superaluation for the	Anuly Rocale 1115 (Total No. of printed p	
Sr. No Common f	ON BOOKLET BEFORE TIME OR UNTIL YOU ARE ASKED TO (PG-EE-2015) Subject : LIFE SCIENCE Code for all M. Sc. Course running under Faculty Science Except M. Sc. Forensic Science	DO SO)
Time: 1 ¹ / ₄ Hours	Max. Marks : 100 Total Question	ons : 100
Roll No.	_ (in figure) (i	n words)
	Father's Name :	- 1-
	Date of Examination	
(Signature of the candidate)	(Signature of the my	
CANDIDATES MUST INSTRUCTIONS BEFORM 1. All questions are computed 2. The second is the formation of the fore		TION/

- 2. The candidates must return the Question book-let as well as OMR answer-sheet to the Invigilator concerned before leaving the Examination Hall, failing which a case of use of unfair-means / misbehaviour will be registered against him / her, in addition to lodging of an FIR with the police. Further the answer-sheet of such candidate will not be evaluated.
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- 4. 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 book-let itself. Answers MUST NOT be ticked in the Question book-let.
- 5. There will be no negative marking. Each correct answer will be awarded one full mark. Cutting, erasing, overwriting and more than one answer in OMR Answer-Sheet will be treated as incorrect answer.
- 6. Use only Black or Blue <u>BALL POINT PEN</u> of good quality in the OMR Answer-Sheet.
- 7. BEFORE ANSWERING THE QUESTIONS, THE CANDIDATES SHOULD ENSURE THAT THEY HAVE BEEN SUPPLIED CORRECT AND COMPLETE BOOK-LET. COMPLAINTS, IF ANY, REGARDING MISPRINTING ETC. WILL NOT BE ENTERTAINED 30 MINUTES AFTER STARTING OF THE EXAMINATION.

Code-A

	Questions
1.	The enzyme involved in mRNA synthesis during transcription is called(1) Helicase(2) DNA ligase(3) RNA polymerase(4) DNA polymerase
2.	The coding sequences in eukaryotic DNA are known as :(1) Regulatory sequence(2) Exon(3) Intron(4) Muton
3.	DNA carries :(1) Positive charge(2) Negative charge(3) Neutral(4) None of the above
4.	 Which of the following is correct with regard to aneuploidy? (1) All aneuploid individuals die before birth (2) Inversion (3) 4n
	(4) $2n+1$
5.	The X-ray diffraction studies conducted by were key to the discovery of the structure of DNA. 1) Franklin (2) Meselson and Stahl
5.	The X-ray diffraction studies conducted by were key to the discovery of the structure of DNA. 1) Franklin (2) Meselson and Stahl 3) Chargaff (4) McClintock Which of the following is not needed for DNA transcription ?) DNA) Enzymes) Ribosomes

- - - - - A

Question No.	Questions
7.	Which of the following descriptions of chromosomes is not correctl matched?
	(1) Telocentric – there is only one chromosome arm.
	(2) Acrocentric – chromosome arms are identical in size
	(3) Metacentric – chromosome arms are almost equal in size.
	(4) Submetacentric – chromosome arms are slightly different in size
8.	The triplet code of CAT in DNA is represented as in mRNA an in tRNA.
	(1) CAT, CAT (2) GUA, CAU
	(3) GTA, CAU (4) GAA, CAT
9.	What is the probability that a male will inherit an X-linked recessive gen
	from his father ?
	(1) 25% (2) 50%
	(3) 75% (4) 0%
10.	Who demonstrated that genes are located on chromosomes ?
Iscover	(1) Meselson and Stahl (2) Watson and Crick
	(3) Morgan (4) Chargaff
11.	'DOTS' strategy is used to treat
	(1) HIV (2) Malaria
	(3) Tuberculosis (4) Hepatitis
12.	The most important route of transmission for hepatitis C is
	(1) Semen (2) Vaginal secretion
	(3) Saliva (4) Blood transfusion

uestion No.	Questions	ation ia.
13.	Holding method of pasteurization is carried out at	
	(1) 71.7°C for 15 seconds (2) 68.4°C for 30 minutes	
	(3) 64.1°C for 45 minutes (4) 62.8°C for 30 minutes	
14.	Serum can be sterilised by	
	(1) Autoclaving (2) Dry-heat sterilisation	
	(3) Membrane-filtration (4) Incineration	
15.	Widal test is widely used for the diagnosis of	
	(1) Bacillary dysentery (2) Tuberculosis	
	(3) Typhoid fever (4) Cholera	
16.	HAART strategy is used for the treatment of	
	(1) Hepatitis B (2) Syphilis	•
	(3) AIDS (4) Hepatitis C	
17.	The following bacterium is good example of photolithotrophs	
	(1) Rhodospirillum rubrum (2) Nitrosomonas europaea	
	(3) Pseudomonas pseudoflava (4) Chromatium okenii	
18.	Transduction was discovered by	
roter o	(1) Zinder and Lederberg	
	(2) Elie Wollman and Francois Jacob	
	(3) Luria and Delbruck	
	(4) Beadle and Tatum	
-FF	2015 (Life Science)Code-A(3)	

uestion No.	Questions		
19.	Flagellation type where a bacterial cell is having flagella all over its surfa		
	is (1) Amphitrichous (3) Lophotrichous (4) Peritrichous		
20.	A short stretch of RNA used to initiate replication is termed		
	(1) Promoter (2) Primer		
	(3) Primase (4) Replisone		
21.	Enzyme that joins the Okazaki fragments is		
	(1) Laccase (2) Ligase		
	(3) Helicase (4) Topoisomerase		
22.	Cytochrome C is a protein with		
	(1) Sulphate (2) Haeme		
	(3) Copper (4) Magnesium		
23.	Lipopolysaccharide is the crucial component of		
	(1) Gram-positive bacteria (2) Gram-negative bacteria		
	(3) Virus (4) Plant cell wall		
24.	Which type of library would you screen in order to identify the promot		
4	the hemoglobin gene		
	(1) Genomic library (2) Expression library		
	(3) cDNA library (4) None of the above		

No.	Questions
25.	 Which of the following is used to select genes of interest from genomic library? (1) Restriction enzymes (2) Cloning vectors
	(1) Restriction enzymes(2) Cloning vectors(3) DNA probes(4) Gene targets
26.	Which technique is used to resolve the different sizes of DNA fragment following a restriction enzyme digest ?
	(2) Control :
	(3) Gene cloning (4) PCR
27.	Which type of restriction endonuclease enzymes are most widely used in
	recombinant DNA technology?
	(1) Type I enzymes
	(3) Type III enzymes (3) All of the above
28.	Which technique can be used to investigate the transcripts of a gene ?
	(1) Southern blotting (2) Northern blotting
	(3) Western blotting (4) None of the above
29.	Crowngall disease is caused by
	(1) Racillus thuringiensis
(Bit of a	(2) Agrobacterium radiobacter
(3) Pseudomonas syringae
(4) Agrobacterium tumefaciens
	1

Question No.	Qu	estions
30.		is not a transgenic or genetically modified
	organism?	i rtsidu-
	(1) Sheep 'Dolly'	
	(2) Bt cotton	(a)
	(3) Bacteria that make hum	an insulin
gmonts	(4) Golden rice	evice reacting to reactive
31.	Plasmids can easily hold the	DNA of which of the following sizes :
	(1) 10 kb	(2) 50 kb
21	(3) 300 kb	(4) 600 kb
32.	LSD (lysergic acid) is obtained from	
	(1) Aspergillus niger	(2) Pencillium notatum
12.	(3) Claviceps purpurea	(4) Fusarium udum
33.	Which of the following algae	has "Plakea stage" in its life cycle ?
- 9 al	(1) Chlamydomonas	(2) Volvox
	(3) Vaucheria	(4) Batrachospermum
34.	Winged pollen grains are pro	esent in
	(1) Cycas	(2) Pinus
	(3) Ephedra	(4) Ginkgo
35.	Puccinia spores that are stalked, unicellular, oval and binucleate are o	
	(1) Uredospores	(2) Teleutospores
	(3) Basidiospores	(4) Pycniospores

No.			Questi	ons	hob
36.	The	e seedless vascular plan	ts are	on which is the state of the second state of t	
	(1)	Bryophyta	(2)	Pteridophyta	
	(3)	Gymnosperm	(4)	Angiosperm	
37.	Wh	ich of the following are t	the char	cacteristics of Gymnosperms ?	
	(a)	Naked ovules	(b)	Double Fertilization	
	(c)	Absence of tracheids	(d)	Haploid endosperm	
	(1)	(a) and (d)	(2)	(a) and (b)	
	(3)	(c) and (d)	(4)	(b) and (c)	
38.	Whi	ch of the following is not	t a stem	?	
	(1)	Potato	• (2)	Sweet Potato	
ce for e	(3)	Ginger	(4)	Onion	
				in the first of	
39.	In Ir	idia, most of herbaria are	e based	on which system of plant close	ant:
39.				on which system of plant classifi	cati
39.	(1)	idia, most of herbaria are Engler and Prantl's syst Bentham and Hooker's		on which system of plant classifi	catio
39.	(1) (2)	Engler and Prantl's syst		on which system of plant classifi	catio
39.	(1)(2)(3)	Engler and Prantl's syst Bentham and Hooker's		on which system of plant classifi	cati
	 (1) (2) (3) (4) 	Engler and Prantl's syst Bentham and Hooker's Hutshinson's system Takhtajan's system	zem	 (2) Starme Match correctly between solu Coharae (A) Fixtrome cold treatment 	46.
10.	 (1) (2) (3) (4) Trop. 	Engler and Prantl's syst Bentham and Hooker's Hutshinson's system Takhtajan's system	cem	on which system of plant classifi now high efficiency of CO_2 fixation CCA cycle	46.

