Total No. of Printed Pages: 13 (DO NOT OPEN THIS QUESTION ET BEFORE TIME OR UNTIL YOU ARE ASKED TO DO SO)

CPG-EE-20	19 (Life Science	(SEI-	- Y)
A		Sr. No.	10357
Time : 1½ Hours	Total Questions: 100		Max. Marks : 100
Roll No. (in figures)	(in words)		
Candidate's Name	***************************************	- Date of Birth-	
Father's Name ——————	Mother's Nam	e	
Date of Exam :	Marine you are not the control of th		
			un di
(Signature of the Candidate)		(Signature o	f the Invigilator)

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CPG-EE-2019(Life Sciences)-(SET-Y)/(A)

1.	Marker enzyme of Golgi apparatus is:	
	(1) Acetyl-coA synthetase	(2) Pyruvate kinase
	(3) Galactosyl transferase	(4) Cytochrome oxidase
2.	In the cAMP pathway, the G-protein stir	nulates:
	(1) Phospholipase C	(2) Adenylate
	(3) The Endoplasmic reticulum	(4) Calmodulin
3.	Each ribosome consists of two unequal	subunits of composition:
	(1) RNA and Protein	(2) RNA and carbohydrates
	(3) Only RNA	(4) Proteins and DNA
4.	Which of the following is a cell adhesio	n molecule?
	(1) Integrin (2) Lysine	(3) Myosin (4) Keratin
5.	Proto-oncogenes are:	
	(1) Oncogens found in transforming ret	roviruses
	(2) Oncogenes present in protozoa	
	(3) Genes encoding oncogenes related	proteins in extinct organisms
	(4) Cellular genes encoding proteins re	lated to viral oncogenes
6.	Plane of formation of cell plate in plant	cell is governed by:
	(1) Phragmoplast (2) Microtubules	(3) Nucleus (4) Centriole
7.	Which of the following is an example of	f chemolithoautotroph?
	(1) Sulphur-oxidising bacteria	(2) Hydrogen bacteria
	(3) Nitrifying bacteria	(4) All of these
8.	Mycoplasma are not inhibited by penic	Illin because they:
a	(1) produce penicillinase	(2) are gram-positive
	(3) are gram-negative	(4) do not have a cell wall
9.	The protoplast of the cork cells, in the	oot, secretes a fat like substance, called:
	(1) Lignin (2) Cutin	(3) Suberin (4) Cellulose
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10.	Which of the follow (1) Nostoc	ving algae belongs to (2) Polysiphonia	the tubular series? (3) Vaucheria	(4) Pandorina
11.	The bracketed key arranged:	for determine subcl	lass, is based on the	e principle where leads are
	(1) Parallely	(2) Diagonally	(3) Horizontally	(4) Vertically
12.	Which of the follow	ving best describes a	fern gametophyte?	
	(1) It cells are hapl	oid	(2) It lacks chlorop	phyll
	(3) It is tough and	woody	(4) It is larger than	n sporophyte
13.	Periderm includes :			*
•	(1) Phelloderm, co	llenchyma and cortex	x	,
	(2) Phellem, camb	ium and cortex		
	(3) All the tissues	between epidermis an	nd pith	
	(4) Phellogen, phe	llem and phelloderm		
14.	Apospory is the dev	velopment of an offs	pring from the:	
	(1) Cell of nucleus		(2) Synergids or a	ntipodals
	(3) Haploid female	gamete	(4) Haploid micro	spore
15.	Which ion plays an	important role in po	llen tube growth?	#
	(1) Calcium	(2) Chlorine	(3) Magnesium	(4) Sulphate
16.	Which of the follow	ving orders, consists	entirely of fossil rep	resentatives?
	(1) Lepidodendrale	es	(2) Selaginellales	
	(3) Lycopodiales		(4) Isoetales	× :
17.	Which plant is know	wn as 'maiden hair tr	ree' ?	
	(1) Pinus	(2) Cycas	(3) Gnetum	(4) Ginkgo
18.	Correlation amongs	st individuals with re	egard to their evoluti	onary history is called:
	(1) Phenetic relation	onship	(2) Cladistic relati	ionship
	(3) Chronistic relation	tionship	(4) Phylogentic re	lationship
19.	Members of which	group are not deute	rostomes:	
	(1) Chordates		(2) Echinoderms	ρ.3.
	(3) Arthropods		(4) None of these,	all are deuterostomes
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20.	Vertebrates and tunicates share: (1) Jaws adopted for feeding (2) High degree of cephalization (3) Formation of structures from the neu (4) A notochord and a dorsal hollow ner		
21.	Dorsal fins are absent in: (1) Myxine (2) Petromyzon	(3) Lampetra	(4) Ichthyomyzon
22.	The longest part of the frog alimentary ca (1) Oesophagous (2) Small intestine		(4) Rectum
23.	Down feathers of Columba are also called	las:	
	(1) Remiges (2) Plumules	(3) Pennae	(4) Pin feathers
24.	Night blindness in rabbit is associated wi	th:	
	(1) Very high level of rhodopsin	(2) Low level of rh	odopsin
	(3) High level of vitamin A	(4) None of the abo	ove
25.	In which of the following skull is heavier	r than the rest of the	animal body?
_0.	(1) Dogfish (2) Pigeon	(3) Frog	(4) Rabbit
26.	Following statement about Cyclostomata (1) Lack of paired appendages (3) No stomach in digestive system	is false: (2) Jaws are absent (4) None of the ab	
27.	In Guinea pig, black coat colour is a don female is test crossed producing si heterogeneous black would do this by ch	x black offspring.	The probability that a
	(1) 50%		
	(2) 25%		
	(3) 1%		
	(4) Cannot be determined from the infor	rmation	
28.	The kind of polyploidy usually arising ploidy level is known as:	g by crossing between	een organisms of different
	(1) Autoploid	(2) Primary polyp	loid
	(3) Secondary polyploid	(4) Pentaploid	
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29.	Albinism is a recessive human trait. If a is the probability that their next child wi	a normal couple produces an albino child, what ill be albino?			
	(1) 1/4 (2) 1/8	(3) 1/16 (4) 1/64			
30.	If four chromosomes synapse into a prophase, the organism is heterozygous	cross-shaped configuration of configurat	luring meiotic		
	(1) Pericentric inversion	(2) Deletion			
	(3) Translocation	(4) Paracentric inversion			
31.	If the garden pea has 14 chromosomes trisomics could theoretically exist:	in its diploid complement, how	v many double		
	(1) 6 (2) 9	(3) 16 (4) 21			
32.	In prokaryotes, the lagging primers are r	emoved by :			
	(1) 3' to 5' exonuclease	(2) DNA ligase			
	(3) DNA polymerase I	(4) DNA polymerase III			
33.	Satellite DNA consists of:				
	(1) Extrachromosomal DNA	(2) Short repetitive nucleotide	sequences		
	(3) Ribosomal RNA gene	(4) Single gene regions			
34.	 Human genomic DNA is digested into fragments approx. 1 kb in size, denatured an then renatured. Which of the following statements is <i>true</i>? All fragments will renature at the same rate. Fragments composed largely of repetitive DNA sequence will renature fastest. Fragments composed largely of non-repetitive DNA sequence will renature fastest. Fragments with high A: T content will renature fastest. 				
35.	Which of the following enzymes does not (1) RNA dependent DNA polymerase (2) DNA dependent DNA polymerase (3) DNA dependent RNA polymerase (4) Taq. DNA polymerase	ot require a primer?			
36.	A method to detect whether two mutatingenes is:	ons are located on the same ge	ne or different		
	(1) Generalized transduction	(2) Complementation analysis			
	(3) hfr mapping	(4) Karyotyping			
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37.	Vessels and companion cells are the characteristic features of:				
	(1) Gymnosperms	(2) Angiosperms			
	(3) Pteridophytes	(4) Fungi			
38.	Ecological equivalent describes:				
	(1) Group of species with comparable ro	oles.			
	(2) Species that occupy the same niche i	n different geographical regions.			
	(3) Diversity of habitats.				
	(4) Social behaviour that enhances the f	tness of other individuals in the population.			
39.	The biomass of one trophic level getting trophic level is the:	ng incorporating into the biomass of the next			
	(1) Relative ratio of energy flow	(2) Energy flow efficiency			
	(3) Ecological efficiency	(4) Ecological gradient			
40.	The objective of signing the 'Montreal p	cotocol' was :			
	(1) Protection of wild life	(2) Protection of ozone layer			
	(3) Control over the use of pesticides	(4) Control of noise pollution			
41.	Wings of insects and the wings of bats re	epresent a case of:			
	(1) Divergent evolution	(2) Convergent evolution			
	(3) Parallel evolution	(4) Neutral evolution			
42.	Which prehistoric human had almost san	ne cranial capacity as that of modern man?			
	(1) Neanderthal man	(2) Peking man			
	(3) Java ape man	(4) Australopithecus man			
43.	Which of the following organs have no	evolutionary significance ?			
	(1) Analogous organs	(2) Atavistic organs			
	(3) Non-functional organs	(4) Functional organs			
44.	ground state to excited state. This activa				
	(1) Excited singlet state	(2) Excited triplet state			
	(3) Phosphorescence	(4) Flurorescence			
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45.	Rhizobium fixes atmospheric nitrogen to	o ammonia in the presence of pigment called:
	(1) Xanthophyll (2) Leghemoglobir	n (3) Hemoglobin (4) Phycobilin
46.	Which of the following are referred to as	s diageotropic ?
	(1) Secondary roots	(2) Stems
	(3) Leaves	(4) Rhizomes
47.	The mechanism of ATP formation in ch	loroplast is explained by:
	(1) Relay Pump theory of Godlewski	(2) Cholodny Went's model
	(3) Chemiosmotic theory	(4) Munch's pressure/mass flow model
48.	Root pressure is a/an:	
	(1) Non-osmotic phenomenon	(2) Osmotic phenomenon
	(3) Positive hydrostatic pressure	(4) More than one statement is true
49.	Most of the water taken up by the plant is	is:
	(1) Split during photosynthesis as a sour	rce of electorns and hydrogen.
	(2) Lost by transpiration through stomat	ta.
	(3) Absorbed by cells during their elong	gation.
	(4) Incorporated directly into organic m	aterial.
50.	Carnivorous adaptation of plants mainly content of:	y compensate for soil that has a relatively low
	(1) Potassium (2) Nitrogen	(3) Phosphate (4) Calcium
51.	The accumulation of one of the following	g causes seed dormancy:
	(1) Cytokinin (2) Auxin	(3) Abscisic acid (4) Gibberllins
52.	In photomorphogenesis following pigme	ent plays a key role :
	(1) Chlorophyll (2) Phytochrome	(3) Cytochrome (4) Anthocyanin
53.	Which of the following properties of wait in the capillary spaces of plants?	ater is most directly related to its ability to rise
	(1) Neutral pH	(2) High density
*	(3) Low compressibility	(4) High surface tension
CPG-F	EE-2019/(Life Sciences)-(SET-Y)/(A)	

