfilaria in humans								
39.	Ident	Identify the correct objective(s) of the Kyoto Protocol										
	1.	Fight global warming by reducing greenhouse gas concentrations										
	2.	It puts the obligation to reduce current emissions on developed countries on the basis										
		that they are historically responsible for the current levels of greenhouse gases										
	3.	Regulate international trade in endangered species of Wild Life										
	4.	Assignment of liabilities for	damag	ges caused in case of nuclear accidents								
	A)	1 and 2 only	B)	1, 2 and 3 only								
	C)	1, 2, 3 and 4	D)	3 and 4 only								
40.		Which among the following is not situated in Kerala?										
	A)	Pushpagiri Wildlife Sanctua	ry									
	B)	Aralam Wildlife Sanctuary										
	C)	Chinnar Wildlife Sanctuary										
	D)	Shendurney Wildlife Sanctu	ary									
41.		Navigation by migrating salmon is oriented on the basis of:										
	A)	The position of the sun										
	B)	The relative position of the s										
	C)	The relative position of the s		•								
	D)	Magnetoception and sense o	of smell									
42.		animal credited with the longes	_									
	A)	Eel	B)	Salmon								
	C)	Arctic Tern	D)	Leatherback turtles								
43.	The 1	El Nino:										
	A)	Is a warm current that flows Ecuador	eastwa	ard from the Tropics to the coasts of Peru and								
	B)	Is a warm current that flows	westw	ard from the Tropics to the coasts of India and Sri								
	C)	Lanka Is a warm current that flows northward from the Tropics to the cold coasts of North										
		Δmerica	•									

D)

Ecuador

Is a cold current that flows southward from the Arctic to the warm coasts of Peru and

44.	A)	major component of the food Squids	B)	Euphausia superba							
	C)	Artemia sp	D)	Clupeids							
45.	Ospł	nradium is a sensory organ of:									
	A)	Crustaceans	B)	Insects							
	C)	Molluscs	D)	Annelids							
46.	Whic	Which statement(s) is/are correct for topoisomerases?									
	1.	They create double strand breaks in DNA									
	2.	They are capable of repairing double strand breaks in DNA									
	3.	They are involved in chromosomal cross-over during meiosis									
	4.	They are involved in repair	ring DN	A-helix distorting damage caused by UV light							
	A)	1, 2 and 3 only	B)	1, 2 and 4 only							
	C)	2 and 4 only	D)	1 and 2 only							
47.	Whic	Which of the following are the factor(s) that influence(s) motivation?									
	1.	Satiation	2.	Biological Drives							
	3.	Operant conditioning	4.	Classical conditioning							
	A)	1 and 2 only	B)	2 only							
	C)	1, 2, 3 and 4	D)	3 and 4 only							
48.		The identical bold colouration patterns exhibited by members of the poisonous Heliconiinae butterflies is an example of									
	A)	Mullerian mimicry	B)	Batesian mimicry							
	C)	Auto mimicry	D)	Camouflaging							
49.	The]	The primary requirement for ethological imprinting in birds is									
	A)	The eggs should be incubated artificially									
	B)										
	C)	The arbitrary stimulus/ object should resemble the mother									
	D)	D) It requires habituation									
50.	Ident	tify the incorrect combination									
	A)	Hemichordata - Balanoglos		Fornaria							
	B)	Mollusca - Mytilus – Bipin									
	C)	Crustacea - Penaeus – Nauplius									
	D)	Trematoda – Fasciola - Min	racidium	1							
51.		function of the follicular dend	ritic cell	s in the lymph nodes is to:							
	A)	Support memory B-cells	. –								
	B)	Coordinate the maturation									
	C)	Coordinate the maturation									
	D)	D) Deletion of de-activated B and T cells									