PG-EE-2015 (Life Science)Code-A(7)

Question No.	Questions
41.	 The cell organelles associated with photorespiration are (1) Chloroplast, peroxisome and mitochondria (2) Chloroplast and peroxisome (3) Chloroplast and mitochondria (4) Peroxisome and mitochondria
42.	The conversion of ammonia into nitrite and nitrate is called(1) Nitrogen fixation(2) Denitrification(3) Nitrification(4) Ammonification
43.	If an organism is respiring in a bel jar filled with radio-labelled oxygen, the radioactivity will be detected in which product of respiration (1) CO_2 (2) H_2O (3) $C_6H_{12}O_6$ (4) CO_2 and H_2O
44.	The carbohydrates are transported from leaves to other parts of the plantsin the form of(2) Glucose(3) Sucrose(4) Cellulose
45.	Match correctly between column (A) and column (B)Column (A)Column (B)I.Extreme cold treatmentA.Ripening of fruitsII.Response to day lengthB.VernalizationIII.Apical dominanceC.PhotoperiodismIV.EthyleneD.Auxin(1)I-B, II-D, III-C, IV-A(2)I-B, II-C, III-D, IV-A(3)I-D, II-C, III-B, IV-A(4)I-C, II-B, III-A, IV-D

PG-EE-2015 (Life Science)Code-A(8)

uestion No.	Qu	iestions	.cM
46.	Monocot seed contains single	cotyledon which is known as	
	(1) Aleurone		
	(3) Scutellum	(4) Perisperm	
47.	The Central Potato Research	n Institute is located at	
eie	(1) Dehradun	(2) Delhi	
	(3) Shimla	(4) Coimbatore	
48.	The edible part of litchi is me	orphologically	
	(1) Fleshy thalamus	(2) Mesocarp	
	(3) Aril	(4) Endosperm	
49.	Match list I with list II	8) Protomophily (6) (6)	
	List I	List II	1
	I. Fibre	A. Arachis hypogea	
	II. Oil	B. Corchorus capsularis	
	III. Timber	C. Curcuma longa	
	IV. Spice	D. Tectona grandis	
	(1) I-B, II-A, III-D, IV-C	(2) I-B, II-C, III-D, IV-A	
	(3) I-C , II-A, III-B, IV-D	(4) I-D, II-B, III-C, IV-A	
50.	The condition where a bisex	cual flower does not open is called	
	(1) Allogamy	(2) Xenogamy	
	(3) Geitonogamy	(4) Cleistogamy	

PG-EE-2015 (Life Science)Code-A(9)

Question No.	Questions				
51.	If an endosperm of an angiosperm has 18 chromosomes what would be the number of chromosome in megaspore mother cell of the same plant ?				
	(1) 6 (2) 12				
	(3) 18 (4) 24				
52.	Fertilization in which male gametes are carried through pollen tube is				
43.	(1) Syngamy (2) Siphonogamy				
	(3) Chalazogamy (4) Poroġamy				
53.	Pollination through air is termed as				
	(1) Anemophily (2) Cheiropterophily				
	(3) Entomophily (4) Ornithophily				
54.	The female gametophyte of typical dicot plant at the time of fertilization is				
	(1) 6-celled (2) 7-celled				
	(3) 8-celled (4) 4-celled				
55.	Development of 'seedless fruits' is called'				
	(1) Parthenogenesis (2) Parthenocarpy				
	(3) Polyembryony (4) Apomixis				
56.	What is the general term used to describe the degradation of pollutants				
	using a biological approach ?				
	(1) Biodegradation (2) Bioaugmentation				
	(3) Bioremediation (4) Biostimulation				

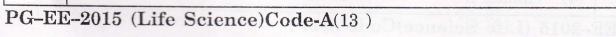
PG-EE-2015 (Life Science)Code-A(10)

Question No.	Questions				
57.	Biological magnification of DDT will affect the most at which tropical leve				
	(1) First tropical level (2) Second tropical level				
	(3) Third tropical level (4) Fourth tropical level				
58.	VAM (vesicular arbuscular mycorrhizae) are important for the plants t				
	supply from soil				
	(1) Phosphate (2) Nitrogen				
apidin.	(3) Iron (4) Potassium				
59.	CNG is				
	(1) Carbonitrogen (2) Complete nitrogen gas				
Nexo an	(3) Compressed natural gas (4) Coal nitrogen gas				
60.	In coming years, the skin diseases will be more common due to				
	(1) Increase in air pollution, (2) Increase in CO,				
	(3) Excess use of detergent (4) Depletion of ozone				
61.	Red data book provides data on				
	(1) Biota of red sea				
	(2) Effect of red light on photosynthesis				
	(3) Red pigmented plants				
	(d) Cytosine (d) Thymine				
	Threatened species				
62.	A species inhabiting different geographical areas is known as				
	(1) Sympatric (2) Sibling				
	(3) Allopatric (4) Allelopathy				
	-2015 (Life Science)Code-A(11)				

Question No.	Qu	estio	ons		
63.	"Theory of spontaneous generation" was proposed by				
	(1) Charles Darwin	(2)	Louis Pasteur		
	(3) Oparin and Haldane	(4)	Hugo de Vries		
64.	Development of resistance aga	ainst	DDT by mosquito is an example of		
	(1) Natural selection	(2)	Variation		
	(3) Adaptation	(4)	Isolation		
65.	Who gave the statement that than the food supply	popt	ulation tends to multiply more rapidly		
	(1) Malthus	(2)	Darwin		
	(3) Lamark	(4)	Cope		
66.	In which one of the following p its effect ? (1) G1 (3) S)hase (2) (4)	es of cell cycle, the drug colchicine exert G2 M		
67.	The most storage polysacchar	ide of	f animal cell is		
	(1) Starch	(2)	Chitin		
	(3) Glycogen	(4)	Glycan		
68.	Pyrimidines in RNA are				
	(a) Adenine	(b)	Uracil		
	(c) Cytosine	(d)	Thymine		
- 196.	(e) Guanine		62. 1 A species in babinov different		
	(1) (a) and (b)	(2)	(b) and (c)		
	(3) (a) and (e)	(4)	(c) and (d)		
DO DD	2015 (Life Saiamae) Code	A / 4 -			

PG-EE-2015 (Life Science)Code-A(12)

Question No.					
69.	An inorganic ion required for the activity of an enzyme is known as				
	(1) Activator	(2) Cofactor			
	(3) Coenzyme	(4) Holoenzyme			
70.	End product of aerobic glyco	lysis is			
	(1) Acetyl CoA	(2) Lactate			
	(3) Pyruvate	(4) CO_2 and H_2O			
71.	Enzymes of hexose monopho	sphate shunt are present			
	(1) Mitochondria	(2) Cytosol			
	(3) Lysosomes	(4) Microsomes			
72.	A digestive secretion that do	es not contain any digestive enzyme is			
	(1) Saliva	(2) Castric juice			
	(3) Pancreatic juice	(4) Bile			
73.	Primary structure of a prote	in is formed by			
	(1) Hydrogen bond	(2) Peptide bond			
	(3) Disulphide bond	(4) All of the above			
74.	The Centriols have	so. The obetosenertive present, rhodor			
	(1) RNA				
	(2) DNA	G-minuteV (1)			
	(3) Microtubules				
	(4) None of these				



uestion No.	Questions			
75.	The following is a polyunsaturated fatty acid			
	(1) Palmitic acid (2) Palmitoleic acid			
	(3) Linoleic acid (4) Oleic acid			
76.	A hormone used for detection of pregnancy is			
	(1) Estrogen (2) Progesterone			
	(3) Oxytocin (4) Chorionic gonadotropin			
77.	Insulin increases			
	(1) Glycogenesis (2) Gluconeogenesis			
	(3) Lipolysis (4) Blood glucose			
78.	Mammary glands are the modification of			
	(1) Sebaceous glands (2) Sweat glands			
	(3) Meibomian glands (4) Perineal glands			
79.	Sinus venosus is not present in the heart of			
	(1) Fish (2) Amphibian			
	(3) Reptile (4) Mammal			
80.	The photosensitive pigment, rhodopsin which is present in rods of eye is			
	synthesised from			
	(1) Vitamin-D			
	(2) Vitamin-A			
	(3) Vitamin-B			
	(4) Vitamin-E			

PG-EE-2015 (Life Science)Code-A(14)

Question No.	Questions				
81.	The amount of air that moves in and out of the lungs with each norma				
		and expiration			
Saute	(1) Tidal c	apacity	(2)	Vital capacity	
	(3) Tidal v	olume	(4)	Residual volume	
82.	Schizocoel i	s present in	an colo	and an amount in a state of the	
	(1) Frog		(2)	Pila	
	(3) Herdm	ania	(4)	Balanoglossus	
83.	Uricotelic er	xcretion is ma	inly an a	laptation for	
		vation of urea			
		g osmotic conc			
	(3) Conser	vation of wate	r	Name of the second start of the	
	(4) Storage	e of waste mat	erials		
84.	Match list I	correctly with	list II		
	List I	in the		List II	
	I. Planaria	a	А.	Greengland	
	II. Earthwe	orm	B.	Malpighian tubes	
	III. Prawn		C.	Nephridia	
	IN Scorpion	n	D.	Flame Cell	
	1				
		C, III-A, IV-B	(2)	I-B, II-C, III-D, IV-A	

PG-EE-2015 (Life Science)Code-A(15)

Question No.	Questions				
85.	The flow of blood in the veins is at				
	(1) Atmospheric pressure	(2)	Low pressure		
	(3) High pressure	(4)	Initially high and then low pressure		
86.	Flagellated larvae of sponges	is			
	(1) Glochidium	(2)	Amphiblastula		
	(3) Trochophore	(4)	Miracidium		
87.	Homocercal tail is present in		XO		
	(1) Electric ray	(2)	Shark		
	(3) Lung fish	(4)	Teleosts		
88.	Which one of the following is not a fish ?				
	(1) Silver fish	(2)	Lungfish		
	(3) Gold fish	(4)	Flying fish		
89.	Notochord like structure in buccal region of hemichordates is				
	(1) Protochord	(2)	Stomochord		
	(3) Pallium	(4)	Mantle		
90.	'Crop' in birds is		and a state of the state of the state		
	(1) Rectum				
	(2) Modified stomach				
	(3) Modified oesophagus		H-VI A-III O-I ALE IO		