5	4.	When a electric current is passed through the water containing amoeba?						
		(1) Amoeba moves faster						
		(2) Amoeba ceases						
			along flowing water					
		(4) Amoeba stop m	oving & become glo	bula	r by withdrawl o	f pse	eudopodia	
5	5.	Self conjugation in	paramecium is called	1:				
		(1) Endomixis	(2) Autogamy	(3)	Cytogamy	(4)	Rejuvenation	•
5	6.	Coral island with sh	allow central lake is	:				
No.		(1) Coral reef	(2) Lagoon	(3)	Atoll	(4)	Corallite	
5	7.	Respiratory pigmen	t in Nereis is:			٠.	7	
		(1) Haemoglobin	(2) Haemocyanin	(3)	Erythrocyanin	(4)	Cyanin	
5	8.	Cleavage in Balano	alossus is :				<u>.</u>	
		(1) Holoblastic	(2) Meroblastic	(3)	Teloblastic	(4)	Spiral	
						` '	,	
5	9.	(1) 70	eight of an amino acid		i typical globular 150		90	
	0.			` /	150	(+)	70	
C	ο.		on of protein involved					
			change in the proteige of the peptide bor					
			ication of certain am		ncids			
		(4) Increase in its is						×
6	1.		· · ·	- J :	41 1-1 1			
		(1) Inside the RBC	ty acids are transport					
		(3) Combined with			As lipoproteins Bound to album	in		
_							700 .	
б	2.		e peroxidase catalyse					
		(1) Zn	(2) Fe	(3)		, ,	Мо	
6	3.		ing processes does n	ot ir	volve cytochron	ne C	in plants?	
		(1) Oxidative phos	phorylation	(2)	Electron Transp	ort		
		(3) TCA cycle		(4)	Apoptosis			
CP	G-F	EE-2019/(Life Scien	ces)-(SET-Y)/(A)					P. T. O.

- **64.** Organic constituents of protoplasm are:
 - (1) Carbohydrates & Proteins
- (2) Nucleotids & lipids
- (3) Hormones & Vitamins
- (4) All of the above
- **65.** Which characteristic is undesirable in cloning vectors?
 - (1) Self replicating
 - (2) High copy number
 - (3) Vulnerable at several sites to a restriction enzyme
 - (4) Small in size
- **66.** A reporter gene is used to:
 - (1) Identify regulatory sequences from the upstream regions of other genes
 - (2) Determine if a protein binds to a given sequence element
 - (3) Determine if a gene contains introns
 - (4) Determine the stability of a protein
- 67. Genomic library is:
 - (1) Collection of recombinant molecules with inserts that contain all of the genes of an organism.
 - (2) Collection of recombinant molecules with inserts that contain all of an organism's genome.
 - (3) Collection of recombinant molecules that express all of the genes of the organism.
 - (4) Collection of recombinant molecules that have been sequenced.
- 68. RFLP analysis is a technique that:
 - (1) Uses hybridization to detect specific DNA restriction fragments in genomic DNA.
 - (2) Used to determine whether a gene is transcribed in specific cells.
 - (3) Measure the transfer frequency of genes during conjugation.
 - (4) Used to detect genetic variation at the protein level.
- 69. Simple tandem repeat polymorphisms in humans are most useful for :
 - (1) Solving criminal and paternity cases.
 - (2) Reconstructing the relationships of humans & chimps.
 - (3) Estimating relationships of humans & Neanderthals.
 - (4) Transferring disease resistance factors into bone marrow cells.

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- **70.** Transgenic plants are easier to produce than animals:
 - (1) Plants can more easily be grown from single cultured cells into which foreign DNA has been introduced.
 - (2) Plant DNA is easier to clone.
 - (3) Plant cells can be transformed by bacterial infection.
 - (4) DNA passes more readily through the plant cell wall then through the animal cell membrane.
- 71. Advantage of microprojectile method over microinjection method for gene transfer in plants include:
 - (1) Intact cells are used
 - (2) Method is universal in its application irrespective of all shape, size, type, presence or absence of cell wall
 - (3) Genes can be transferred to many cells simultaneously .
 - (4) All of the above
- 72. Recombinant live attenuated vaccine against hepatitis B was prepared from:
 - (1) Plasma of infected individual
 - (2) Recombinant yeast expressing hepatitis B surface antigens
 - (3) Recombinant vaccinia virus expressing hepatitis B surface antigen
 - (4) Transgenic plants expressing hepatitis B surface antigen
- 73. Which of the following gene-therapy vectors preferentially infects nerve cells?
 - (1) Adeno-associated virus
- (2) Retrovirus

(3) Herpes-virus

- (4) Adenovirus
- **74.** During fertilization, polyspermy is prevented by :
 - (1) Zona pellucida in the presence of sodium ions
 - (2) Vitalline membrane in the presence of calcium ions
 - (3) Cortical granules in the presence of Ca and Na ions
 - (4) Influx of Na, Ca and Mg ions
- **75.** The Spemann organiser of the amphibians is:
 - (1) Mesodermal in origin
- (2) Endodermal in origin
- (3) Ectodermal in origin
- (4) Epidermal in origin

76.	Amphibian metamorphosis is controlled (1) Thyroid hormone	by: (2) Parathyroid hormone
	(3) Oxytocin	(4) Gastrointestinal hormones
77.	In sporophytic self incompatibility, relevel of:	ection of the male gametophyte occurs at the
ST.	(1) Ovary	(2) Stigma surface
	(3) Stylar canal	(4) Transmitting tract of the stigma
78.	Primary function of allantois is to serve	as:
	(1) Nutritive organ	(2) Embryonic excretory organ
	(3) Embryonic protective layer	(4) Embryonic respiratory organ
79.	Principal components of xylem tissues i	nclude:
	(1) Companion cells & tracheids	(2) Fibres & Sieve tubes
	(3) Companion cells & Vessels	(4) Tracheids & Vessels
80.	The latex cells differ from the latex vess	sels in :
	(1) They are formed due to cell fusion	
	(2) They fuse with other latex cells to f	orm a network
	(3) They usually anastomose and are al	
	(4) They never fuse with other latex ce	
81.	The vascular cambium is absent in:	
	(1) Dicots	(2) Monocots
	(3) Vascular crytogams	(4) Both (2) & (3)
82.	The wall of parenchyma is composed o	f:
	(1) Suberin	(2) Cutin
	(3) Calcium pectate	(4) Calcium phosphate
83.	Which group of plants have their root s	ystem composed entirely of adventitious roots?
	(1) Bryophytes	(2) Pteridophytes
	(3) Gymnosperms	(4) Angiosperms
CPG-	EE-2019/(Life Sciences)-(SET-Y)/(A)	

84.	In which of the dicot, there is no heart w	rood?	
	(1) Populus (2) Morus	(3) Tamarix	(4) Fraximus
85.	Scientific study of true, bony fishes is:		
	(1) Ornithology (2) Ichthyology	(3) Pisciculture	(4) Aquaculture
86.	The uredospore stage of Puccinia is calle	ed the:	
	(1) Black rust stage	(2) Red rust stage	
	(3) Brown rust stage	(4) Leaf rust stage	
87.	In necrosis, the dead tissue of the leaf perforations called:	spot may fall out le	eaving circular or irregular
	(1) Loop holes (2) Shunt holes	(3) Shot holes	(4) Sclerotic holes
88.	Which of the following drugs is obtained (1) Digitalin (2) Chamomile	d from flowers? (3) Curave	(4) Aconite
89.			
05.	Compared with systematic arterial blood (1) O_2 content (2) pH		
90.	In an electrocardiogram, the QRS comple (1) Depolarisation of atria (3) Depolarisation of ventricles	ex represents the : (2) Repolarisation (4) Repolarisation	
91.	At which site the partial pressure of CO ₂ (1) Exhaled gas	- 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
	(3) Systemic arterial blood	(2) Alveolar gas(4) Systemic venou	us blood
92.	High doses of antibiotics can destroy th result in impaired:		
	(1) Absorption of protein	(2) Blood coagulat	ion
	(3) Bone resorption	(4) Respiratory con	ntrol
93.	Cerebellum of brain is concerned with:	*	
	(1) Static balance		
	(2) Initiation of muscular contraction		*
	(3) Regulation of body posture & equili		
	(4) Coordination of muscular movemen	ts	

CPG-EE-2019/(Life Sciences)-(SET-Y)/(A)

94.	Cutting the posterio	r root of a spinal ner	ve would:	
	(1) Impair motor co	ontrol of skeletal mus	scle	
	(2) Interfere with the	ne flow of sensory in	npulses	
	(3) Interfere with the	ne ability of brain to	transmit impulse	
	(4) Interfere with the	ne circulation of CSF	7	
95.	Kupffer's cells in liv	ver are :	**	
	(1) Adipose cells	(2) Phagocytic cell	s(3) Blood cells	(4) Regenerative cells
96.	Highest concentration	on of urea is found in	n :	
	(1) Renal vein		(2) Hepatic portal	vein
	(3) Dorsal aorta		(4) Hepatic vein	
97.	Magnitude of curre	nt just sufficient to e	xcite a nerve or muse	cle is called:
	(1) Chronaxie	(2) Rheobase	(3) Subliminal	(4) None of the above
98.	In bees, pollen bask	tet is present in:		
	(1) Prothoracic leg	S	(2) Mesothoracic l	egs
	(3) Metathoracic le	egs	(4) Both meso and	l metathoracic legs
99.	Kala-azar is caused	by:		
	(1) Leishmania	(2) Leptomonas	(3) Trypanosoma	(4) Plasmodium
100.	Which of the follow	ving does not have a	pupa in its life cycle	?
	(1) Butterfly	(2) Bedbug	(3) Mosquito	(4) Silk moth

(Signature of the Invigilator)

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CPG-EE-2019(Life Sciences)-(SET-Y)/(B)

Date of Exam: -

(Signature of the Candidate)

1.	The bracketed key for determine subclass, i arranged:	s based on the principle where leads are
	(1) Parallely (2) Diagonally (3)	Horizontally (4) Vertically
2.	. Which of the following best describes a fern g	gametophyte?
	(1) It cells are haploid (2)	It lacks chlorophyll
	(3) It is tough and woody (4)	It is larger than sporophyte
3.	Periderm includes :	
	(1) Phelloderm, collenchyma and cortex	
	(2) Phellem, cambium and cortex	
	(3) All the tissues between epidermis and pit	h
	(4) Phellogen, phellem and phelloderm	
4.	Apospory is the development of an offspring	from the:
	(1) Cell of nucleus (2)	Synergids or antipodals
	(3) Haploid female gamete (4)	Haploid microspore
5.	Which ion plays an important role in pollen t	ube growth?
	(1) Calcium (2) Chlorine (3)	Magnesium (4) Sulphate
6.	6. Which of the following orders, consists entir	ely of fossil representatives?
		Selaginellales
	(3) Lycopodiales (4)	Isoetales
7.	7. Which plant is known as 'maiden hair tree'?	
		Cycas
		Ginkgo
8.	8. Correlation amongst individuals with regard	to their evolutionary history is called:
0.		Cladistic relationship
	(-)	Phylogentic relationship
•		
9.		Echinoderms
	(-)	None of these, all are deuterostomes
	(3) Arthropods (4)	1 Trone of mese, an are dealer ostomes