52.	Which	among the following function	ns as an	opsonin?					
	A)	Antibodies	B)	Macrophages					
	C)	B-lymphocytes	D)	T-lymphocytes					
53.	A component of the blood vascular system wherein it starts in capillaries and ends in capillaries is:								
	A)	Portal system	B)	Lymphatic system					
	C)	Sinuses and sinusoids	D)	Spleen					
54.	The pe	eristaltic movement of the alim	nentary	canal in man is controlled by					
	A)	Gastrin	B)	Secretin					
	C)	Meissner's plexus	Ď)	Leptin					
55.	Identify the correct assortment of hormones secreted by the kidneys								
	A) Rennin, calcitonin, erythropoietin								
	B)	Angiotensin, erythropoietin,	calcitrio	ol					
	C)	Calcitonin, thrombopoietin, r							
	D) Calcitriol, erythropoietin, thrombopoietin								
56.	Consider the following statements:								
	1. The concentration of chloride ions in the venous blood is lower than in the arteries, which is compensated by the presence of bicarbonate ions.								
	2. Mutations of the anion exchanger protein 'Band 3' leads to acidosis of blood								
	The physiological process that is relevant to the above statements is:								
	A)	Haldane effect	B)	Hamburger phenomenon					
	C)	Bohr effect	D)	Counter current system					
57.	The natural anticoagulant that regulates blood coagulation is:								
	A)	Thromboxane A2	B)	Factor VIII					
	C)	Protein C	D)	Calcium					
58.	Abnor	mal lowering of the human he	art rate						
	A)	Tachycardia	B)	Infarction					
	C)	Bradycardia	D)	Arrhythmia					
59.		by the correct match:							
	A)	Flame cells – loop of Henle'							
	B)	Nephrons – arachnids							
	C)	Metanephridia – organ of Bo							
	D)	Malpighian tubules – protone	ephridia						
60.		among the following is/ are v	ital stai						
	1.	Trypan blue	2.	Propidium iodide					
	3.	Gram's stain	4.	Janus green					
	A)	1, 2, 3 and 4	B)	3 only					
	C)	1 and 4 only	D)	1, 2 and 4 only					

61.	The biochemical that inhibits transmission of impulses in spinal neurons is:									
01.	A)	Acetylcholine	B)	Glycine						
	C)	Nicotine	D)	MSG						
62.		major component in activated s	_							
	A)	Diatomaceous earth	B)	Saprotrophic bacteria						
	C)	Activated charcoal	D)	Chemical oxidants						
63.		oldest surviving lepidosaurian	-							
	A)	Iguana	B)	Sphenodon						
	C)	Chameleon	D)	Turtles						
64.	The sharp vision of birds of prey is attributed to the presence of:									
	A)	Nictitating membrane	B)	Tapetum						
	C)	Pecten	D)	Vision in the UV range						
65.	Expression levels of a large number of genes can be simultaneously studied by:									
	A) Polyacrylamide gel electrophoresis									
	B) Microarray analysis									
	C)	DNA fingerprinting								
	D)	Confocal microscopy								
66.	The immune related rejection of the human foetus does not occur because									
	A)	,								
	B)	The placenta does not have any antigenic proteins								
	C)	MHC antigens are not expressed in the cells of the placenta								
	D)	The placenta does not come	in close	e contact with the uterine tissue						
67.	Cytoplasmic control of nuclear activity is most evident in:									
	A)	Embryonic stem cells	B)	Adult stem cells						
	C)	Undividing somatic cells	D)	Prokaryotes						
68.	In hymenoptera, female offspring produced by thelytoky occurs by:									
	A)									
	B)	Fusion of proto-eggs from d	ifferent	meiotic sets						
	C)	Development of unfertilised	eggs							
	D)	Development of fertilised eg	ggs							
69.	An e	xample for a passive vaccine is	: :							
	A)	Tetanus toxoid vaccine	B)	Anti-tetanus toxoid vaccine						
	C)	MMR vaccine	D)	Hepatitis B vaccine						
70.	Whic	ch among the following is not a	ı functio	on of the corpus luteum?						
	A)	Secretion of the progesteron								
	B)	Secretion of oxytocin								
	C)	Secretion of menstrual horm	iones							
	D)	Secretion of inhibin								