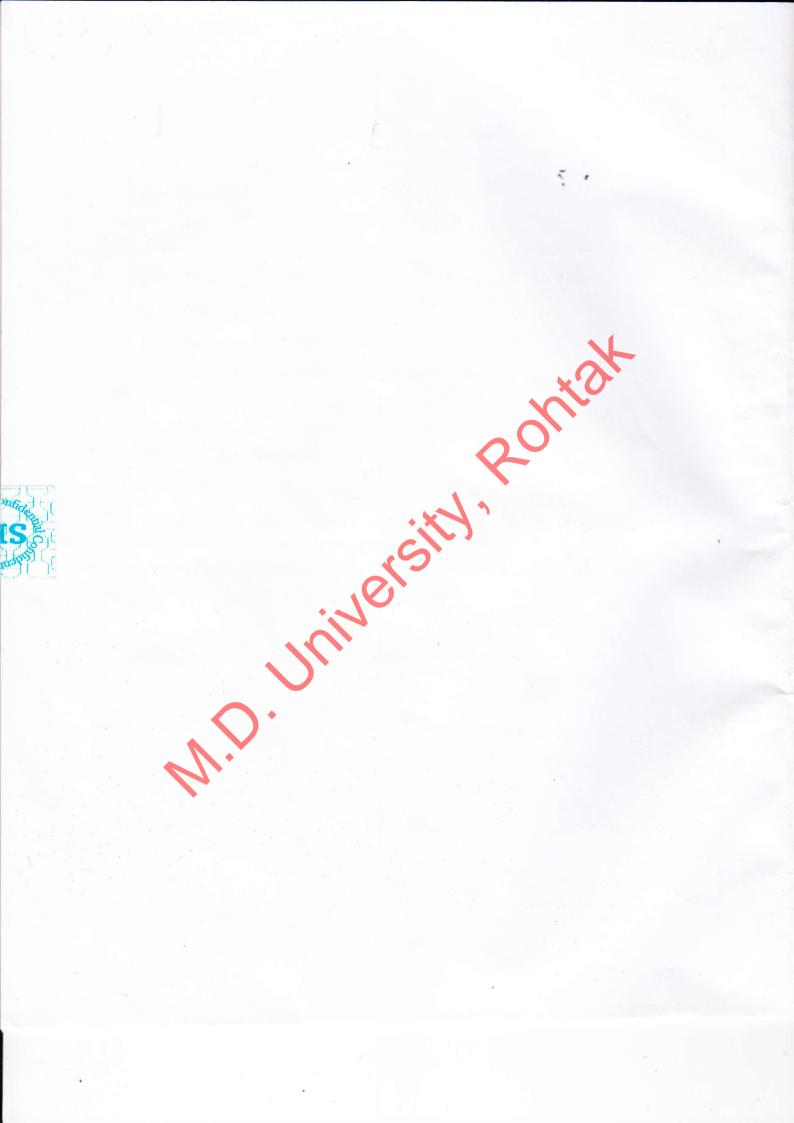
PG-EE-2015 (Life Science)Code-A(16)

Question No.	Questions	00000
91.	Sperm capacitation takes place in(1) Epididymis(2) Seminal vesicles(3) Female genital tract(4) Testis	
92.	Graafian follicles are found in(1) Thyroid(2) Spleen(3) Ovary(4) Kidney	2
93.	Extra-embryonic membranes are absent in embryo of(1) Fish(2) Reptile(3) Bird(4) Mammal	
94.	 The presence of gray crescent is a characteristic of (1) Fertilized egg of frog (2) Unfertilized egg of frog (3) Fertilized egg of reptile (4) Fertilized egg of mammal 	
95.	Sexual reproduction in larval stage is called(1) Parthenogenesis(2) Abiogenesis(3) Neoteny(4) Paedogenesis	
	 Rearing of earthworm is called (1) Apiculture (2) Silviculture (3) Vermiculture (4) Pisciculture 	

PG-EE-2015 (Life Science)Code-A(17)

uestion No.	Questions	E-MARKET CO
97.	Sting is a modified ovipositor in	
	(1) Centipede (2) Millipede	
	(3) Honey bee (4) Scorpion	
98.	DNA finger printing is based on the presence in DNA of	
	(1) Constant number of tandem repeats	
	(2) Variable number of tandem repeats	
	(3) Non-repetitive sequences in each DNA	
	(4) Introns in eukaryotic DNA	
99.	PCR was discovered by	
	(1) Kary Mullis (2) Francis Crick	
	(3) Hershey and Chase (4) Rosalind Franklin	MECHANIC
100.	The pH of a plant tissue culture medium is usually maintained at	
	(1) 7.0 (2) 5.8	
	(3) 4.0 (4) Any between 4-14	
IBMORINE OBJECT BULLET BUILT		
	(2) Siltionitane element (2) Siltionitane	
	(3) Vormieuture	
	(4) Planaulture (4) Planaulture (4)	

PG-EE-2015 (Life Science)Code-A(18)



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Sr. No Common for	(PG-EE-2015) ubject : LIFE SCIE or all M. Sc. Course running cience Except M. Sc. Forer	ENCE Code B
Time: 1¼ Hours	Max. Marks : 100	Total Questions : 100
Roll No	(in figure)	(in words)
Name :	Father's Nam	e:
Mother's Name	Date o	f Examination
(Signature of the candidate)		(Signature of the Invigilator)

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uestion No.	n Questions				
1.	'DOTS' strategy is used to treat				
	(1) HIV (2	2) Malaria			
	(3) Tuberculosis (4				
2.	The most important route of tran	smission for hepatitis C is			
	(1) Semen (2	martel has alknow (a)			
anna a	(3) Saliva (4				
3.	Holding method of pasteurization	is carried out at			
	(1) 71.7°C for 15 seconds (2)	A second s			
7.0.	(3) 64.1°C for 45 minutes (4)) 62.8°C for 30 minutes			
4.	Serum can be sterilised by	LU. The short strong of the			
	(1) Autoclaving	Dry-heat sterilisation			
	(3) Membrane-filtration (4)	Incineration			
5.	Widal test is widely used for the d	iagnosis of			
18.	(1) Bacillary dysentery (2)	Tuberculosis			
	(3) Typhoid fever (4)	Cholera			
6.	HAART strategy is used for the tre	eatment of			
	(1) Hepatitis B (2)	Syphilis			
	(3) AIDS (4)	Hepatitis C			
7.	The following bacterium is good example.	ample of photolithotrophs			
	(1) Rhodospirillum rubrum (2)	Nitrosomonas europaea			
	(3) Pseudomonas pseudoflava (4) -2015 (Life Science)Code-B(1	Chromatium okonii			

uestion No.		Questions	aostion	
8.	Transduction was discover	ed by	f. 1	
	(1) Zinder and Lederberg	((S) YIH (
	(2) Elie Wollman and Fra	ncois Jacob		
	(3) Luria and Delbruck			
	(4) Beadle and Tatum	he most important route of figurant) 9 Aut		
9.	Flagellation type where a ba	acterial cell is having flagella all ove	er its surfac	
	is			
	(1) Amphitrichous	(2) Cephalotrichous		
	(3) Lophotrichous	(4) Peritrichous		
10.	A short stretch of RNA use	d to initiate replication is termed		
	(1) Promoter	(2) Primer		
	(3) Primase	(4) Replisome		
11.	Sperm capacitation takes pl	lace in		
	(1) Epididymis	(2) Seminal vesicles		
	(3) Female genital tract	(4) Testis		
12.	Graafian follicles are found	in		
	(1) Thyroid	(2) Spleen		
	(3) Ovary	(4) Kidney		
13.	Extra-embryonic membranes are absent in embryo of			
	(1) Fish	(2) Reptile		

PG-EE-2015 (Life Science)Code-B(2))

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Question No.	Questions	(Juesaol)
14.	 The presence of gray crescent is a characteristic of (1) Fertilized egg of frog (2) Unfertilized egg of frog (3) Fertilized egg of reptile (4) Fertilized egg of mammal 	.02
15.	Sexual reproduction in larval stage is called(1) Parthenogenesis(2) Abiogenesis(3) Neoteny(4) Paedogenesis	21.
16.	 Rearing of earthworm is called (1) Apiculture (2) Silviculture (3) Vermiculture (4) Pisciculture 	
17.	Sting is a modified ovipositor in(1) Centipede(2) Millipede(3) Honey bee(4) Scorpion	
18. PG-EE-	 DNA finger printing is based on the presence in DNA of (1) Constant number of tandem repeats (2) Variable number of tandem repeats (3) Non-repetitive sequences in each DNA (4) Introns in eukaryotic DNA -2015 (Life Science)Code-B(3) 	