10. Vertebrates and tunicates share:

	 Jaws adopted for feeding High degree of cephalization Formation of structures from the neural A notochord and a dorsal hollow nerve 		
11.	(1) Extracted Bus	s highest ? 2) Alveolar gas 4) Systemic venous bloo	d
12.	(1)	bacterial flora of the larg 2) Blood coagulation 4) Respiratory control	e intestine. This can
13.	Cerebellum of brain is concerned with: (1) Static balance (2) Initiation of muscular contraction (3) Regulation of body posture & equilibration (4) Coordination of muscular movements		
14.	Cutting the posterior root of a spinal nervel (1) Impair motor control of skeletal muse (2) Interfere with the flow of sensory imp (3) Interfere with the ability of brain to tr (4) Interfere with the circulation of CSF	ele oulses	
15.		(4)	D
	(1) Adipose cells (2) Phagocytic cells		Regenerative cells
16.		: (2) Hepatic portal vein	
	(1) Renal vein(3) Dorsal aorta	(4) Hepatic vein	
			called:
17.			None of the above
CPG	(1) Chronaxie (2) Rheobase -EE-2019/(Life Sciences)-(SET-Y)/(B)	(3) Subliminal (4)	Tione of the doore

18.		
	(1) Prothoracic legs (2) Mesothoracic legs	3
	(3) Metathoracic legs (4) Both meso and metathora	cic legs
19.	19. Kala-azar is caused by :	
	(1) Leishmania (2) Leptomonas	
	(3) Trypanosoma (4) Plasmodium	
20.	20. Which of the following does <i>not</i> have a pupa in its life cycle?	
	(1) Butterfly (2) Bedbug	
	(3) Mosquito (4) Silk moth	*
21.	21. Advantage of microprojectile method over microinjection method for plants include:	gene transfer in
	 Intact cells are used Method is universal in its application irrespective of all shape, size or absence of cell wall Genes can be transferred to many cells simultaneously 	e, type, presence
	(4) All of the above	
22.	22. Recombinant live attenuated vaccine against hepatitis B was prepared	from:
	(1) Plasma of infected individual	
	(2) Recombinant yeast expressing hepatitis B surface antigens	
	(3) Recombinant vaccinia virus expressing hepatitis B surface antigen	
	(4) Transgenic plants expressing hepatitis B surface antigen	
23.	23. Which of the following gene-therapy vectors preferentially infects ner	ve cells?
	(1) Adeno-associated virus (2) Retrovirus	
	(3) Herpes-virus (4) Adenovirus	
24.	24. During fertilization, polyspermy is prevented by:	
	(1) Zona pellucida in the presence of sodium ions	
	(2) Vitalline membrane in the presence of calcium ions	
	(3) Cortical granules in the presence of Ca and Na ions	
	(4) Influx of Na, Ca and Mg ions	

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(2) Phytochrome

(4) Anthocyanin

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(1) Chlorophyll

(3) Cytochrome

33.	Which of the following properties of water is most directly related to its ability to ris in the capillary spaces of plants?			to rise			
	(1) Neutral pH		(2)	High density			
	(3) Low compressil	oility	(4)	High surface ter	nsion	ļ ;	
34.	 (1) Amoeba moves (2) Amoeba ceases (3) Amoeba drifted 	all activities along flowing water					
	(4) Amoeba stop m	oving & become glo	bula	r by withdrawl o	f pse	eudopodia	
35.	Self conjugation in (1) Endomixis	paramecium is called (2) Autogamy		Cytogamy	(4)	Rejuvenation	
36.	Coral island with sh (1) Coral reef	nallow central lake is (2) Lagoon		Atoll	(4)	Corallite	×
37.	1 716	t in Nereis is: (2) Haemocyanin	(3)	Erythrocyanin	(4)	Cyanin	
38.	Cleavage in Balano	glossus is :					
	(1) Holoblastic	(2) Meroblastic	(3)	Teloblastic	(4)	Spiral	
39.	Mean molecular we	eight of an amino aci		a typical globula 150		otein is : 90	
40.	Thermal denaturation	on of protein involve	s:				
		l change in the prote					
	(2) Random cleava	age of the peptide bor	nds				
	(3) Covalent modified(4) Increase in its in	fication of certain an	nino	acids			*
/11		•	in	its diploid comr	lem	ent how many	double
41.	41. If the garden pea has 14 chromosomes in its diploid complement, how many do trisomics could theoretically exist:			doddie			
	(1) 6	(2) 9	(3)) 16	(4)	21	
42.	In prokaryotes, the	lagging primers are	remo	oved by:			
	(1) 3' to 5' exonuc	lease	(2)) DNA ligase			
	(3) DNA polymera	ase I	(4) DNA polymer	ase I	II	
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43.	Satellite DNA consists of: (1) Extrachromosomal DNA (3) Ribosomal RNA gene	(2) Short repetitive nucleotide sequences(4) Single gene regions
44.	then renatured. Which of the following (1) All fragments will renature at the s (2) Fragments composed largely of re	same rate. petitive DNA sequence will renature fastest. on-repetitive DNA sequence will renature fastest.
45.	Which of the following enzymes does (1) RNA dependent DNA polymerase (2) DNA dependent DNA polymerase (3) DNA dependent RNA polymerase (4) Taq. DNA polymerase	
46.	genes is:	tations are located on the same gene or different
	(1) Generalized transduction(3) hfr mapping	(2) Complementation analysis(4) Karyotyping
47.	Vessels and companion cells are the o	characteristic features of:
	(1) Gymnosperms	(2) Angiosperms
	(3) Pteridophytes	(4) Fungi
48.	Ecological equivalent describes:	
	(1) Group of species with comparable	e roles.
	(2) Species that occupy the same nic	he in different geographical regions.
	(3) Diversity of habitats.	
	(4) Social behaviour that enhances the	ne fitness of other individuals in the population.
49	The biomass of one trophic level g trophic level is the:	etting incorporating into the biomass of the next
	(1) Relative ratio of energy flow	(2) Energy flow efficiency
	(3) Ecological efficiency	(4) Ecological gradient
CPG	G-EE-2019/(Life Sciences)-(SET-Y)/(B	

50.	The objective of signing the 'Montreal protocol' was:						
	(1) Protection of w	rild life	(2)	Protection of oz	one	layer	
	(3) Control over th	e use of pesticides	(4) Control of noise pollution				
51.	Dorsal fins are abse	ent in :				*	
	(1) Myxine	(2) Petromyzon	(3)	Lampetra	(4)	Ichthyomyzon	
52.	The longest part of	the frog alimentary c	anal	is:			
2.	(1) Oesophagous	(2) Small intestine	(3)	Ileum	(4)	Rectum	
53.	Down feathers of C	olumba are also called	d as	:			
	(1) Remiges	(2) Plumules	(3)	Pennae	(4)	Pin feathers	
54.	Night blindness in	rabbit is associated w	ith:				
	(1) Very high level	of rhodopsin	(2)	Low level of rhe	odop	osin	
	(3) High level of v	itamin A	(4) None of the above				
55.	In which of the following skull is heavier than the rest of the animal body?						
	(1) Dogfish	(2) Pigeon	(3)	Frog	(4)	Rabbit	
56.	Following statement about Cyclostomata is false:						
	(1) Lack of paired	appendages	(2)	Jaws are absent			
	(3) No stomach in	digestive system	(4)	None of the abo	ove		
57.	In Guinea pig, black coat colour is a dominant trait and white is recessive trait. A black female is test crossed producing six black offspring. The probability that a heterogeneous black would do this by chance alone is approximately:						
n	(1) 50%						
	(2) 25%						
	(3) 1%						
	(4) Cannot be dete	rmined from the info	rmat	ion			
58.	The kind of polyp ploidy level is know	loidy usually arising vn as :	g by	crossing betwe	en o	rganisms of d	ifferent
	(1) Autoploid		(2)	Primary polyplo	oid		
	(3) Secondary poly	ploid	(4)	Pentaploid			
CPG-I	EE-2019/(Life Scien	ces)-(SET-Y)/(B)					P. T. O.

	100	
59.	Albinism is a recessive human trait. If a n is the probability that their next child will	formal couple produces an albino child, what be albino?
	(1) 1/4 (2) 1/8	(4) 1/64
60.	If four chromosomes synapse into a prophase, the organism is heterozygous fo	cross-shaped configuration during meiotic or a:
	(1) Pericentric inversion	(2) Deletion
	(3) Translocation	(4) Paracentric inversion
61.	Wings of insects and the wings of bats rep	present a case of:
		(2) Convergent evolution
		(4) Neutral evolution
62.	Which prehistoric human had almost sam	e cranial capacity as that of modern man?
-	(1) Neanderthal man	(2) Peking man
	(3) Java ape man	(4) Australopithecus man
63.	Which of the following organs have no e	volutionary significance?
	(1) Analogous organs	(2) Atavistic organs
	(3) Non-functional organs	(4) Functional organs
64.		, a cholorphyll molecule gets changed from
04.	ground state to excited state. This activat	ted state is called:
	(1) Excited singlet state	(2) Excited triplet state
	(3) Phosphorescence	(4) Flurorescence
65	. Rhizobium fixes atmospheric nitrogen to	o ammonia in the presence of pigment called:
	(1) Xanthophyll (2) Leghemoglobir	
66	. Which of the following are referred to a	s diageotropic?
	(1) Secondary roots	(2) Stems
	(3) Leaves	(4) Rhizomes
67	. The mechanism of ATP formation in ch	aloroplast is explained by:
01	(1) Relay Pump theory of Godlewski	(2) Cholodny Went's model
	(3) Chemiosmotic theory	(4) Munch's pressure/mass flow model
CDC	* × * × × × × × × × × × × × × × × × × ×	
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68.	Root pressure is a/an:	
	(1) Non-osmotic phenomenon	(2) Osmotic phenomenon
	(3) Positive hydrostatic pressure	(4) More than one statement is true
69.	Most of the water taken up by the plant	is:
	(1) Split during photosynthesis as a sou	rce of electorns and hydrogen.
	(2) Lost by transpiration through stoma	ta.
	(3) Absorbed by cells during their elong	
	(4) Incorporated directly into organic m	aterial.
70.	Carnivorous adaptation of plants mainl content of:	y compensate for soil that has a relatively low
	(1) Potassium (2) Nitrogen	(3) Phosphate (4) Calcium
71.	Most of the free fatty acids are transport	ed in the blood :
	(1) Inside the RBCs	(2) As lipoproteins
	(3) Combined with glucose	(4) Bound to albumin
72.	Enzyme glutathione peroxidase catalyse	s destruction of H_2O_2 , contains:
	(1) Zn (2) Fe	(3) Se (4) Mo
73.	Which of the following processes does	not involve cytochrome C in plants?
	(1) Oxidative phosphorylation	(2) Electron Transport
	(3) TCA cycle	(4) Apoptosis
74.	Organic constituents of protoplasm are:	
	(1) Carbohydrates & Proteins	(2) Nucleotids & lipids
	(3) Hormones & Vitamins	(4) All of the above
75.	Which characteristic is undesirable in cl	oning vectors?
	(1) Self replicating	
	(2) High copy number	
	(3) Vulnerable at several sites to a restri	ction enzyme
	(4) Small in size	

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76. A reporter gene is used to:

- (1) Identify regulatory sequences from the upstream regions of other genes
- (2) Determine if a protein binds to a given sequence element
- (3) Determine if a gene contains introns
- (4) Determine the stability of a protein

77. Genomic library is:

- (1) Collection of recombinant molecules with inserts that contain all of the genes of an organism.
- (2) Collection of recombinant molecules with inserts that contain all of an organism's genome.
 - (3) Collection of recombinant molecules that express all of the genes of the organism.
 - (4) Collection of recombinant molecules that have been sequenced.