71.	The feathers seen around the beaks and wyes of birds are known as:									
/1.	A)	Down feathers		B)	Contour feath	ers				
	C)	Barbicels		D)	Rictals					
72.	Communicable diseases of viral origin seen in areas where unsafe drinking water and bad sanitation prevail are A) AIDS, Plague and Hepatitis A									
	B) Malaria, Cancer and Dengue FeverC) Hepatitis A, Dengue Fever and Chikungunya									
	C) D)	Hepatitis A, Deng Hepatitis A, Hepa	_		<i>U</i> ,					
73.	The acrosome of the sperm originates from:									
	A)	Endoplasmic reti		B)	Polar bodies					
	C)	Golgi complex		D)	Sertoli cells					
74.	_	l-filtration chromato nn to get a good res	~ .	-		sample that	can be loaded in	nto the		
	A)	Width of the colu	ımn	B)	Length of the	column				
	C)	Pore size of the g	gel	D)	Rate of flow					
75.	The o	dye used for visualis	sing DNA i	in agaro	se gels is:					
	A)	Aceto-orcine		B)	Aceto-carmine	e				
	C)	Ethidium bromid	e	D)	Coommassie l	Brilliant Blue				
76.	State State	Consider the following statements with respect to EEG and MRI Statement 1: EEG does not use ionising radiations while MRI uses ionising radiations Statement 2: EEG reads the electrical activity of the neuronal cells while MRI depends on high energy radio-frequency emitted by hydrogen atoms from the tissue Select the correct option from below:								
	A) Both statements are correct and they supplement each other.									
	B)	Statement 1 is co			_					
	C)	C) Statement 1 is wrong since both EEG and MRI do not use ionising radiations while statement 2 is correct.								
	D)	Both statements a	are wrong s	since bo	th EEG and MR	I uses ionisin	g radiation			
77.		shift in wavelength	•	he phas						
	A)	λ Β)	$\lambda/2$		C) $\lambda/3$	D)	$\lambda/4$			
78.	In a s A)	spectrophotometer, to Keeping the dista	-	_	-	-	•			
	B)	Keeping the dista			-					
	,				-		onstant			
	C) D)	Using cuvettes of Maintaining the				-				
79.	Inaı	medium containing	both glucos	se and 1	actose, the grow	th curve of F	E.coli will be:			
•	A)	Retarded	5 610-01	B)	Monophasic					
	C)	Biphasic		D)	Exponential of	nly				
	,	1		,	1	•				

80.	A disease caused by chromosomal jumping translocations in humans:										
	A)	Hodgkins lymphoma	B)	Chronic myelogenous leukemia							
	C)	Giant cell carcinoma	D)	Cervical cancer							
81.	The	cAMP cascade that leads to g	lycogen	olysis is triggered by:							
	A)	Insulin	B)	Glucagon							
	C)	Ribulose-bis-phosphate	D)	Phosphoenolpyruvate							
82.	The sting gland of the wasp is a modified										
	A)	Sternal plates	B)	Ovipositor							
	C)	Tergum	D)	Mandibles							
83.	The	fate of the last 3-carbon fragm	nents of	odd chain fatty acids undergoing beta oxidation is							
	A)	Entry into the Kreb's cycle	as acet	yl-CoA							
	B)	Entry into Kreb's cycle as	propion	yl-CoA							
	C)	Conversion to 6-carbon glu	icose by	dimerisation							
	D)	Entry into Kreb's cycle as	succinyl	-CoA							
84.	Exce	ess amino acids absorbed from	the die	t is:							
	A)	Stored in the liver	B)	Stored in the muscles							
	C)	Deaminated by the liver	D)	Converted to urea by the kidneys							
85.	The resolving power of a compound microscope is limited by the wavelength of light and:										
	A)	Magnifying power of the eye piece									
	B)	Magnifying power of the objective									
	C)	Numerical aperture									
	D)	Focal length of the objective	ve								
86.	The	The extend of the error bar in a graphical representation of data indicates									
	A)										
	B)	The size of the population									
	C)	The extent of variation within the raw data									
	D)	The degree of correlation b	etween	the two variables							
87.	The	The graph you would expect when the co-relation constant between two variables is 1, is:									
	A)	A straight line parallel to the	ne X axi	S							
	B)	A straight line parallel to the									
	C)	A straight line at 45° to the X axis starting from the origin									
	D)	A sigmoidal graph starting	from the	e origin							
88.	The	Chi-square test is used to anal	yse								
	A)	Relationships between two	-								
	B)	Relationship between two	independ	dent variables							
	C)	Differences between obser	ved and	expected values							
	D)										