	Q	uestio	ns	No.
PCR	was discovered by		The presence of gray creace	
(1)	Kary Mullis	(2)	Francis Crick	
(3)	Hershey and Chase	(4)	Rosalind Franklin	
The	pH of a plant tissue cul	ture me	dium is usually maintained a	ıt
(1)	7.0	(2)	5.8	
(3)	4.0	(4)	Any between 4-14	- Sie
Enz	zymes of hexose monoph	osphate	e shunt are present	
(1)	Mitochondria	(2)	Cytosol	
(3)	Lysosomes	(4)	Microsomes	1.01
A d	igestive secretion that	loes not	contain any digestive enzym	e is
(1)	Saliva			
(3)	Pancreatic juice	(4)	Bile	
Pri	mary structure of a pro	tein is f	ormed by	
(1)	Hydrogen bond	(2)	Peptide bond	
(3)	Disulphide bond	(4)	All of the above	
Th	e Centriols have	(2)	Sales - attantic sector AM	
(1)	RNA			
(2)	DNA			
(3)	Microtubules			
(4)	None of these			
	 (1) (3) The (1) (3) Enz (1) (3) A d (1) (3) Pri (1) (3) Th (1) (2) (3) 	PCR was discovered by (1) Kary Mullis (3) Hershey and Chase The pH of a plant tissue cul (1) 7.0 (3) 4.0 Enzymes of hexose monoph (1) Mitochondria (3) Lysosomes A digestive secretion that (1) Saliva (3) Pancreatic juice Primary structure of a pro (1) Hydrogen bond (3) Disulphide bond The Centriols have (1) RNA (2) DNA	PCR was discovered by(1)Kary Mullis(2)(3)Hershey and Chase(4)The pH of a plant tissue culture met(1)7.0(1)7.0(2)(3)4.0(4)Enzymes of hexose monophosphate(1)Mitochondria(2)(3)Lysosomes(4)A digestive secretion that does not(1)Saliva(2)(3)Pancreatic juice(4)Primary structure of a protein is f(1)(1)Hydrogen bond(2)(3)Disulphide bond(4)The Centriols have(1)(1)RNA(2)(2)DNA(3)(3)Microtubules	PCR was discovered by (1) Kary Mullis (2) Francis Crick (3) Hershey and Chase (4) Rosalind Franklin The pH of a plant tissue culture medium is usually maintained at (1) 7.0 (2) 5.8 (3) 4.0 (4) Any between 4-14 Enzymes of hexose monophosphate shunt are present (1) Mitochondria (2) Cytosol (3) Lysosomes (4) Microsomes A digestive secretion that does not contain any digestive enzym (1) Saliva (2) Gastric juice (3) Pancreatic juice (4) Bile Primary structure of a protein is formed by (1) Hydrogen bond (2) Peptide bond (4) Disulphide bond (4) All of the above (3) The Centriols have (1) RNA (2) DNA (3) Microtubules

PG-EE-2015 (Life Science)Code-B(4)

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uestion No.		luestions	1000	
25.	The following is a polyunsaturated fatty acid			
1	(1) Palmitic acid	(2) Palmitole	eic acid	
	(3) Linoleic acid	(4) Oleic acid	a and a second second	
26.	A hormone used for detect	on of pregnancy is	s	
	(1) Estrogen	(2) Progester	rone	
	(3) Oxytocin	(4) Chorionia	c gonadotropin	
27.	Insulin increases			
	(1) Glycogenesis	(2) Gluconeo	genesis	
	(3) Lipolysis	(4) Blood glu	ICOSE	
28.	Mammary glands are the n	odification of	(S) Entomophily	
	(1) Sebaceous glands•	(2) Sweat gla	ands	
	(3) Meibomian glands	(4) Perineal g	glands	
29.	Sinus venosus is not present in the heart of			
	(1) Fish	(2) Amphibia	m	
	(3) Reptile	(4) Mammal		
30.	The photosensitive pigment, rhodopsin which is present in rods of eye i synthesised from			
tutants	(1) Vitamin-D			
	(2) Vitamin-A			
	(3) Vitamin-B			
	(4) Vitamin-E			

Question No.	Questic	ons
31.	If an endosperm of an angiosperm	has 18 chromosomes what would be the
	number of chromosome in megasp	ore mother cell of the same plant ?
	(1) 6 (2)	12
	(3) 18 (4)	24
32.	Fertilization in which male gamet	es are carried through pollen tube is
	(1) Syngamy (2)	Siphonogamy
	(3) Chalazogamy (4)	Porogamy
33.	Pollination through air is termed a	as
	(1) Anemophily (2)	Cheiropterophily
	(3) Entomophily (4)	Ornithophily
34.	The female gametophyte of typical	l dicot plant at the time of fertilization is
	(1) 6-celled (2)	7-celled
1 25.	(3) 8-celled (4)	4-celled
35.	Development of 'seedless fruits' is	called'
	(1) Parthenogenesis (2)) Parthenocarpy
ni dybi	(3) Polyembryony (4)) Apomixis
36.	What is the general term used to	describe the degradation of pollutants
	using a biological approach ?	
	(1) Biodegradation (2) Bioaugmentation
	(3) Bioremediation (4) Biostimulation

PG-EE-2015 (Life Science)Code-B(6)

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Question No.	Questions	itie		
37.	Biological magnification of DDT will affect the most at which tropical level			
	(1) First tropical level (2) Second tropical level			
	(3) Third tropical level (4) Fourth tropical level	10.1 (6)		
38.	VAM (vesicular arbuscular mycorrhizae) are important	for the plants to		
	supply from soil (1) Phosphate (2) Nitrogen	7		
	(3) Iron (4) Potassium			
39.	CNG is			
	(1) Carbonitrogen (2) Complete nitrogen g	as		
	(3) Compressed natural gas (4) Coal nitrogen gas	•		
40.	In coming years, the skin diseases will be more common	due to		
	(1) Increase in air pollution (2) Increase in CO_2			
	(3) Excess use of detergent (4) Depletion of ozone			
41.	Plasmids can easily hold the DNA of which of the following sizes :			
	(1) 10 kb (2) 50 kb			
	(3) 300 kb (4) 600 kb			
42.	LSD (lysergic acid) is obtained from			
	(1) Aspergillus niger (2) Pencillium notatum			
	(3) Claviceps purpurea (4) Fusarium udum			
43.	Which of the following algae has "Plakea stage" in its life cycle ?			
	(1) Chlamydomonas (2) Volvox			
	(3) Vaucheria (4) Batrachospermum			

PG-EE-2015 (Life Science)Code-B(7)

Question No.	(Juestions			
44.	Winged pollen grains are present in				
	(1) Cycas	(2) Pinus			
	(3) Ephedra	(4) Ginkgo			
45.	Puccinia spores that are sta	lked, unicellular, oval and binucleate are called			
	(1) Uredospores	(2) Teleutospores			
	(3) Basidiospores	(4) Pycniospores			
46.	The seedless vascular plant	ts are			
	(1) Bryophyta	(2) Pteridophyta			
	(3) Gymnosperm	(4) Angiosperm			
47.	Which of the following are	the characteristics of Gymnosperms ?			
	(a) Naked ovules	(b) Double Fertilization			
	(c) Absence of tracheids	(d) Haploid endosperm			
	(1) (a) and (d)	(2) (a) and (b)			
	(3) (c) and (d)	(4) (b) and (c)			
48.	Which of the following is not a stem ?				
	(1) Potato	(2) Sweet Potato			
	(3) Ginger	(4) Onion			
49.	In India, most of herbaria are based on which system of plant classification				
	(1) Engler and Prantl's sy	stem (2) Bentham and Hooker's			
	(3) Hutchinson's system	(4) Takhtajan's system			
PG-EE	-2015 (Life Science)Co	de-B (8)			

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Question No.	Questions				
50.	Tropical plants such as sugarcane show high efficiency of CO_2 fixation by				
	(1) EMP pathway (2) TCA cycle				
	(3) Hatch Slack cycle (4) Calvin cycle				
51.	Enzyme that joins the Okazaki fragments is				
11 00e1 1-63	(1) Laccase (2) Ligase				
	(3) Helicase (4) Topoisomerase				
52.	Cytochrome C is a protein with				
	(1) Sulphate (2) Hacme				
	(3) Copper (4) Magnesium				
53.	Lipopolysaccharide is the crucial component of				
	(1) Gram-positive bacteria (2) Gram-negative bacteria				
	(3) Virus (4) Plant cell wall				
54.	Which type of library would you screen in order to identify the promoter o				
	the hemoglobin gene				
	(1) Genomic library (2) Expression library				
iodiffier	(3) cDNA library (4) None of the above				
55.	Which of the following is used to select genes of interest from genomic				
	library?				
	(1) Restriction enzymes (2) Cloning vectors				
	(3) DNA probes (4) Gene targets				

PG-EE-2015 (Life Science)Code-B(9)

Question No.	Questions				
56.	Which technique is used to resolve the different sizes of DNA fragments				
	following a restriction enzyme digest ?				
	(1) DNA sequencing (2) Gel electrophoresis				
	(3) Gene cloning (4) PCR				
57.	Which type of restriction endonuclease enzymes are most widely used in recombinant DNA technology?				
	(1) Type I enzymes (2) Type II enzymes				
	(3) Type III enzymes (4) All of the above				
58.	Which technique can be used to investigate the transcripts of a gene?				
	(1) Southern blotting (2) Northern blotting				
	(3) Western blotting (4) None of the above				
59.	Crown gall disease is caused by				
	(1) Bacillus thuringiensis				
	(2) Agrobacterium radiobacter				
the toler	(3) Pseudomonas syringae				
	(4) Agrobacterium tumefaciens				
60.	Which one of the following is not a transgenic or genetically modifie				
	organism?				
own only	(1) Sheep 'Dolly'				
	(2) Bt cotton				
	(3) Bacteria that make human insulin				
	(4) Golden rice				

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Question No.	Questions				
61.	The cell organelles associated with photorespiration are				
	(1) Chloroplast, peroxisome and mitochondria				
	(2) Chloroplast and peroxisome				
	(3) Chloroplast and mitochondria				
	(4) Peroxisome and mitochondria				
62.	The conversion of ammonia into nitrite and nitrate is called				
	(1) Nitrogen fixation (2) Denitrification				
	(3) Nitrification (4) Ammonification				
63.	If an organism is respiring in a bel jar filled with radio-labelled oxygen, the				
1923.	radioactivity will be detected in which product of respiration				
	(1) CO_2 (2) H_2O (3) $C_6H_{12}O_6$ (4) CO_2 and H_2O				
64.	The carbohydrates are transported from leaves to other parts of the plants in the form of				
	(1) Starch (2) Glucose				
	(3) Sucrose (4) Cellulose				
65.	Match correctly between column (A) and column (B)				
	Column (A) Column (B)				
	I. Extreme cold treatment A. Ripening of fruits				
	II. Response to day length B. Vernalization				
78	III. Apical dominance C. Photoperiodism				
	IV. Ethylene D. Auxin				
	(1) I-B, II-D, III-C, IV-A (2) I-B, II-C, III-D, IV-A				
ST. SECTOR	(3) I-D, II-C, III-B, IV-A (4) I-C, II-B, III-A, IV-D				