78. RFLP analysis is a technique that:

- (1) Uses hybridization to detect specific DNA restriction fragments in genomic DNA.
- (2) Used to determine whether a gene is transcribed in specific cells.
- (3) Measure the transfer frequency of genes during conjugation.
- (4) Used to detect genetic variation at the protein level.

79. Simple tandem repeat polymorphisms in humans are most useful for :

- (1) Solving criminal and paternity cases.
- (2) Reconstructing the relationships of humans & chimps.
- (3) Estimating relationships of humans & Neanderthals.
- (4) Transferring disease resistance factors into bone marrow cells.

80. Transgenic plants are easier to produce than animals:

- (1) Plants can more easily be grown from single cultured cells into which foreign DNA has been introduced.
- (2) Plant DNA is easier to clone.
- (3) Plant cells can be transformed by bacterial infection.
- (4) DNA passes more readily through the plant cell wall then through the animal cell membrane.

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81/	Marker enzyme of Golgi apparatus is:		
	(1) Acetyl-coA synthetase	(2) Pyruvate kinase	
	(3) Galactosyl transferase	(4) Cytochrome oxidase	
82.	In the cAMP pathway, the G-protein stin	nulates:	
	(1) Phospholipase C	(2) Adenylate	
	(3) The Endoplasmic reticulum	(4) Calmodulin	
83.	Each ribosome consists of two unequal s	ubunits of composition:	
	(1) RNA and Protein	(2) RNA and carbohydrates	
	(3) Only RNA	(4) Proteins and DNA	
84.	Which of the following is a cell adhesion	n molecule ?	
	(1) Integrin (2) Lysine	(3) Myosin (4) Keratin	
85.	Proto-oncogenes are:		
	(1) Oncogens found in transforming retr	roviruses	
	(2) Oncogenes present in protozoa		
	(3) Genes encoding oncogenes related p	roteins in extinct organisms	
	(4) Cellular genes encoding proteins rela	ated to viral oncogenes	
86.	Plane of formation of cell plate in plant	cell is governed by:	
	(1) Phragmoplast (2) Microtubules	(3) Nucleus (4) Centriole	
87.	Which of the following is an example of	chemolithoautotroph?	
	(1) Sulphur-oxidising bacteria	(2) Hydrogen bacteria	
	(3) Nitrifying bacteria	(4) All of these	
88.	Mycoplasma are not inhibited by penicil	200	
	(1) produce penicillinase	(2) are gram-positive	
	(3) are gram-negative	(4) do not have a cell wall	
89.	The protoplast of the cork cells, in the ro		
PC_I	(1) Lignin (2) Cutin EE-2019/(Life Sciences)-(SET-Y)/(B)	(3) Suberin (4) Cellulose	n T ^
* O-T	an autoritine defences)-(de 1-1 //(D)	J	P. T. O.

90.	Which of the follow (1) Nostoc	ving algae belongs to (2) Polysiphonia	the tubular series? (3) Vaucheria	(4) Pandorina
91.	The vascular camb	ium is absent in:		¥
	(1) Dicots		(2) Monocots	
	(3) Vascular cryto	gams	(4) Both (2) & (3)	
92.	The wall of parenc	hyma is composed of	f:	
	(1) Suberin		(2) Cutin	
	(3) Calcium pecta		(4) Calcium phosp	
93.	Which group of pl	ants have their root s	ystem composed entir	rely of adventitious roots?
	(1) Bryophytes		(2) Pteridophytes	*
	(3) Gymnosperms	S	(4) Angiosperms	*
94.	In which of the di	cot, there is no heart	wood?	
	(1) Populus	(2) Morus	(3) Tamarix	(4) Fraximus
95.	Scientific study of	f true, bony fishes is		
	(1) Ornithology	(2) Ichthyology	(3) Pisciculture	(4) Aquaculture
96.	The uredospore st	tage of Puccinia is ca	lled the:	
	(1) Black rust sta	ige	(2) Red rust stage	
	(3) Brown rust st		(4) Leaf rust stag	
97	. In necrosis, the operforations called		af spot may fall out	leaving circular or irregular
	(1) Loop holes	(2) Shunt holes	(3) Shot holes	(4) Sclerotic holes
98	Which of the following	lowing drugs is obtain	ned from flowers?	770 A
	(1) Digitalin	(2) Chamomile	(3) Curave	(4) Aconite
99	Compared with s	systematic arterial blo		al blood has a higher:
	(1) O_2 content	(2) pH	(3) HCO_3 ions	(4) Hb concentration
100			nplex represents the : (2) Repolarisation	: on of atria
	(1) Depolarisati(3) Depolarisati	on of atria	(4) Repolarisation	
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CPG-EE-2019 (Life Sciences)-(SET-Y)

C			Sr. No.	10359
Time: 1½ Hours	Total Questi	ons : 100		Max. Marks : 100
Roll No. (in figures)	(in words)			8
Candidate's Name —————			Date of Birth	
Father's Name —		Mother's Name		
Date of Exam :				
(Signature of the Candidate)			(Signature o	f the Invigilator)

CANDIDATES MUST READ THE FOLLOWING INFORMATION/INSTRUCTIONS BEFORE STARTING THE QUESTION PAPER.

- 1. All questions are *compulsory* and carry equal marks. The candidates are required to attempt all questions.
- 2. The candidate *must return* this question booklet and the OMR Answer-Sheet to the Invigilator concerned before leaving the Examination Hall, failing which a case of use of unfairmeans / misbehaviour will be registered against him / her, in addition to lodging of an FIR with the police. Further the answer-sheet of such a candidate will not be evaluated.
- 3. Keeping in view the transparency of the examination system, carbonless OMR Sheet is provided to the candidate so that a copy of OMR Sheet may be kept by the candidate.
- 4. Question Booklet along-with answer key of all the A, B, C and D code shall be got uploaded on the University Website immediately after the conduct of Entrance Examination. Candidates may raise valid objection/complaint if any, with regard to discrepancy in the question booklet/answer key within 24 hours of uploading the same on the University website. The complaint be sent by the students to the Controller of Examinations by hand or through email. Thereafter, no complaint in any case will be considered.
- 5. The candidate *must not* do any rough work or writing in the OMR Answer-Sheet. Rough work, if any, may be done in the question booklet itself. Answers *must not* be ticked in the question booklet.
- 6. Use only black or blue ball point pen of good quality in the OMR Answer-Sheet.
- 7. There will be negative marking. Each correct answer will be awarded one full mark and each incorrect answer will be negatively marked for which the candidate will get ¼ Mark (0.25 Mark) discredit. Cutting, erasing, overwriting and more than one answer in OMR Answer-Sheet will be treated as incorrect answer.
- 8. Before answering the questions, the candidates should ensure that they have been supplied correct & complete question booklet. Complaints, if any, regarding misprinting etc. will not be entertained 30 minutes after starting of the examination.

CPG-EE-2019(Life Sciences)-(SET-Y)/(C)

1.	Wings of insects and the wings of bats re	present a case of:	
	(1) Divergent evolution	(2) Convergent evolution	
	(3) Parallel evolution	(4) Neutral evolution	
2.	Which prehistoric human had almost sam	e cranial capacity as that of modern man?	
	(1) Neanderthal man	(2) Peking man	
	(3) Java ape man	(4) Australopithecus man	
3.	Which of the following organs have no evolutionary significance?		
	(1) Analogous organs	(2) Atavistic organs	
	(3) Non-functional organs	(4) Functional organs	
4.	ground state to excited state. This activat		
	(1) Excited singlet state	(2) Excited triplet state	
	(3) Phosphorescence	(4) Flurorescence	
5.	Rhizobium fixes atmospheric nitrogen to	ammonia in the presence of pigment called:	
	(1) Xanthophyll	(2) Leghemoglobin	
	(3) Hemoglobin	(4) Phycobilin	
6.	Which of the following are referred to as	diageotropic?	
	(1) Secondary roots	(2) Stems	
	(3) Leaves	(4) Rhizomes	
7.	The mechanism of ATP formation in ch	oroplast is explained by :	
	(1) Relay Pump theory of Godlewski	(2) Cholodny Went's model	
	(3) Chemiosmotic theory	(4) Munch's pressure/mass flow model	
8.	Root pressure is a/an:		
	(1) Non-osmotic phenomenon	(2) Osmotic phenomenon	
	(3) Positive hydrostatic pressure	(4) More than one statement is true	
	(5) I ositive iljuiostatie pressure	(1) Intole main one blanchine in the	

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9.	Most of the water taken up by the plant is:			
	(1) Split during photosynthesis as a source of electorns and hydrogen.			
	(2) Lost by transpiration through stomata.			
*	(3) Absorbed by cells during their elongation.			
	(4) Incorporated di	rectly into organic m	aterial.	R *
10.	Carnivorous adapta content of:	tion of plants mainly	y compensate for so	oil that has a relatively low
	(1) Potassium	(2) Nitrogen	(3) Phosphate	(4) Calcium
11. Dorsal fins are absent in:				
	(1) Myxine	(2) Petromyzon	(3) Lampetra	(4) Ichthyomyzon
12.	The longest part of	the frog alimentary c	canal is:	
	(1) Oesophagous	(2) Small intestine	(3) Ileum	(4) Rectum
13.				
	(1) Remiges	(2) Plumules	(3) Pennae	(4) Pin feathers
14.	Night blindness in r	abbit is associated w	vith:	
	(1) Very high level	of rhodopsin	(2) Low level of r	hodopsin
	(3) High level of vi	itamin A	(4) None of the ab	oove
15. In which of the following skull is heavier than the rest of the anima			e animal body ?	
	(1) Dogfish	(2) Pigeon	(3) Frog	(4) Rabbit
16. Following statement about Cyclostomata is false:			a is false:	
k.		appendages	- 1 (1) (1) (1) (1) (1) (1) (1) (1) (1) (
47	(3) No stomach in	_	(4) None of the ab	
17. In Guinea pig, black coat colour is a dominant trait and white is reces female is test crossed producing six black offspring. The p heterogeneous black would do this by chance alone is approximately			. The probability that a	
	(1) 50%			
	(2) 25%			w
	(3) 1%			
	(4) Cannot be deter	rmined from the infor	rmation	
CPG-I	EE-2019/(Life Scien	ces)-(SET-Y)/(C)	e	