is

89.	Trison	ny of chromosome 2	1 in humans c	causes							
	A)	Patau syndrome	B)	Down	n syndrome						
	C)	Jacobsen syndrome	e D)	Edwa	rd syndrome						
90.	With respect to the Genic balance theory, which of the following statements are true in Drosophila?										
	1.	Sex of the offspring is determined by a ratio of the number of X chromosomes to that of the number of sets of autosomes									
	2.										
	3. The Y chromosome does not have any role in sex determination										
	A) C)	1, 2 and 3 are true 1 alone is true	B) D)		3 only are true 3 only are true						
91.	An exa A) B) C) D)	Artificial inseminate Embryonic stem ce Intra-cytoplasmic g	tion ll cloning	·							
92.		ormone acts on all cesis and plays a majo Adrenalin B)		nating ani			nte, affects prot Glucagon	ein			
93.	The F(A)	O-F1 component of A Electrons B)	ATP synthase Protons	- a molecu C)	lar motor - is o	lriven by D)	v: NADP				
94.	With respect to the transport of glucose across cell membranes which of the following is/ are true:										
	1. 2.	 GLUT 1 is involved in the transport across erythrocyte membrane GLUT 2 is involved in the transport across membranes of intestinal cells and liver 									
	3.	cells. GLUT 3 is involved in the transport across neuronal membrane while GLUT 4 is involved in the transport across striated muscle membrane									
	A)	1 alone is true	B)	2 aloi	ne is true						
	C)	1, 2 and 3 are true	D)		3 only are true	e					
95.		ajor component of the	-	•		D)	Tuloulia				
	A)	Dynein B)	Kinesin	C)	Calcium	D)	Tubulin				
96.		in-Barré syndrome i			arising out of						
	A)	Mutations in mitoc		A							
	B)	Sex-linked inherita									
	C)	Auto-immune react									
	ע)	D) Chromosomal aberrations									

97.	Which among the following are true with respect to the fluid-mosaic model of the cell membrane?									
	1.	The constituents of the membrane are in constant motion but are limited by the								
		cytoskeleton and the extracellular matrix								
	2. The proteins embedded in the phospholipid layer appear and disappear according to									
	the functional state of the cell									
	3. The model demonstrates that integrity of the membrane is not influenced by Van der Waals forces and hydrophobic interactions									
	A)	Statements 1, and 3 only are true								
	B)	Statements 1, 2 and 3 are true								
	C)	Statements 1 and 2 only are true								
	D)	Statement 1 alone is true								
98.	The multiple pass channels in the plasma membranes are formed by:									
		A) Type I trans-membrane proteins.								
	B) C)	Type II trans-membrane proteins. Type III trans-membrane proteins.								
	D)	Type IV trans-membrane proteins.								
99.	Dopamine, the neurotransmitter signal released by nerve cells is a derivative of:									
	A)	Glutamine B) Tyrosine C) Histidine D) Glycine								
100.	The r	metallic component of the prosthetic group of DNA polymerase is:								
	A)	Manganese B) Copper C) Magnesium D) Iron								
101.	Bence-Jones proteins occur in the urine of patients with:									
	A)	Kwashiorkor B) Phenylketonuria								
	C)	Multiple myeloma D) Alkaptonuria								
102.		The underlying cause of the heritable disorder osteogenesis imperfecta (brittle bone disease)								
		e to the changes in:								
	A)	Oestrogen levels Collagen structure								
	B) C)	Dietary levels of Vitamin C								
	D)	Calcium metabolism								
103.	The n	mechanical properties of silk which is one among the stronger natural fibres is dependent or	n:							
	A)	Presence of keratin B) Presence of beta sheets								
	C)	Absence of beta sheets D) Alternation of beta sheets with alpha sheets								
104.	Whic	ch among the following respiratory pigments do not contain a haem group?								
	1.	Leghaemoglobin 2. Haemerythrin								
	3.	Chlorocruorin 4. Haemocyanin								
	A)	1 and 3 only B) 1, 2 and 4 only								
	C)	2 and 4 only D) 3 and 4 only								