PG-EE-2015 (Life Science)Code-B(11)

Question No.		Q	uestio	ns	mines) Animes
66.	Monocot seed contains single cotyledon which is known as				
	(1)	Aleurone	(2)	Endosperm	
	(3)	Scutellum	(4)	Perisperm	
67.	The	Central Potato Research	n Instit	oute is located at	
	(1)	Dehradun	(2)	Delhi	
	(3)	Shimla	(4)	Coimbatore	.23
68.	The	edible part of litchi is mo	orpholo	gically	
	(1)	Fleshy thalamus	(2)	Mesocarp	
	(3)	Aril	(4)	Endosperm	
69.	Match list I with list II				
		List I		List II	
	I.	Fibre	A.	Arachis hypogea	
	II.	Oil	В.	Corchorus capsularis	
	III.	Timber	C.	Curcuma longa	
	IV.	Spice	D.	Tectona grandis	
	(1)	I-B, II-A, III-D, IV-C	(2)	I-B, II-C, III-D, IV-A	
Ano:	(3)	I-C, II-A, III-B, IV-D	(4)	I-D, II-B, III-C, IV-A	
70.	The condition where a bisexual flower does not open is called				
	(1)	Allogamy		Xenogamy	
	(3)	Geitonogamy	(4)	Cleistogamy	
		C, R.B. M.A. IV.D	(1)(1)	1.10, 100, 100, 100, 100, 100, 100, 100,	

PG-EE-2015 (Life Science)Code-B(12)

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Question No.	Que	stio	ons	hoileon	
71.	Red data book provides data or	ı		37	
	(1) Biota of red sea				
	(2) Effect of red light on photo	osyr	thesis		
	(3) Red pigmented plants				
	(4) Threatened species				
72.	A species inhabiting different g	eogi	caphical areas is known as		
	(1) Sympatric	(2)	Sibling		
	(3) Allopatric	(4)	Allelopathy		
73.	"Theory of spontaneous genera	tion	" was proposed by		
	(1) Charles Darwin	(2)	Louis Pasteur	27,	
	(3) Oparin and Haldane	(4)	Hugo de Vries		
74.	Development of resistance against DDT by mosquito is an example of				
	(1) Natural selection	(2)	Variation		
	(3) Adaptation	(4)	Isolation		
75.					
t ballies	than the food supply Malthus	(2)	Darwin		
	(3) Lamark	(4)	Cope		
76.	In which one of the following pl its effect ?	nase	s of cell cycle, the drug colchici	ne exert	
	(1) G1	(2)	G2		
	(3) S	(4)	M		

PG-EE-2015 (Life Science)Code-B(13)

uestion No.		Questions		
77.	The most storage polysa	ccharide of animal cell is		
	(1) Starch	(2) Chitin		
	(3) Glycogen	(4) Glycan		
78.	Pyrimidines in RNA are	(3) Red Annunied plants		
	(a) Adenine	(b) Uracil		
	(c) Cytosine	(d) Thymine		
	(e) Guanine			
-68,]	(1) (a) and (b)	(2) (b) and (c)		
	(3) (a) and (e)	(4) (c) and (d)		
79.	An inorganic ion requir	ed for the activity of an enzyme is known a	.s	
- Mile	(1) Activator	(2) Cofactor		
	(3) Coenzyme	(4) Holoenzyme		
80.	End product of aerobic glycolysis is			
	(1) Acetyl CoA	(2) Lactate		
	(3) Pyruvate	(4) CO_2 and H_2O	75	
81.	The enzyme involved in mRNA synthesis during transcription is called			
	(1) Helicase	(2) DNA ligase		
	(3) RNA polymerase	(4) DNA polymerase		
82.	The coding sequences i	in eukaryotic DNA are known as :		
	(1) Regulatory seque	nce (2) Exon		
	(3) Intron	(4) Muton		

PG-EE-2015 (Life Science)Code-B(14)

uestion No.	Questions	notizes
83.	DNA carries :(1) Positive charge(2) Negative charge(3) Neutral(4) None of the above	88.
84.	 Which of the following is correct with regard to an euploidy? (1) All an euploid individuals die before birth (2) Inversion (3) 4n (4) 2n + 1 	.98
85.	The X-ray diffraction studies conducted by	scover
-96.	 Which of the following is not needed for DNA transcription ? (1) DNA (2) Enzymes (3) Ribosomes (4) Nucleotide 	
	 Which of the following descriptions of chromosomes is not connatched ? 1) Telocentric – there is only one chromosome arm. 2) Acrocentric – chromosome arms are identical in size 3) Metacentric – chromosome arms are almost equal in size. 4) Submetacentric – chromosome arms are slightly different in size 	

Code-B

Question No.	Questions
88.	The triplet code of CAT in DNA is represented as in mRNA and in tRNA.(1) CAT, CAT(2) GUA, CAU(3) GTA, CAU(4) GAA, CAT
89.	What is the probability that a male will inherit an X-linked recessive genefrom his father ?(1) 25%(2) 50%(3) 75%(4) 0%
90.	Who demonstrated that genes are located on chromosomes ?(1) Meselson and Stahl(2) Watson and Crick(3) Morgan(4) Chargaff
91.	The amount of air that moves in and out of the lungs with each norminspiration and expiration(1) Tidal capacity(2) Vital capacity(3) Tidal volume(4) Residual volume
92.	Schizocoel is present in(1) Frog(2) Pila(3) Herdmania(4) Balanoglossus
93.	 Uricotelic excretion is mainly an adaptation for (1) Conservation of urea producing enzymes (2) Raising osmotic concentration of blood (3) Conservation of water (4) Storage of waste materials

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Code-B

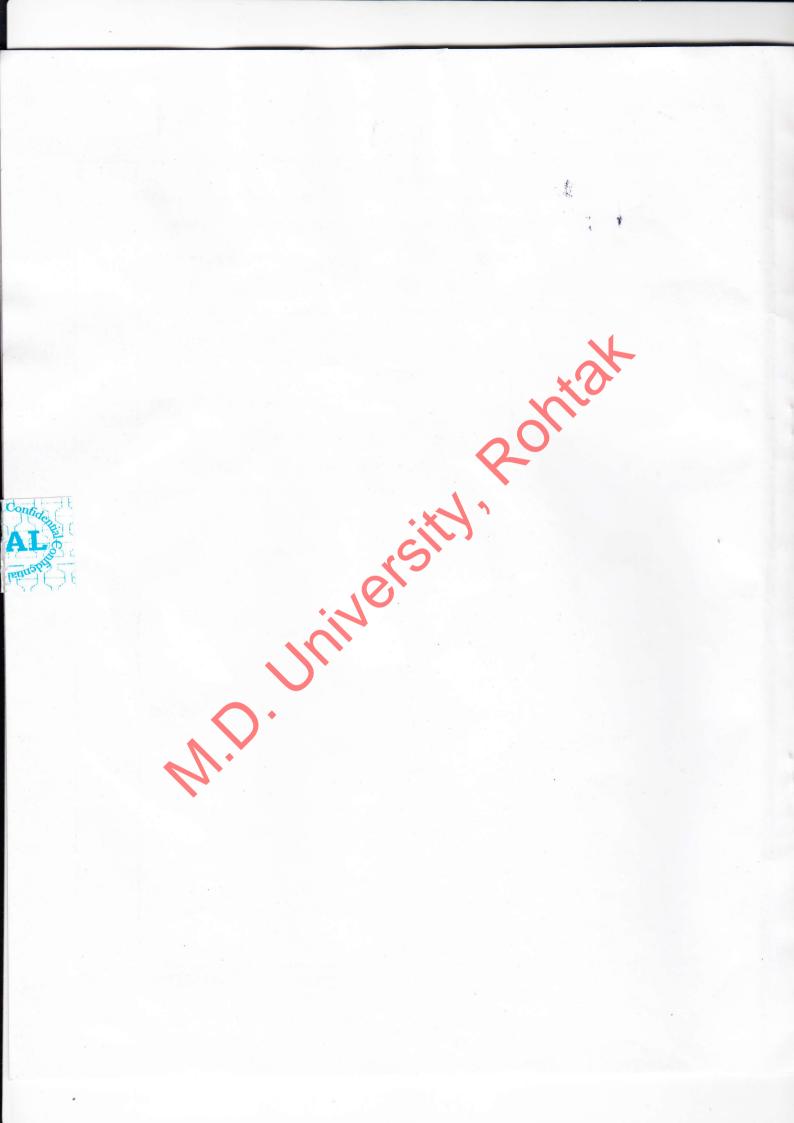
Question No.	Q	uestions	ter the second s		
94.	Match list I correctly with list II				
	ListI	Li	st II brodestor (1)		
	I. Planaria	A. Gr	een gland		
	II. Earthworm	B. Ma	alpighian tubes		
	III. Prawn	C. Ne	phridia		
	IV. Scorpion	D. Fla	ame Cell		
	(1) I-D, II-C, III-A, IV-B	(2) I-E	3, II-C, III-D, IV-A		
	(3) I-C, II-B, III-D, IV-A	(4) I-A	, II-D, III-C, IV-B		
95.	The flow of blood in the veins is at				
	(1) Atmospheric pressure	(2) Lo	w pressure		
	(3) High pressure	(4) Ini	tially high and then low pressure		
96.	Flagellated larvae of sponges	sis			
	(1) Glochidium	(2) An	phiblastula		
	(3) Trochophore	(4) Mi	racidium		
97.	Homocercal tail is present in				
	(1) Electric ray	(2) Sha	ark		
	(3) Lung fish	(4) Tel	leosts		
98.	Which one of the following is	not a fish	?		
	(1) Silver fish	(2) Lu	ng fish		
	(3) Gold fish	(4) Fly	ing fish		