18.	The kind of polyploidy usually arising ploidy level is known as:	by crossing between organisms of different	
	(1) Autoploid(3) Secondary polyploid	(2) Primary polyploid(4) Pentaploid	
19.	Albinism is a recessive human trait. If a normal couple produces an albino child, w is the probability that their next child will be albino?		
	(1) 1/4 (2) 1/8	(3) 1/16 (4) 1/64	
20.	If four chromosomes synapse into a prophase, the organism is heterozygous	cross-shaped configuration during meiotic for a:	
	(1) Pericentric inversion	(2) Deletion	
	(3) Translocation	(4) Paracentric inversion	
21.	Marker enzyme of Golgi apparatus is:		
	(1) Acetyl-coA synthetase	(2) Pyruvate kinase	
	(3) Galactosyl transferase	(4) Cytochrome oxidase	
22.	. In the cAMP pathway, the G-protein stimulates:		
	(1) Phospholipase C	(2) Adenylate	
	(3) The Endoplasmic reticulum	(4) Calmodulin	
23.			
	(1) RNA and Protein	(2) RNA and carbohydrates	
	(3) Only RNA	(4) Proteins and DNA	
24.			
	(1) Integrin (2) Lysine	(3) Myosin (4) Keratin	
25.	Proto-oncogenes are:	* * * * * * * * * * * * * * * * * * *	
25.		roviruses	
	(1) Oncogens found in transforming ret	Tovituses	
	(2) Oncogenes present in protozoa		
	(3) Genes encoding oncogenes related		
	(4) Cellular genes encoding proteins related to viral oncogenes		

26.	Plane of formation of cell plate in plant cell is governed by:			
	(1) Phragmoplast (2) Microtubules	(3) Nucleus (4) Centriole		
27.	Which of the following is an example o	f chemolithoautotroph?		
	(1) Sulphur-oxidising bacteria	(2) Hydrogen bacteria		
	(3) Nitrifying bacteria	(4) All of these		
28.	Mycoplasma are not inhibited by penici	llin because they:		
	(1) produce penicillinase	(2) are gram-positive		
	(3) are gram-negative	(4) do not have a cell wall		
29.	9. The protoplast of the cork cells, in the root, secretes a fat like substance, called			
	(1) Lignin (2) Cutin	(3) Suberin (4) Cellulose		
30.	Which of the following algae belongs to	the tubular series?		
	(1) Nostoc (2) Polysiphonia	(3) Vaucheria (4) Pandorina		
31.	31. At which site the partial pressure of CO_2 is highest?			
	(1) Exhaled gas(3) Systemic arterial blood	(2) Alveolar gas(4) Systemic venous blood		
32.	•			
52.	32. High doses of antibiotics can destroy the bacterial flora of the large intestine. T result in impaired:			
	(1) Absorption of protein	(2) Blood coagulation		
	(3) Bone resorption	(4) Respiratory control		
33.	Cerebellum of brain is concerned with:			
	(1) Static balance			
	(2) Initiation of muscular contraction			
	(3) Regulation of body posture & equil			
(4) Coordination of muscular movements34. Cutting the posterior root of a spinal nerve would :				
54.	Cutting the posterior root of a spinal net (1) Impair motor control of skeletal mu			
	(2) Interfere with the flow of sensory in			
9.	(3) Interfere with the ability of brain to	-		
	(4) Interfere with the circulation of CSI	_		
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35 .	Kupffer's cells in liv	ver are:				
	(1) Adipose cells		(2) Phagoc	ytic cell	S	
	(3) Blood cells		(4) Regene	rative co	ells	
36.	Highest concentration	on of urea is found in	n :			
	(1) Renal vein	*.	(2) Hepatic	portal	vein	
	(3) Dorsal aorta		(4) Hepatic	vein		
37.	Magnitude of curre	nt just sufficient to e	xcite a nerve	or musc	ele is called:	
	(1) Chronaxie	(2) Rheobase	(3) Sublim	inal	(4) None of the above	
38.	In bees, pollen bask	tet is present in:				
	(1) Prothoracic leg	S _{1,1}	(2) Mesoth	oracic l	egs	
	(3) Metathoracic le	egs	(4) Both m	eso and	metathoracic legs	
39.	Kala-azar is caused	by:				
	(1) Leishmania	(2) Leptomonas	(3) Trypan	osoma	(4) Plasmodium	
40.	Which of the follow	ving does <i>not</i> have a	pupa in its li	fe cycle	?	
	(1) Butterfly	(2) Bedbug	(3) Mosqu	ito	(4) Silk moth	
41.	. Most of the free fatty acids are transported in the blood:					
	Whost of the free fa	,			(2) As lipoproteins	
	(1) Inside the RBC	_		protein	S	
		Cs		-		
42.	(1) Inside the RBC(3) Combined with	Cs	(2) As lipo (4) Bound	to albui	min	
42.	(1) Inside the RBC(3) Combined withEnzyme glutathion	Cs n glucose	(2) As lipo (4) Bound es destruction	to album of H_2	min	
42. 43.	(1) Inside the RBO(3) Combined withEnzyme glutathion(1) Zn	Es n glucose e peroxidase catalys	(2) As lipo (4) Bound es destruction (3) Se	to album of H_2	min O_2 , contains: (4) Mo	
	(1) Inside the RBO(3) Combined withEnzyme glutathion(1) Zn	Cs In glucose e peroxidase catalyse (2) Fe wing processes does	(2) As lipo (4) Bound es destruction (3) Se	to album of H_2 0	min O ₂ , contains: (4) Mo me C in plants?	
	(1) Inside the RBO(3) Combined withEnzyme glutathion(1) ZnWhich of the follows	Cs In glucose e peroxidase catalyse (2) Fe wing processes does	(2) As lipo (4) Bound es destruction (3) Se not involve c	to album of H_2 0 sytochroon Trans	min O ₂ , contains: (4) Mo me C in plants?	
	 (1) Inside the RBC (3) Combined with Enzyme glutathion (1) Zn Which of the follow (1) Oxidative phose (3) TCA cycle 	Cs In glucose e peroxidase catalyse (2) Fe wing processes does	(2) As lipo (4) Bound es destruction (3) Se not involve c (2) Electro (4) Apopte	to album of H_2 0 sytochroon Trans	min O ₂ , contains: (4) Mo me C in plants?	
43.	 (1) Inside the RBC (3) Combined with Enzyme glutathion (1) Zn Which of the follow (1) Oxidative phose (3) TCA cycle 	e peroxidase catalyse (2) Fe wing processes does sphorylation ts of protoplasm are	(2) As lipo (4) Bound es destruction (3) Se not involve c (2) Electro (4) Apopte	to album of H_2 0 sytochroon Transposis	min O ₂ , contains: (4) Mo me C in plants?	

45. Which characteristic is undesirable in cloning vectors?

- (1) Self replicating
- (2) High copy number
- (3) Vulnerable at several sites to a restriction enzyme
- (4) Small in size

46. A reporter gene is used to:

- (1) Identify regulatory sequences from the upstream regions of other genes
- (2) Determine if a protein binds to a given sequence element
- (3) Determine if a gene contains introns
- (4) Determine the stability of a protein

47. Genomic library is:

- (1) Collection of recombinant molecules with inserts that contain all of the genes of an organism.
- (2) Collection of recombinant molecules with inserts that contain all of an organism's genome.
- (3) Collection of recombinant molecules that express all of the genes of the organism.
- (4) Collection of recombinant molecules that have been sequenced.

48. RFLP analysis is a technique that :

- (1) Uses hybridization to detect specific DNA restriction fragments in genomic DNA.
- (2) Used to determine whether a gene is transcribed in specific cells.
- (3) Measure the transfer frequency of genes during conjugation.
- (4) Used to detect genetic variation at the protein level.

49. Simple tandem repeat polymorphisms in humans are most useful for :

- (1) Solving criminal and paternity cases.
- (2) Reconstructing the relationships of humans & chimps.
- (3) Estimating relationships of humans & Neanderthals.
- (4) Transferring disease resistance factors into bone marrow cells.

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			/
50.	Transgenic plants are easier to produce than animals: (1) Plants can more easily be grown from single cultured cells into which foreign		
	DNA has been introduced.	from	single cultured cells into which foreign
	(2) Plant DNA is easier to clone.		
	(3) Plant cells can be transformed by bacterial infection.		
	(4) DNA passes more readily through membrane.	the p	lant cell wall then through the animal cell
51.	. If the garden pea has 14 chromosomes in its diploid complement, how many dou trisomics could theoretically exist:		
	(1) 6 (2) 9	(3)	16 (4) 21
52.	52. In prokaryotes, the lagging primers are removed by :		
	(1) 3' to 5' exonuclease	(2)	DNA ligase
	(3) DNA polymerase I	(4)	DNA polymerase III
53.	Satellite DNA consists of:		
	(1) Extrachromosomal DNA	(2)	Short repetitive nucleotide sequences
	(3) Ribosomal RNA gene	(4)	Single gene regions
54.	Human genomic DNA is digested into fragments approx. 1 kb in size, denatured and then renatured. Which of the following statements is <i>true</i> ? (1) All fragments will renature at the same rate. (2) Fragments composed largely of repetitive DNA sequence will renature fastest. (3) Fragments composed largely of non-repetitive DNA sequence will renature fastest.		
	(4) Fragments with high A: T content v		.2
55.	Which of the following enzymes does not (1) RNA dependent DNA polymerase (2) DNA dependent DNA polymerase (3) DNA dependent RNA polymerase (4) Taq. DNA polymerase	ot re	quire a primer ?
56.	A method to detect whether two mutat genes is:	ions	are located on the same gene or different
	(1) Generalized transduction	(2)	Complementation analysis
	(3) hfr mapping	(4)	Karyotyping