105.	Which among the following is not involved in regulating carbohydrate metabolism in humans?									
	A)	Glucagon	B)	Calcitonin	C)	Somatostatin	D)	Cortisol		
106.	Which A)	among the fol Cholesterol	lowing i B)	s a precursor Tyrosine	for ster C)	oid hormones? Glycerol	D)	Glutamine		
107.	Assert Reason Reason	Consider the following statements: Assertion: Consumption of methanol results in blindness and death Reason 1: Methanol affects nerve function by inhibiting acetylcholine esterase resulting in blindness and death Reason 2: Methanol is converted to formaldehyde and formates by the liver which causes blindness and death Reason 3: Methanol is converted to hydrogen cyanide by the Hydrochloric acid in the stomach which causes blindness and death								
100	B) C) D)	The assertion and reason 1 are true and the reason explains the assertion The assertion and reason 2 are true and the reason explains the assertion The assertion and reason 3 are true and the reason explains the assertion The assertion is true but none of the reasons explains the assertion								
108.	then di	which of the following conditions the bacterial growth curve becomes a plateau and en dips?								
	1.	Nutrients are	exhauste	ed 2.	Wast	e products becor	ne inhil	bitors.		
	3.	pH becomes a	cidic.	4.	It rea	ches Hayflick lii	mit.			
	A) C)	1, 2, 3 and 4 a 1 and 2 only a		B) D)		and 3 only are tr	ue			
109.	The man (A) (C)	ost conserved p Haemoglobin Histone	orotein a	mong the fol B) D)	Cyto	as revealed by pl chrome c nogen	hylogen	netic analyses is:		
110.	The coexpres A) B)	sion is Sample → pro DNA probe →	otein → scanni	Reverse tran	scription ification	microarray exper n → cDNA → la n. n → cDNA → la	belling	→ coupling to		

Sample \rightarrow DNA \rightarrow PCR \rightarrow coupling to DNA probe \rightarrow washing \rightarrow scanning and

Sample \rightarrow mRNA \rightarrow cDNA \rightarrow rDNA \rightarrow plasmid clone \rightarrow labelling \rightarrow coupling to

DNA probe \rightarrow washing \rightarrow scanning and quantification.

protein probe \rightarrow washing \rightarrow scanning and quantification.

C)

D)

quantification.

111.	With respect to BLAST, which of the following are true?									
	1. The BLAST algorithm is heuristic									
	2. 3.									
	<i>3</i> . 4.									
	4. It aligns sequences only from secondary databases									
	A)	1, 2 and 4 only	B)	1 and 3 only						
	C)	1 and 2 only	D)	2 and 4 only						
112.	Computing the structure of a protein from a given amino acid sequence depends on:									
	A) 1									
	B)	• • •								
	C)	R group and bond angles of each amino acid in the protein								
	D)									
113.	A database which contains data that have been checked and vouched for accuracy is known as:									
	A)	Secondary database	B)	Curated database						
	C)	Primary database	D)	Purged database						
114.	Segue	encing of proteins reveal that:								
117.	A)	0 1	e is seer	in proteins						
	B)	L-form of amino acids alone is seen in proteins. Both L and D-form of amino acids are seen in proteins.								
	C)			<u>-</u>						
	D)	D-form of amino acids alone is seen in amino acids. Structure of a protein is stable only when it contains D-form of amino acids.								
	D)	Structure of a protein is state	one omy	when it contains D form of animo delas.						
115.		Zwitter ions are molecules that bear:								
	A)	No charged groups.								
	B)	Negatively charged polarities on opposite ends.								
	C)	Charged groups of opposite polarity.								
	D)	Charged groups of similar polarity.								
116.	This protein which loses its function when it associates with its substrate is known as a									
		dal enzyme'. Which is it?								
	A)	Cytochrome oxidase	B)	Beta-galactosidase						
	C)	DNA methyl transferase	D)	Lipoxygenase						
117.	Which among the following will enable you to visualise a proteinaceous ligand binding to its									
	cell surface receptor?									
	A)	ELISA	B)	Polarised light microscopy						
	C)	Immunohistochemistry	D)	Confocal microscopy with DAPI stain						
118.	The first and definitive proof that DNA is the genetic material was given by									
	A) Gregor Johann Mendel B) Avery, McLeod and McCarty									
	C)	Watson and Crick	D)	Hershey and Chase						

119.	The genetic disease caused by insufficiency of the enzyme hexosaminidase in							
	A)	Cri-du-chat syndrome Tay-Sachs disease						
	B)							
	C)	Severe combined immunodeficiency syndrome						
	D)	Xeroderma pigmentosun	n					
120.	The end product of glucose metabolism in an oxygen starved muscle is							
	A)	Creatine phosphate	B)	CO_2				
	C)	Lactic acid	D)	Bicarbonate ions				