PG-EE-2015 (Life Science)Code-B(17)

Code-B

iestion No.	Questions	poba av
99.	Notochord like structure in buccal region	n of hemichordates is
	(1) Protochord (2) Ston	nochord
	(3) Pallium (4) Man	tle
100.	'Crop' in birds is	N
	(1) Rectum	×O.
	(2) Modified stomach	
	(3) Modified oesophagus	0.
	(4) Early part of small intestine	
		engel hat heirsonnel
	Nonne-Levelersten netensieft. (2) inter a	

PG-EE-2015 (Life Science)Code-B(18)



Used Andralians High orther all and Hull (DO NOT OPEN THIS OUT	AS And MUS (To	tal No. of printed pages : 19)
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Time: 1 ¹ / ₄ Hours	Max. Marks: 100	Total Questions : 100
Roll No.	(in figure)	(in words)
Name :	Father's Name :	
Mother's Name		xamination

(Signature of the candidate)

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- 1. All questions are compulsory.
- 2. The candidates must return the Question book-let as well as OMR answer-sheet to the Invigilator concerned before leaving the Examination Hall, failing which a case of use of unfair-means / misbehaviour will be registered against him / her, in addition to lodging of an FIR with the police. Further the answer-sheet of such candidate will not be evaluated.
- 3. In case there is any discrepancy in any question(s) in the Question Booklet, the same may be brought to the notice of the Controller of Examinations in writing within two hours after the test is over. No such complaint(s) will be entertained thereafter.
- 4. 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 book-let itself. Answers MUST NOT be ticked in the Question book-let.
- 5. There will be no negative marking. Each correct answer will be awarded one full mark. Cutting, erasing, overwriting and more than one answer in OMR Answer-Sheet will be treated as incorrect answer.
- 6. Use only Black or Blue <u>BALL POINT PEN</u> of good quality in the OMR Answer-Sheet.
- 7. BEFORE ANSWERING THE QUESTIONS, THE CANDIDATES SHOULD ENSURE THAT THEY HAVE BEEN SUPPLIED CORRECT AND COMPLETE BOOK-LET. COMPLAINTS, IF ANY, REGARDING MISPRINTING ETC. WILL NOT BE ENTERTAINED 30 MINUTES AFTER STARTING OF THE EXAMINATION.

Question No.	Questions	.pM
1.	 The cell organelles associated with photores (1) Chloroplast, peroxisome and mitochond (2) Chloroplast and peroxisome (3) Chloroplast and mitochondria (4) Peroxisome and mitochondria 	
2.	The conversion of ammonia into nitrite and no(1) Nitrogen fixation(2) Denitrified(3) Nitrification(4) Ammonia	cation
3.	If an organism is respiring in a bel jar filled w radioactivity will be detected in which produ (1) CO_2 (2) H_2O_3 (3) $C_6H_{12}O_6$ (4) CO_2 and	ct of respiration
4.	The carbohydrates are transported from leaven in the form of (1) Starch (2) Glucose (3) Sucrose (4) Cellulose	
5.	Match correctly between column (A) and column (A) Column (A) Column (A) I. Extreme cold treatment A. Ripening	(B)
10.	 II. Response to day length B. Vernaliza III. Apical dominance C. Photoper IV. Ethylene D. Auxin (1) I-B, II-D, III-C, IV-A (2) I-B, II-C, (3) I-D, II-C, III-B, IV-A (4) I-C, II-B, 	iodism III-D, IV-A

PG-EE-2015 (Life Science)Code-C(1)

uestion No.	Questions	hollesu
6.	Monocot seed contains single cotyledon which is known as	1.11
	(1) Aleurone (2) Endosperm	
	(3) Scutellum (4) Perisperm	
7.	The Central Potato Research Institute is located at	
	(1) Dehradun (2) Delhi	
	(3) Shimla (4) Coimbatore	
8.	The edible part of litchi is morphologically	
t dobr	(1) Fleshy thalamus (2) Mesocarp	
	(3) Aril (4) Endosperm	
9.	Match list I with list II	
iste o fa	List I List II	
	I. Fibre A. Arachis hypogea	
	II. Oil B. Corchorus capsularis	
]	II. Timber C. Curcuma longa	
1	V. Spice D. Tectona grandis	
(1) I-B, II-A, III-D, IV-C (2) I-B, II-C, III-D, IV-A	
(3) I-C, II-A, III-B, IV-D (4) I-D, II-B, III-C, IV-A	
10. I	he condition where a bisexual flower does not open is called	
	1) Allogamy (2) Xenogamy	
(3		

Question No.	Quest	tions
11.	Enzyme that joins the Okazaki fi	ragments is
\checkmark	(1) Laccase (2	2) Ligase
	(3) Helicase (4	4) Topoisomerase
12.	Cytochrome C is a protein with	~
ne?	(1) Sulphate (2	2) Haeme
	(3) Copper (4	4) Magnesium
13.	Lipopolysaccharide is the crucial	component of
	(1) Gram-positive bacteria (2	2) Gram-negative bacteria
	(3) Virus	Plant cell wall
14.	Which type of library would you s	creen in order to identify the promoter of
	the hemoglobin gene	
Attibur	(1) Genomic library (2) Expression library
	(3) cDNA library (4) None of the above
15.	Which of the following is used t	o select genes of interest from genomic
	library?	
	(1) Restriction enzymes (2) Cloning vectors
	(3) DNA probes (4) Gene targets
16.	Which technique is used to resol- following a restriction enzyme dig	ve the different sizes of DNA fragments rest ?
	(1) DNA sequencing (2) Gel electrophoresis
	(3) Gene cloning (4) PCR
G-EE-	-2015 (Life Science)Code-C(3	

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Question No.	Quest	ions	hoileonG	
17.	Which type of restriction endonuclease enzymes are most widely used in recombinant DNA technology ?			
	(1) Type I enzymes (2	2) Type II enzymes		
	(3) Type III enzymes (4	All of the above		
18.	Which technique can be used to i	nvestigate the transcripts of a	gene ?	
	and summer and and the	2) Northern blotting		
) None of the above		
19.	19. Crown gall disease is caused by			
	(1) Bacillus thuringiensis	(1) Gran-positive-income 0		
	(2) Agrobacterium radiobacter	(3) Vana		
	(3) Pseudomonas syringae			
motor c	(4) Agrobacterium tumefaciens	Which type of library would you the hemosiohin generations		
20.	Which one of the following is n	ot a transgenic or genetically	modified	
	organism?			
	(1) Sheep Dolly'			
LOROTOS -	(2) Bt cotton			
	(3) Bacteria that make human insulin			
	(4) Golden rice	(3) DNA probes		
21.	The enzyme involved in mRNA sy	nthesis during transcription is	called :	
	(1) Helicase (2) DNA ligase		
	(3) RNA polymerase (4) DNA polymerase		

PG-EE-2015 (Life Science)Code-C(4)

Question No.	Q	lestions	. No.		
22.	The coding sequences in eukaryotic DNA are known as :				
	(1) Regulatory sequence	(2) Exon	AAA AL AND AL AND A AND		
	(3) Intron	(4) Muton			
23.	DNA carries :		X		
e geneg s	(1) Positive charge	(2) Negativ	ve charge		
	(3) Neutral	(4) None of	the above		
24.	Which of the following is cor	ect with regar	d to aneuploidy ?		
	(1) All aneuploid individua	s die before bir	th		
	(2) Inversion	Lx.	Marchine malazel		
	(3) 4n		(3) Moreen		
	(4) $2n+1$	2	The motion of		
25.	The X-ray diffraction studies conducted by were key to the discovery of the structure of DNA.				
	(1) Franklin	(2) Meselso	on and Stahl		
	(3) Chargaff	(4) McClin			
26.	Which of the following is no	needed for DN	VA transcription ?		
	(1) DNA	(2) Enzyme	DIDIVITY		
	(3) Ribosomes	(4) Nucleo	tide		
27.	Which of the following de matched?	scriptions of a	chromosomes is not correctly		
	(1) Telocentric – there is o	nly one chromo	osome arm.		
	(2) Acrocentric – chromosome arms are identical in size				
	(3) Metacentric – chromosome arms are almost equal in size.				
			are slightly different in size		

PG-EE-2015 (Life Science)Code-C(5)

Question No.	କ	iestions	inites.
28.	The triplet code of CAT in DNA is represented as in mRNA an in tRNA.		
	(1) CAT, CAT	(2) GUA, CAU	
	(3) GTA, CAU	(4) GAA, CAT	HUILLI (6)
29.	What is the probability that from his father ?	a male will inherit an X	X-linked recessive gen
	(1) 25%	(2) 50%	A DEEKI LU
	(3) 75%	(4) 0%	24. Which of the fo
30.	Who demonstrated that gen	es are located on chror	nosomes ?
	(1) Meselson and Stahl	(2) Watson and Cr	ick
	(3) Morgan	(4) Chargaff	· · · · · · · · · · · · · · · · · · ·
31,	Sperm capacitation takes p	ce in	
	(1) Epididymis	action studies conduce	25. The X-ray diffe
		(2) Seminal vesicle	S
1 22	(3) Female genital tract	(4) Testis	omizinaril a (4) plotati
32.	Graafian follicles are found i	l	
	(1) Thyroid	(2) Spleen	
	(3) Ovary	(4) Kidney	(1) DRA
33.	Extra-embryonic membrane	are absent in embryo	of
	(1) Fish		on a maister a second
	(2) Reptile		(1) Telocente
	(3) Bird		
		to chromosome arm	
1	(4) Mammal		(4) Submetar

luestion No.	Questions	kolta .ok
34.	The presence of gray crescent is a characteristic of	Nas
	(1) Fertilized egg of frog (2) Unfertilized egg of frog	
	(3) Fertilized egg of reptile (4) Fertilized egg of mammal	
35.	Sexual reproduction in larval stage is called	.14
	(1) Parthenogenesis (2) Abiogenesis	
	(3) Neoteny (4) Paedogenesis	
36.	Rearing of earthworm is called	
	(1) Apiculture (2) Silviculture	
	(3) Vermiculture (4) Pisciculture	
37.	Sting is a modified ovipositor in	
	(1) Centipede (2) Millipede	
128	(3) Honey bee (4) Scorpion	
38.	DNA finger printing is based on the presence in DNA of	
	(1) Constant number of tandem repeats	
a of	(2) Variable number of tandem repeats	
	(3) Non-repetitive sequences in each DNA	
	(4) Introns in eukaryotic DNA	
39.	PCR was discovered by	45.
	(1) Kary Mullis (2) Francis Crick	
•	(3) Hershey and Chase (4) Rosalind Franklin	