57.	Vessels and companion cells are the cha	racteristic features of:		
	(1) Gymnosperms	(2) Angiosperms		
	(3) Pteridophytes	(4) Fungi		
58.	Ecological equivalent describes:(1) Group of species with comparable roles.(2) Species that occupy the same niche in different geographical regions.(3) Diversity of habitats.			
	(4) Social behaviour that enhances the	itness of other individuals in the population.		
59.	The biomass of one trophic level getting incorporating into the biomass of the ne trophic level is the :			
c	(1) Relative ratio of energy flow(3) Ecological efficiency	(2) Energy flow efficiency(4) Ecological gradient		
60.	The objective of signing the 'Montreal p	protocol' was :		
(9.)	(1) Protection of wild life	(2) Protection of ozone layer		
	(3) Control over the use of pesticides	(4) Control of noise pollution		
61. Advantage of microprojectile method over microinjection method for gene plants include:(1) Intact cells are used				
	(2) Method is universal in its application or absence of cell wall(3) Genes can be transferred to many cell(4) All of the above	on irrespective of all shape, size, type, presence		
62.	 Recombinant live attenuated vaccine against hepatitis B was prepared from: (1) Plasma of infected individual (2) Recombinant yeast expressing hepatitis B surface antigens (3) Recombinant vaccinia virus expressing hepatitis B surface antigen 			
	(4) Transgenic plants expressing hepat	itis B surface antigen		
63.	Which of the following gene-therapy v (1) Adeno-associated virus (3) Herpes-virus	(2) Retrovirus (4) Adenovirus		
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	64.	During fertilization, polyspermy is prevented (1) Zona pellucida in the presence of social (2) Vitalline membrane in the presence (3) Cortical granules in the presence of (3)	dium ions of calcium ions				
		(4) Influx of Na, Ca and Mg ions					
	65.	The Spemann organiser of the amphibian	ns is:				
		(1) Mesodermal in origin	(2) Endodermal in origin				
		(3) Ectodermal in origin	(4) Epidermal in origin				
	66.	Amphibian metamorphosis is controlled	by:				
		(1) Thyroid hormone	(2) Parathyroid hormone				
		(3) Oxytocin	(4) Gastrointestinal hormones				
	67.	In sporophytic self incompatibility, rejlevel of:	ection of the male gametophyte occurs at the	,			
		(1) Ovary	(2) Stigma surface				
		(3) Stylar canal	(4) Transmitting tract of the stigma				
	68.	Primary function of allantois is to serve	as:				
		(1) Nutritive organ	(2) Embryonic excretory organ				
		(3) Embryonic protective layer	(4) Embryonic respiratory organ				
	69.	Principal components of xylem tissues in	nclude:				
		(1) Companion cells & tracheids	(2) Fibres & Sieve tubes				
		(3) Companion cells & Vessels	(4) Tracheids & Vessels				
	70.						
	71.	The vascular cambium is absent in:					
		(1) Dicots	(2) Monocots				
		(3) Vascular crytogams	(4) Both (2) & (3)				
C	PG-I	EE-2019/(Life Sciences)-(SET-Y)/(C)	P. T. (C			

	72.	The wall of parench	yma is composed of	:	6 ×		
		(1) Suberin		(2)	Cutin		
		(3) Calcium pectate	;	(4)	Calcium phosph	nate	
	73.	Which group of plan (1) Bryophytes (3) Gymnosperms		(2)	composed entire Pteridophytes Angiosperms	ely o	f adventitious roots?
	74.	In which of the dico	t, there is no heart w	ood	?		
		(1) Populus	(2) Morus	(3)	Tamarix	(4)	Fraximus
	75.	Scientific study of tr (1) Ornithology	rue, bony fishes is: (2) Ichthyology	(3)	Pisciculture	(4)	Aquaculture
	76.	The uredospore stage (1) Black rust stage (3) Brown rust stage		(2)	e : Red rust stage Leaf rust stage		
	77.	In necrosis, the dea perforations called:		spot	may fall out le	aving	g circular or irregular
		(1) Loop holes	(2) Shunt holes	(3)	Shot holes	(4)	Sclerotic holes
	78.	Which of the follow (1) Digitalin	ving drugs is obtained (2) Chamomile		m flowers? Curave	(4)	Aconite
	79.	Compared with syst	ematic arterial blood	l, pu	lmonary arterial	bloo	d has a higher :
		(1) O_2 content	(2) pH	(3)	HCO_3 ions	(4)	Hb concentration
	80.	In an electrocardiog (1) Depolarisation (3) Depolarisation	of atria	(2)	epresents the : Repolarisation Repolarisation		
	81.	The bracketed key arranged:	for determine subcl	lass,	is based on the	prin	ciple where leads are
		(1) Parallely	(2) Diagonally	(3)	Horizontally	.(4)	Vertically
	82.	Which of the follow	ving best describes a	fern	gametophyte?		
		(1) It cells are haple	oid	(2)	It lacks chlorop	hyll	
		(3) It is tough and v	woody	(4)	It is larger than	spor	rophyte
(CPG-1	EE-2019/(Life Scien	ces)-(SET-Y)/(C)				

83.	Periderm includes:						
	(1) Phelloderm, collenchyma and cortex						
	(2) Phellem, cambium and cortex						
	(3) All the tissues between epidermis and pith						
	(4) Phellogen, phellem and phelloderm						
84.	Apospory is the development of an offsp	ring from the:					
	(1) Cell of nucleus	(2) Synergids or antipodals					
	(3) Haploid female gamete	(4) Haploid microspore					
85.	Which ion plays an important role in pol	len tube growth?					
	(1) Calcium (2) Chlorine	(3) Magnesium (4) Sulphate					
86.	Which of the following orders, consists e	entirely of fossil representatives?	3				
	(1) Lepidodendrales	(2) Selaginellales					
	(3) Lycopodiales	(4) Isoetales					
87.	Which plant is known as 'maiden hair tre	ee' ?					
	(1) Pinus (2) Cycas	(3) Gnetum (4) Ginkgo					
88.	Correlation amongst individuals with reg	gard to their evolutionary history is called:					
	(1) Phenetic relationship	(2) Cladistic relationship					
	(3) Chronistic relationship	(4) Phylogentic relationship					
89.	Members of which group are not deutere	ostomes:					
	(1) Chordates	(2) Echinoderms					
	(3) Arthropods	(4) None of these, all are deuterostomes					
90.	Vertebrates and tunicates share:						
	(1) Jaws adopted for feeding						
	(2) High degree of cephalization						
	(3) Formation of structures from the neu	ral crest					
	(4) A notochord and a dorsal hollow ner	ve cord					
91.	The accumulation of one of the following	g causes seed dormancy:					
	(1) Cytokinin (2) Auxin	(3) Abscisic acid (4) Gibberllins					
CPG-E	EE-2019/(Life Sciences)-(SET-Y)/(C)	P.	T. (

92.	In photomorphogen	esis following pigme	nt p	lays a key role:			
	(1) Chlorophyll	(2) Phytochrome	(3)	Cytochrome	(4)	Anthocyanin	
93.	Which of the follow in the capillary space		ater	is most directly	relate	ed to its ability to rise	
	(1) Neutral pH		(2)	High density			
	(3) Low compressi	bility	(4)	High surface te	nsior	1	
94.	When a electric cur (1) Amoeba moves (2) Amoeba ceases		h the	e water containin	g am	noeba?	
		l along flowing water	r				
		noving & become glo		or by withdrawl o	of nee	eudopodia	
	-	3 1		ii by williarawi c	n pse	cudopodia	
95.		paramecium is calle			(4)	Deinmontion	
	(1) Endomixis	(2) Autogamy	(3)	Cytogamy	(4)	Rejuvenation	
96.	Coral island with sl	nallow central lake is	:				
	(1) Coral reef	(2) Lagoon	(3)	Atoll	(4)	Corallite	
97.	Respiratory pigmer	nt in Nereis is:	ė				
	(1) Haemoglobin	(2) Haemocyanin	(3)) Erythrocyanin	(4)	Cyanin	
98.	Cleavage in Balanc	oglossus is :				*	
	(1) Holoblastic	(2) Meroblastic	(3) Teloblastic	(4)	Spiral	
00			2073			• 196	
99.	(1) 70	eight of an amino aci		a typicai gioduia	100000000000000000000000000000000000000	90	
				, 100	(-)		
00.		on of protein involve		5 W - 5			
		d change in the prote					
		age of the peptide bo					
		fication of certain an	nino	acids			
	(4) Increase in its	isoelectric point					

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CPG-EE-2019 (Life Sciences)-(SET-Y)

			Sr. No.	10900
Time : 1½ Hours	Total Questi	ions : 100		Max. Marks : 100
Roll No. (in figures)	(in words)			
Candidate's Name			Date of Birth-	
Father's Name ——————		Mother's Name		
Date of Exam :	•			
(Signature of the Candidate)		· -	(Signature	of the Invigilator)

CANDIDATES MUST READ THE FOLLOWING INFORMATION/INSTRUCTIONS BEFORE STARTING THE QUESTION PAPER.

- 1. All questions are *compulsory* and carry equal marks. The candidates are required to attempt all questions.
- 2. The candidate *must return* this question booklet and the OMR Answer-Sheet to the Invigilator concerned before leaving the Examination Hall, failing which a case of use of unfairmeans / misbehaviour will be registered against him / her, in addition to lodging of an FIR with the police. Further the answer-sheet of such a candidate will not be evaluated.
- **3.** Keeping in view the transparency of the examination system, carbonless OMR Sheet is provided to the candidate so that a copy of OMR Sheet may be kept by the candidate.
- 4. Question Booklet along-with answer key of all the A, B, C and D code shall be got uploaded on the University Website immediately after the conduct of Entrance Examination. Candidates may raise valid objection/complaint if any, with regard to discrepancy in the question booklet/answer key within 24 hours of uploading the same on the University website. The complaint be sent by the students to the Controller of Examinations by hand or through email. Thereafter, no complaint in any case will be considered.
- 5. The candidate *must not* do any rough work or writing in the OMR Answer-Sheet. Rough work, if any, may be done in the question booklet itself. Answers *must not* be ticked in the question booklet.
- 6. Use only black or blue ball point pen of good quality in the OMR Answer-Sheet.
- 7. There will be negative marking. Each correct answer will be awarded one full mark and each incorrect answer will be negatively marked for which the candidate will get ¼ Mark (0.25 Mark) discredit. Cutting, erasing, overwriting and more than one answer in OMR Answer-Sheet will be treated as incorrect answer.
- 8. Before answering the questions, the candidates should ensure that they have been supplied correct & complete question booklet. Complaints, if any, regarding misprinting etc. will not be entertained 30 minutes after starting of the examination.