PG-EE-2015 (Life Science)Code-C(7)

Question No.	Questions		
40,	The pH of a plant tissue culture medium is usually maintained at		
\checkmark	(1) 7.0 (2) 5.8		
	(3) 4.0 (4) Any between 4-14		
41.	Red data book provides data on		
	(1) Biota of red sea		
	(2) Effect of red light on photosynthesis		
	(3) Red pigmented plants		
	(4) Threatened species		
42.	A species inhabiting different geographical areas is known as		
	(1) Sympatric (2) Sibling		
	(3) Allopatric (4) Allelopathy		
43.	"Theory of spontaneous generation" was proposed by		
Service and	(1) Charles Darwin (2) Louis Pasteur		
\$3.	(3) Oparin and Haldane (4) Hugo de Vries		
44.	Development of resistance against DDT by mosquito is an example of		
	(1) Natural selection (2) Variation		
	(3) Adaptation (4) Isolation		
45.	Who gave the statement that population tends to multiply more rapidly than the food supply		
	(1) Malthus (2) Darwin		
	(3) Lamark (4) Cope		

PG-EE-2015 (Life Science)Code-C(8)

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Question No.		Questions
46.	In which one of the follo its effect ?	owing phases of cell cycle, the drug colchicine exert
	(1) G1	(2) G2
	(3) S	(4) M
47.	The most storage polys	accharide of animal cell is
	(1) Starch	(2) Chitin
	(3) Glycogen	(4) Glycan
48.	Pyrimidines in RNA are	54. Minesed pollen geworke present in
	(a) Adenine	(b) Uracil
	(c) Cytosine	(d) Thymine
138	(e) Guanine	
0911.0	(1) (a) and (b)	(2) (b) and (c)
	(3) (a) and (e)	(4) (c) and (d)
49.	An inorganic ion requir	ed for the activity of an enzyme is known as
	(1) Activator	(2) Cofactor
	(3) Coenzyme	(4) Holoenzyme
50.	End product of aerobic	glycolysis is
	(1) Acetyl CoA	(2) Lactate
	(3) Pyruvate	(4) CO_2 and H_2O
51.	Plasmids can easily ho	ld the DNA of which of the following sizes :
	(1) 10 kb	(2) 50 kb
		(4) 600 kb
		en en sol of ble above

PG-EE-2015 (Life Science)Code-C(9)

 LSD (lysergic acid) is obtained (1) Aspergillus niger (3) Claviceps purpurea Which of the following algae 	ed from (2) Pencillium notatum (4) Fusarium udum	
(3) Claviceps purpurea	(I) (I) (I)	
	(4) Fusarium udum	
Which of the following algae		
	has "Plakea stage" in its life cycle ?	
(1) Chlamydomonas	(2) Volvox	
(3) Vaucheria	(4) Batrachospermum	
Winged pollen grains are pre	esent in	46.
(1) Cycas	(2) Pinus	
(3) Ephedra	(4) Ginkgo	
Puccinia spores that are stalk	ed, unicellular, oval and binucleate a	re calle
(1) Uredospores	(2) Teleutospores	
(3) Basidiospores	(4) Pycniospores	
The seedless vascular plants	are	•11
(1) Bryophyta	(2) Pteridophyta	
(3) Gymnosperm	(4) Angiosperm	
Which of the following are th	e characteristics of Gymnosperms ?	50.
(c) Absence of tracheids	(d) Haploid endosperm	
(1) (a) and (d)	(2) (a) and (b)	
(3) (c) and (d)		
	 (3) Vaucheria Winged pollen grains are present (1) Cycas (3) Ephedra Puccinia spores that are stalled (1) Uredospores (3) Basidiospores (3) Basidiospores The seedless vascular plants (1) Bryophyta (3) Gymnosperm Which of the following are the (a) Naked ovules (b) Absence of tracheids (c) Absence of tracheids (d) (a) and (d) 	 (3) Vaucheria (4) Batrachospermum Winged pollen grains are present in (1) Cycas (2) Pinus (3) Ephedra (4) Ginkgo Puccinia spores that are stalked, unicellular, oval and binucleate and (1) Uredospores (2) Teleutospores (3) Basidiospores (4) Pycniospores The seedless vascular plants are (1) Bryophyta (2) Pteridophyta (3) Gymnosperm (4) Angiosperm Which of the following are the characteristics of Gymnosperms ? (a) Naked ovules (b) Double Fertilization (c) Absence of tracheids (d) Haploid endosperm (1) (a) and (d) (2) (a) and (b)

PG-EE-2015 (Life Science)Code-C(10)

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Question No.		Questions	voitaou No
58.	Which of the following is	not a stem ?	eve lentre of these
	(1) Potato	(2) Sweet Potato	ANA (1)
	(3) Ginger	(4) Onion	(2) DIVA
59.	In India, most of herbaria	are based on which system	of plant classification
	(1) Engler and Prantl's s	ystem	X
	(2) Bentham and Hooke	's al betermission view	65. The followin
	(3) Hutchinson's system	anna (2) Pal	
	(4) Takhtajan's system	old () Ole	(3) Lapoleic
60.	Tropical plants such as su	garcane show high efficien	cy of CO, fixation by
	(1) EMP pathway	(2) TCA cycle	(1) Batroge
72.	(3) Hatch Slack cycle	(4) Calvin cycle	
61.	Enzymes of hexose monop	hosphate shunt are preser	nt
/	(1) Mitochondria	(2) Cytosol	
1.3	(3) Lysosomes	(4) Microsomes	
62.	A digestive secretion that	does not contain any diges	tive enzyme is
	(1) Saliva	(2) Gastric juice	modiaW (8)
	(3) Pancreatic juice	(4) Bile	
63.	Primary structure of a pr	tein is formed by	
	(1) Hydrogen bond	(2) Peptide bond	
	(3) Disulphide bond	(4) All of the above	

PG-EE-2015 (Life Science)Code-C(11)

uestion No.	Questions	No.
64.	The Centriols have	
	(1) RNA	
	(2) DNA (2)	
	(3) Microtubules	68
nomson	(4) None of these	
65.	The following is a polyunsaturated fatty acid	
14	(1) Palmitic acid (2) Palmitoleic acid	
	(3) Linoleic acid (4) Oleic acid	
66.	A hormone used for detection of pregnancy is	1.08
16 and 10	(1) Estrogen (2) Progesterone	
	(3) Oxytocin (4) Chorionic gonadotropin	
67.	Insulin increases	
	(1) Glycogenesis (2) Gluconeogenesis	
	(3) Lipolysis (4) Blood glucose	
68.	Mammary glands are the modification of	
	(1) Sebaceous glands (2) Sweat glands	62.1
	(3) Meibomian glands (4) Perineal glands	
69.	Sinus venosus is not present in the heart of	1 20
	(1) Fish (2) Amphibian	
	(3) Reptile (4) Mammal	

PG-EE-2015 (Life Science)Code-C(12)

1 24

11 2.

Question No.	Questions	Question
70.	The photosensitive pigment, rhodopsin which is present in respective synthesised from	ods of eye i
	(1) Vitamin-D	
80	(2) Vitamin-A	
	(3) Vitamin-B	II .
	(4) Vitamin-E	
71.	The amount of air that moves in and out of the lungs with e inspiration and expiration	ach norma
	(1) Tidal capacity	
	(2) Vital capacity	
	(3) Tidal volume	
Err Destri	(4) Residual volume	
72.	Schizocoel is present in	
	(1) Frog (2) Pila	
	(3) Herdmania (4) Balanoglossus	
73.	Uricotelic excretion is mainly an adaptation for	
	(1) Conservation of urea producing enzymes	
S. 54	(2) Raising osmotic concentration of blood	
	(3) Conservation of water	V lan
	(4) Storage of waste materials	

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Question No.		Q	uestio	ns	No.
74.	Mat	tch list I correctly with li	st II	The photosensitive pigment.	Ne
		List I		List II	
	I.	Planaria	A.	Greengland	
	II.	Earthworm	B.	Malpighian tubes	
	III.	Prawn	C.	Nephridia	
-	IV.	Scorpion	D.	Flame Cell	
noma	(1)	I-D, II-C, III-A, IV-B	(2)	I-B, II-C, III-D, IV-A	
	(3)	I-C, II-B, III-D, IV-A	(4)	I-A, II-D, III-C, IV-B	
75.	The	flow of blood in the vein	s is at	(2) Yital capacity	
· · · · · ·	(1)	Atmospheric pressure	(2)	Low pressure	•
	(3)	High pressure	(4)	Initially high and then low pr	essure
76.	Flag	gellated larvae of sponge	s is	at jueseite et reception	125
	(1)	Glochidium	(2)	Amphiblastula	
	(3)	Trochophore	(4)	Miracidium	
77.	Hon	nocercal tail is present ir	ine me s 1	Unitedia: Optionate Option (U	
	(1)	Electric ray	(2)	Shark	
	(3)	Lungfish	(4)	Teleosts	
78.	Which one of the following is not a fish ?				
	(1)	Silver fish	(2)	Lungfish	
	(3)	Gold fish	(4)	Flying fish	