CPG-EE-2019(Life Sciences)-(SET-Y)/(D)

	1.	microinjection method for gene transfer in			
		(1) Intact cells are used(2) Method is universal in its application is or absence of cell wall	rrespective of all shape, size, type, presence		
		(3) Genes can be transferred to many cells(4) All of the above	simultaneously		
	2.	Recombinant live attenuated vaccine again (1) Plasma of infected individual	st hepatitis B was prepared from:		
		(2) Recombinant yeast expressing hepatitis(3) Recombinant vaccinia virus expressing(4) Transgenic plants expressing hepatitis	hepatitis B surface antigen		
	3.	A THE STATE OF THE	rs preferentially infects nerve cells? Retrovirus Adenovirus		
	4.				
	5.		is: 2) Endodermal in origin 4) Epidermal in origin		
	6.	The second of th	2) Parathyroid hormone 4) Gastrointestinal hormones		
	7.	In sporophytic self incompatibility, rejectivel of:	tion of the male gametophyte occurs at the		
		(1) Ovary	2) Stigma surface		
		(3) Stylar canal	4) Transmitting tract of the stigma		
CP	G-1	EE-2019/(Life Sciences)-(SET-Y)/(D)	P. T. O.		

	8.	Primary function of allantois is to serve as:							
		(1) Nutritive organ	(2) Embryonic excretory organ						
		(3) Embryonic protective layer	(4) Embryonic respiratory organ						
	9.	include:							
		(1) Companion cells & tracheids	(2) Fibres & Sieve tubes						
		(3) Companion cells & Vessels	(4) Tracheids & Vessels						
	10.	The latex cells differ from the latex ves	sels in :						
		(1) They are formed due to cell fusion							
		(2) They fuse with other latex cells to f	form a network						
		(3) They usually anastomose and are also known as articulated latisifers							
		(4) They never fuse with other latex cells to form a network							
	11.	The accumulation of one of the following	ng causes seed dormancy:						
		(1) Cytokinin (2) Auxin	(3) Abscisic acid (4) Gibberllins						
	12.	In photomorphogenesis following pigm	ent plays a key role:						
		(1) Chlorophyll (2) Phytochrome	(3) Cytochrome (4) Anthocyanin						
	13.	Which of the following properties of win the capillary spaces of plants?	vater is most directly related to its ability to rise						
		(1) Neutral pH	(2) High density						
		(3) Low compressibility	(4) High surface tension						
 14. When a electric current is passed through the water containing amoeba? (1) Amoeba moves faster (2) Amoeba ceases all activities (3) Amoeba drifted along flowing water (4) Amoeba stop moving & become globular by withdrawl of pseudopodia 									
	15.	Self conjugation in paramecium is calle	ed:						
		(1) Endomixis	(2) Autogamy						
		(3) Cytogamy	(4) Rejuvenation						
C	PG-1	EE-2019/(Life Sciences)-(SET-Y)/(D)							

16.	Coral island with sh (1) Coral reef	allow central lake is (2) Lagoon		Atoll	(4)	Corallite
17.	Respiratory pigmen (1) Haemoglobin	t in Nereis is : (2) Haemocyanin	(3)	Erythrocyanin	(4)	Cyanin
18.	Cleavage in Balano; (1) Holoblastic	glossus is: (2) Meroblastic	(3)	Teloblastic	(4)	Spiral
19.	Mean molecular we (1) 70	eight of an amino acid		typical globula 150		tein is:
20.	(1) Conformational(2) Random cleava	on of protein involved change in the proteing ge of the peptide bor ication of certain ame soelectric point	n nds	acids		
21.	If the garden pea h trisomics could the			ts diploid comp		ent, how many double
22.	In prokaryotes, the	lagging primers are r	emo	ved by :		
	(1) 3' to 5' exonucle			DNA ligase		
	(3) DNA polymera	se I	(4)	DNA polymera	se II	I
23.	Satellite DNA cons	ists of:				
	(1) Extrachromoso	mal DNA	(2)	Short repetitive	nuc	leotide sequences
	(3) Ribosomal RNA	A gene	(4)	Single gene reg	gions	}
24.		NA is digested into ich of the following			kb	in size, denatured and
	(1) All fragments v	will renature at the sa	me r	ate.		
	(2) Fragments com	posed largely of repo	etitiv	e DNA sequenc	e wil	Il renature fastest.
	_		_		uenc	e will renature fastest.
	(4) Fragments with	high A: T content v	will r	enature fastest.		

CPG-EE-2019/(Life Sciences)-(SET-Y)/(D)

25.	Which of the following enzymes does not (1) RNA dependent DNA polymerase (2) DNA dependent DNA polymerase (3) DNA dependent RNA polymerase (4) Taq. DNA polymerase	ot require a primer?					
26.	A method to detect whether two mutations are located on the same gene or difference is:						
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	(3) hfr mapping	(4) Karyotyping					
27.	Vessels and companion cells are the char	racteristic features of:					
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,	(3) Control over the use of pesticides	(4) Control of noise pollution					
31.	The bracketed key for determine subclaarranged:	ass, is based on the principle where leads are					
	(1) Parallely (2) Diagonally	(3) Horizontally (4) Vertically					
32.	Which of the following best describes a	fern gametophyte?					
	(1) It cells are haploid	(2) It lacks chlorophyll					
	(3) It is tough and woody	(4) It is larger than sporophyte					
CPG-F	EE-2019/(Life Sciences)-(SET-Y)/(D)						

33.	Periderm includes:							
	(1) Phelloderm, co	llenchyma and cortex	X.					
	(2) Phellem, cambi	um and cortex						
	(3) All the tissues l	between epidermis an	ıd pi	th				
	(4) Phellogen, phellem and phelloderm							
34.	Apospory is the dev	velopment of an offsp	ring	from the:				
	(1) Cell of nucleus		(2)	Synergids or an	tipodals			
	(3) Haploid female	gamete	(4)	Haploid micros	pore			
35.	. Which ion plays an important role in po			ollen tube growth?				
	(1) Calcium	(2) Chlorine	(3)	Magnesium	(4) Sulphate			
36.	Which of the follow	ving orders, consists	entir	ely of fossil repr	esentatives?			
	(1) Lepidodendrale	es	(2)	Selaginellales				
	(3) Lycopodiales		(4)	Isoetales				
37.	Which plant is know	wn as 'maiden hair tr	ee' ?					
	(1) Pinus	(2) Cycas	(3)	Gnetum	(4) Ginkgo			
38.	Correlation amongs	st individuals with re	egard	to their evolution	onary history is calle	ed:		
	(1) Phenetic relation	onship	(2)	Cladistic relation	onship			
	(3) Chronistic rela	tionship	(4)	Phylogentic rela	ationship			
39.	Members of which	group are not deuter	rosto	mes:				
	(1) Chordates		(2)	Echinoderms				
	(3) Arthropods		(4)	None of these,	all are deuterostome	es		
40.	Vertebrates and tur	nicates share:						
	(1) Jaws adopted f							
	(2) High degree of	cephalization tructures from the ne	ural	crest				
	18 1 E 1	nd a dorsal hollow ne						
41.		artial pressure of CC						
	(1) Exhaled gas	areas probbase or co		Alveolar gas				
	(3) Systemic arter	al blood	(4)	Systemic venor	us blood			
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42.	High doses of antibiotics can destroy the result in impaired:	ne bacterial flora of the large intestine. Th	is ca
	(1) Absorption of protein	(2) Blood coagulation	
	(3) Bone resorption	(4) Respiratory control	
43.	Cerebellum of brain is concerned with: (1) Static balance (2) Initiation of muscular contraction (3) Regulation of body posture & equility (4) Coordination of muscular movements	ibrium	
44.	Cutting the posterior root of a spinal nerval. (1) Impair motor control of skeletal must. (2) Interfere with the flow of sensory impairs (3) Interfere with the ability of brain to the control of CSF.	npulses transmit impulse	a p
45.	Kupffer's cells in liver are:		
	(1) Adipose cells (2) Phagocytic cells	ls (3) Blood cells (4) Regenerative ce	ells
46.	Highest concentration of urea is found in	n:	
	(1) Renal vein(3) Dorsal aorta	(2) Hepatic portal vein(4) Hepatic vein	
47.	Magnitude of current just sufficient to ex	excite a nerve or muscle is called:	
		(3) Subliminal (4) None of the abo	ove
48.	In bees, pollen basket is present in :(1) Prothoracic legs(3) Metathoracic legs	(2) Mesothoracic legs(4) Both meso and metathoracic legs	
49.	Kala-azar is caused by:		
	(1) Leishmania (2) Leptomonas	(3) Trypanosoma (4) Plasmodium	
50.	Which of the following does <i>not</i> have a		
		(3) Mosquito (4) Silk moth	
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51.	Most of the free fatty acids are transport	ed in the blood:
	(1) Inside the RBCs	(2) As lipoproteins
	(3) Combined with glucose	(4) Bound to albumin
52.	Enzyme glutathione peroxidase catalyse	s destruction of H_2O_2 , contains:
	(1) Zn (2) Fe	(3) Se (4) Mo
53.	Which of the following processes does n	ot involve cytochrome C in plants?
	(1) Oxidative phosphorylation	(2) Electron Transport
	(3) TCA cycle	(4) Apoptosis
54.	Organic constituents of protoplasm are:	
	(1) Carbohydrates & Proteins	(2) Nucleotids & lipids
	(3) Hormones & Vitamins	(4) All of the above
55.		
JJ.	Which characteristic is undesirable in cl. (1) Self replicating	oning vectors?
	(2) High copy number	
	(3) Vulnerable at several sites to a restri	ction enzyme
	(4) Small in size	
56.	A reporter gene is used to:	
	(1) Identify regulatory sequences from	he upstream regions of other genes
	(2) Determine if a protein binds to a give	en sequence element
	(3) Determine if a gene contains introns	
	(4) Determine the stability of a protein	
57.	Genomic library is:	
	(1) Collection of recombinant molecule organism.	s with inserts that contain all of the genes of an
	(2) Collection of recombinant molecule	s with inserts that contain all of an organism's

(3) Collection of recombinant molecules that express all of the genes of the organism.

(4) Collection of recombinant molecules that have been sequenced.

58.	RFLP analysis is a technique that:
	(1) Uses hybridization to detect specific DNA restriction fragments in genomic DNA.
	(2) Used to determine whether a gene is transcribed in specific cells.
	(3) Measure the transfer frequency of genes during conjugation.
	(4) Used to detect genetic variation at the protein level.
59.	Simple tandem repeat polymorphisms in humans are most useful for: (1) Solving criminal and paternity cases.
	(2) Reconstructing the relationships of humans & chimps.
	(3) Estimating relationships of humans & Neanderthals.
	(4) Transferring disease resistance factors into bone marrow cells.
60.	Transgenic plants are easier to produce than animals:
	(1) Plants can more easily be grown from single cultured cells into which foreign DNA has been introduced.
	(2) Plant DNA is easier to clone.
	(3) Plant cells can be transformed by bacterial infection.
	(4) DNA passes more readily through the plant cell wall then through the animal cell membrane.
61.	The vascular cambium is absent in:
	(1) Dicots (2) Monocots
	(3) Vascular crytogams (4) Both (2) & (3)
62.	The wall of parenchyma is composed of:
	(1) Suberin (2) Cutin
	(3) Calcium pectate (4) Calcium phosphate
63.	Which group of plants have their root system composed entirely of adventitious roots?
	(1) Bryophytes (2) Pteridophytes
	(3) Gymnosperms (4) Angiosperms
64.	In which of the dicot, there is no heart wood?

(2) Morus (3) Tamarix (4) Fraximus

(1) Populus

65.	Scientific study of	true, bony fishe	es is:			
	(1) Ornithology	(2) Ichthyolo	ogy (3)	Pisciculture	(4) Aquaci	ulture
66.	The uredospore stag	ge of Puccinia	is called the	e:		
	(1) Black rust stage	e .	(2)	Red rust stage		
	(3) Brown rust stag	ge	(4)	Leaf rust stage		
67.	In necrosis, the deperforations called		e leaf spot	may fall out le	aving circul	ar or irregular
*	(1) Loop holes	(2) Shunt ho	les (3)	Shot holes	(4) Sclerot	ic holes
68.	Which of the follow (1) Digitalin	wing drugs is of (2) Chamom		m flowers? Curave	(4) Aconit	e
69.	Compared with sys	tematic arterial	l blood, pul	monary arterial	blood has a	higher:
	(1) O_2 content	(2) pH		HCO_3 ions	(4) Hb con	
70.	In an electrocardiog (1) Depolarisation (3) Depolarisation	of atria	(2)	Presents the : Repolarisation Repolarisation		
71.	Wings of insects an	nd the wings of	bats repres	ent a case of:		
	(1) Divergent evolution	ution	(2)	Convergent evo	olution	
	(3) Parallel evoluti	on	(4)	Neutral evolution	on	
72.	Which prehistoric h	numan had alm	ost same cr	anial capacity a	s that of mod	lern man?
	(1) Neanderthal ma	an	(2)	Peking man		
	(3) Java ape man		(4)	Australopithecu	ıs man	
73.	Which of the follow		ve no evolu	tionary significa	ance?	
	(1) Analogous orga			Atavistic organ		
	(3) Non-functional	organs	(4)	Functional orga	ans	
74.	On receiving the reground state to excitate (1) Excited singlet	ited state. This	activated s	tate is called:		changed from
	(3) Phosphorescene			Excited triplet	Sidic	
*! 				Flurorescence		
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75.	Rhizobium fixes atmospheric nitrogen to	ammonia in the presence of pigment called:
	(1) Xanthophyll (2) Leghemoglobin	(3) Hemoglobin (4) Phycobilin
76.	Which of the following are referred to as	diageotropic?
	(1) Secondary roots	(2) Stems
	(3) Leaves	(4) Rhizomes
77.	The mechanism of ATP formation in chl	oroplast is explained by:
	(1) Relay Pump theory of Godlewski	(2) Cholodny Went's model
	(3) Chemiosmotic theory	(4) Munch's pressure/mass flow model
78.	Root pressure is a/an:	
	(1) Non-osmotic phenomenon	(2) Osmotic phenomenon
	(3) Positive hydrostatic pressure	(4) More than one statement is true
79.	Most of the water taken up by the plant i	s:
	(1) Split during photosynthesis as a sour	rce of electorns and hydrogen.
	(2) Lost by transpiration through stomat	ca.
	(3) Absorbed by cells during their elong	gation.
	(4) Incorporated directly into organic m	aterial.
80.	Carnivorous adaptation of plants mainly content of:	y compensate for soil that has a relatively lov
	(1) Potassium (2) Nitrogen	(3) Phosphate (4) Calcium
81.	Dorsal fins are absent in:	
	(1) Myxine	(2) Petromyzon
	(3) Lampetra	(4) Ichthyomyzon
82.	The longest part of the frog alimentary of	canal is:
	(1) Oesophagous	(2) Small intestine
*	(3) Ileum	(4) Rectum
83.	Down feathers of Columba are also calle	d as:
	(1) Remiges (2) Plumules	(3) Pennae (4) Pin feathers
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84.	Night blindness in rabbit is associated w	rith:
	(1) Very high level of rhodopsin	(2) Low level of rhodopsin
	(3) High level of vitamin A	(4) None of the above
85.	In which of the following skull is heavie	er than the rest of the animal body?
	(1) Dogfish (2) Pigeon	(3) Frog (4) Rabbit
86.	Following statement about Cyclostomat (1) Lack of paired appendages (3) No stomach in digestive system	(2) Jaws are absent
87.		minant trait and white is recessive trait. A black ix black offspring. The probability that a nance alone is approximately:
	(1) 50%	
	(2) 25%	
	(3) 1%	
	(4) Cannot be determined from the info	rmation
88.	The kind of polyploidy usually arisin ploidy level is known as:	g by crossing between organisms of different
88.		g by crossing between organisms of different (2) Primary polyploid
88.	ploidy level is known as:	
88. 89.	ploidy level is known as: (1) Autoploid (3) Secondary polyploid	(2) Primary polyploid(4) Pentaploida normal couple produces an albino child, what
	ploidy level is known as: (1) Autoploid (3) Secondary polyploid Albinism is a recessive human trait. If	(2) Primary polyploid(4) Pentaploida normal couple produces an albino child, whatll be albino ?
	ploidy level is known as: (1) Autoploid (3) Secondary polyploid Albinism is a recessive human trait. If is the probability that their next child with the probability that the probability the probability that the probability the probability that the probability that the probability that the probab	 (2) Primary polyploid (4) Pentaploid a normal couple produces an albino child, what ll be albino? (3) 1/16 (4) 1/64 a cross-shaped configuration during meiotic
89.	ploidy level is known as: (1) Autoploid (3) Secondary polyploid Albinism is a recessive human trait. If is the probability that their next child with the probability that the probability t	 (2) Primary polyploid (4) Pentaploid a normal couple produces an albino child, what ll be albino? (3) 1/16 (4) 1/64 a cross-shaped configuration during meiotic
89.	ploidy level is known as: (1) Autoploid (3) Secondary polyploid Albinism is a recessive human trait. If is the probability that their next child with their next child with the properties of	 (2) Primary polyploid (4) Pentaploid a normal couple produces an albino child, what ll be albino? (3) 1/16 (4) 1/64 a cross-shaped configuration during meiotic for a :
89.	ploidy level is known as: (1) Autoploid (3) Secondary polyploid Albinism is a recessive human trait. If is the probability that their next child with their next child with the probability that th	 (2) Primary polyploid (4) Pentaploid a normal couple produces an albino child, what ll be albino? (3) 1/16 (4) 1/64 a cross-shaped configuration during meiotic for a: (2) Deletion
89. 90.	ploidy level is known as: (1) Autoploid (3) Secondary polyploid Albinism is a recessive human trait. If is the probability that their next child with their next child with their chromosomes synapse into prophase, the organism is heterozygous (1) Pericentric inversion (3) Translocation	 (2) Primary polyploid (4) Pentaploid a normal couple produces an albino child, what ll be albino? (3) 1/16 (4) 1/64 a cross-shaped configuration during meiotic for a: (2) Deletion
89. 90.	ploidy level is known as: (1) Autoploid (3) Secondary polyploid Albinism is a recessive human trait. If is the probability that their next child with their next child with their next child with the probability that the probabilit	 (2) Primary polyploid (4) Pentaploid a normal couple produces an albino child, what ll be albino? (3) 1/16 (4) 1/64 a cross-shaped configuration during meiotic for a: (2) Deletion (4) Paracentric inversion

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92.	In the cAMP pathway, the G-protein stimulates:				
	(1) Phospholipase C	(2) Adenylate			
	(3) The Endoplasmic reticulum	(4) Calmodulin			
93.	Each ribosome consists of two unequal s	subunits of composition:			
	(1) RNA and Protein	(2) RNA and carbohydrates			
	(3) Only RNA	(4) Proteins and DNA			
94.	Which of the following is a cell adhesion	n molecule ?			
	(1) Integrin (2) Lysine	(3) Myosin (4) Keratin			
95.	Proto-oncogenes are:				
	(1) Oncogens found in transforming retr	roviruses			
	(2) Oncogenes present in protozoa				
	(3) Genes encoding oncogenes related p	proteins in extinct organisms			
	(4) Cellular genes encoding proteins rel	ated to viral oncogenes			
96.	Plane of formation of cell plate in plant	cell is governed by :			
	(1) Phragmoplast (2) Microtubules	(3) Nucleus (4) Centriole			
97.	Which of the following is an example of	f chemolithoautotroph?			
	(1) Sulphur-oxidising bacteria	(2) Hydrogen bacteria			
	(3) Nitrifying bacteria	(4) All of these			
98.	Mycoplasma are not inhibited by penici	llin because they:			
ſ	(1) produce penicillinase	(2) are gram-positive			
	(3) are gram-negative	(4) do not have a cell wall			
99.	The protoplast of the cork cells, in the re	oot, secretes a fat like substance, called:			
	(1) Lignin (2) Cutin	(3) Suberin (4) Cellulose			
100.	Which of the following algae belongs to (1) Nostoc (2) Polysiphonia	the tubular series? (3) Vaucheria (4) Pandorina			

Answer	key of LIFE S	CIENCE (Cent	ralized Entranc	e Exam 2019
Question				
No.	Α	В	С	D
1	3	1	2	4
2	2	1	1	2
3	1	4	1	3
4	1	1	1	3
5	4	1	2	1
6	2	1	4	1
7	4	4	3	2
8	4	2	4	4
9	3	3	2	4
10	3	4 .	2	4
11	1	1	1	3
12	1	2	3	2
13	4	4	2	4
14	1	2	2	4
15	1	2	1	2
16	1	4	4	3
17	4	2	1	1
18	2	3	3	1
19	3	1	1	2
20	4	2 .	3	1
21	1	4	3	4
22	3	2	2	3
23	2	3	1	2
24	2	3	1	2
25	1	1	4	3
26	4	1	2	2
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29	1	4	3	3
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31	4	3	1	1
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33	2	4	4	4
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36	2	3	4	1
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42	1	3	3	2
43	1	2	3	4
44	1	2	4	2
45	2	3	3	2
46	4	2	1	4
47	3	2	2	2
48	4	2	1	3
49	2	3	1	1
50	2	2	1	2
51	3	1	4	4

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Question	ey of LIFE 3	CIENCE (Centi	ralized Entranc	e Exam 2019
No.	۸	В	С	D
52	A	3	3	3
53	4	2	2	3
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57				1
58	1	1	2	2
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59	2	1	3	1
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62	3	. 1	2	3
63	3	1	3	2
64	. 4	1	3	1
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84	1	1	1	2
85	2			
86	2	2	1	1
			1	4
87	3	4	4	1
88	2	4	2	3
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90	3	3	4	3
91	1	4	3	3
92	2	3	2	2
93	4	2	4	1
94	2	1	4	1
95	2	2	2	4
96	4	2	3	2
97	2	3	1	4
98	3	. 2	1	4
99	1	2	2	3
100	2	3	1	3

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Sylvaders

Lata

Lata