PG-EE-2015 (Life Science)Code-C(14)

uestion No.	Que	stions	notissi
79.	Notochord like structure in bud (1) Protochord (3) Pallium	ccal region of hemichordates is (2) Stomochord (4) Mantle	867
80.	 'Crop' in birds is (1) Rectum (2) Modified stomach (3) Modified oesophagus (4) Early part of small intestin 	e	108
81.	'DOTS' strategy is used to treat (1) HIV	2) Malaria 4) Hepatitis	
	(3) Colina	nsmission for hepatitis C is 2) Vaginal secretion 4) Blood transfusion	
(Holding method of pasteurization (1) 71.7°C for 15 seconds (2	school a searby service should be all	.88
(3) 64.1°C for 45 minutes (4) 62.8°C for 30 minutes	
(Serum can be sterilised by 1) Autoclaving (2 3) Membrane-filtration (4		

Question No.		Question	ons		
85.	Widal test is widely	v used for the dia	iagnosis of		
	(1) Bacillary dyser	ntery (2)	Tuberculosis		
	(3) Typhoid fever	(4)	Cholera		
86.	HAART strategy is	used for the tre	eatment of		
	(1) Hepatitis B	(2)	Syphilis		
	(3) AIDS	(4)	Hepatitis C		
87.	The following bacte	erium is good exa	cample of photolithotrophs		
	(1) Rhodospirillur	n rubrum (2)	Nitrosomonas europaea		
	(3) Pseudomonas	pseudoflava (4)	Chromatium okenii		
88.	Transduction was o	liscovered by	(3) Fubereulogia and (3)		
	(1) Zinder and Le	derberg			
	(2) Elie Wollman and Francois Jacob				
	(3) Luria and Del	bruck			
	(4) Beadle and Ta	tum			
89.		here a bacterial	l cell is having flagella all over its surfac		
	is (1) Amphitrichou	s (2)) Cephalotrichous		
	(3) Lophotrichous	The second s) Peritrichous		
90.	A short stretch of	RNA used to ini	itiate replication is termed		
V	(1) Promoter	(2)			
	(3) Primase	(4)) Replisome		

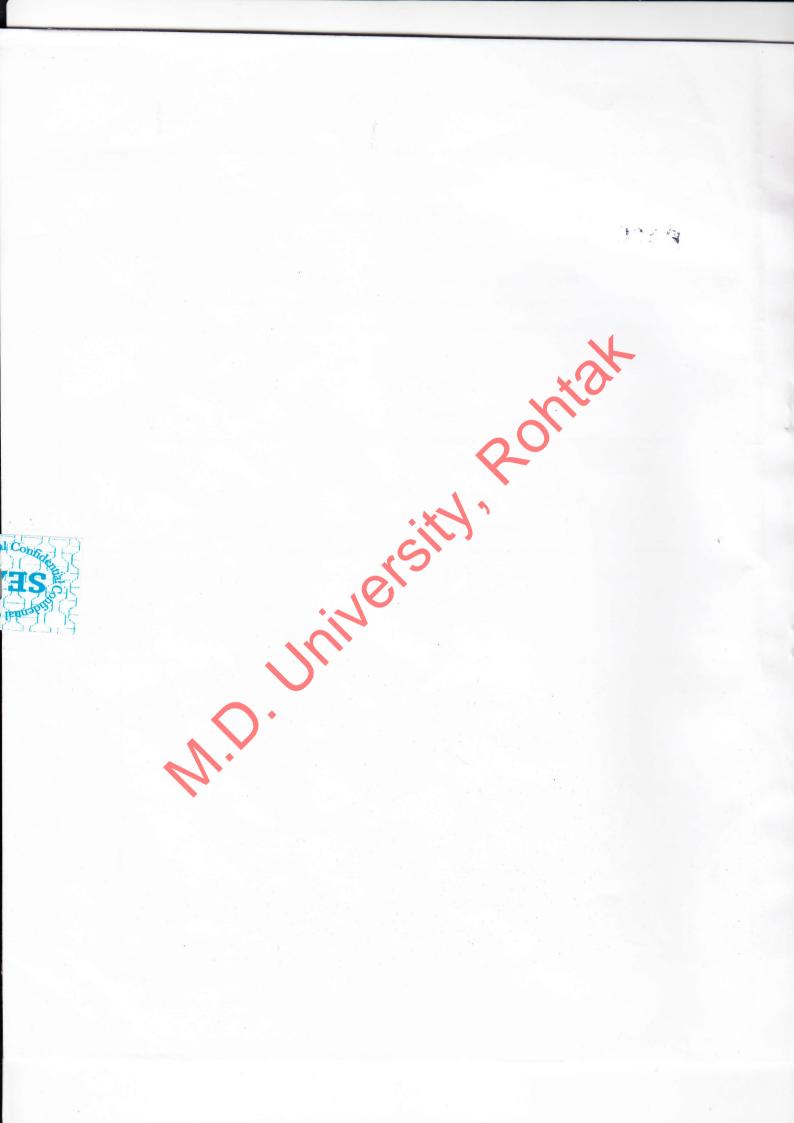
PG-EE-2015 (Life Science)Code-C(16)

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number of chromosome (1) 6 (3) 18	ngiosperm has 18 chromosomes wi in megaspore mother cell of the s (2) 12 (4) 24 ale gametes are carried through p (2) Siphonogamy (4) Porogamy s termed as	ame plant ?		
number of chromosome (1) 6 (3) 18 Fertilization in which m (1) Syngamy (3) Chalazogamy Pollination through air is	in megaspore mother cell of the s (2) 12 (4) 24 ale gametes are carried through p (2) Siphonogamy (4) Porogamy	ame plant ?		
 (1) 6 (3) 18 Fertilization in which m (1) Syngamy (3) Chalazogamy Pollination through air is 	 (2) 12 (4) 24 ale gametes are carried through p (2) Siphonogamy (4) Porogamy 			
Fertilization in which m (1) Syngamy (3) Chalazogamy Pollination through air is	ale gametes are carried through p (2) Siphonogamy (4) Porogamy	ollen tube is		
 (1) Syngamy (3) Chalazogamy Pollination through air is 	(2) Siphonogamy(4) Porogamy	ollen tube is		
 (1) Syngamy (3) Chalazogamy Pollination through air is 	(2) Siphonogamy(4) Porogamy			
Pollination through air is	(4) Porogamy	ent (2) ei (2)/(2) .ee		
une generite ensi-	s termed as	99. CNG 19		
(1) Anemophily				
()	(2) Cheiropterophily	so (0 ·		
(3) Entomophily	(4) Ornithophily			
The female gametophyte	of typical dicot plant at the time of	f fertilization is		
(1) 6-celled	(2) 7-celled			
(3) 8-celled	(4) 4-celled	Ka 161		
Development of 'seedless	fruits' is called'			
(1) Parthenogenesis	(2) Parthenocarpy			
(3) Polyembryony	(4) Apomixis			
What is the general term used to describe the degradation of pollutants				
		or pointainto		
(1) Biodegradation	(2) Bioaugmentation			
(3) Bioremediation	(4) Biostimulation			
) ((() () ()	 6-celled 8-celled 8-celled Development of 'seedless Parthenogenesis Polyembryony What is the general term using a biological approac Biodegradation 	 (3) 8-celled (4) 4-celled Development of 'seedless fruits' is called' (1) Rarthenogenesis (2) Parthenocarpy (3) Polyembryony (4) Apomixis What is the general term used to describe the degradation using a biological approach ? 1) Biodegradation (2) Bioaugmentation (3) Bioremediation (4) Biostimulation 		

PG-EE-2015 (Life Science)Code-C(17)

uestion No.	Questions
97.	Biological magnification of DDT will affect the most at which tropical level(1) First tropical level(2) Second tropical level(3) Third tropical level(4) Fourth tropical level
98.	 VAM (vesicular arbuscular mycorrhizae) are important for the plants to supply from soil (1) Phosphate (2) Nitrogen (3) Iron (4) Potassium
99.	CNG is(1) Carbonitrogen(2) Complete nitrogen gas(3) Compressed natural gas(4) Coal nitrogen gas
100.	 In coming years, the skin diseases will be more common due to (1) Increase in air pollution (2) Increase in CO₂ (3) Excess use of detergent (4) Depletion of ozone
Constant Provide Line Constant	(3) Biorecadistication consider (4) Piccurrents barrendit (2)



Me water and with (DO NOT OPEN THIS QU	JESTION BOOKLET BEFORE TIME OR UNTIL	No. of printed pages : 19) YOU ARE ASKED TO DO SO)
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Time: 1 ¹ / ₄ Hours	Max. Marks : 100	Total Questions : 100
Roll No	(in figure)	(in words)
Name :	Father's Name :	
Mother's Name	Date of Exa	mination

(Signature of the candidate)

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- 4. 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 book-let itself. Answers MUST NOT be ticked in the Question book-let.
- 5. There will be no negative marking. Each correct answer will be awarded one full mark. Cutting, erasing, overwriting and more than one answer in OMR Answer-Sheet will be treated as incorrect answer.
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Question No.			Question	ns
1.	Enz	ymes of hexose monop	hosphate	shunt are present
	(1)	Mitochondria	(2)	Cytosol
	(3)	Lysosomes	(4)	Microsomes
2.	A di	gestive secretion that	does not	contain any digestive enzyme is
	(1)	Saliva	(2)	Gastric juice
	(3)	Pancreatic juice	(4)	Bile
3.	Prin	nary structure of a pr	otein is fo	rmed by
	(1)	Hydrogen bond	(2)	Peptide bond
	(3)	Disulphide bond	(4)	All of the above
4.	The	e Centriols have	, C	10. The photoemstrive ground
	(1)	RNA	.0	
	(2)	DNA		
	(3)	Microtubules	EV (G)	Sisses and Banda Britania
	(4)	None of these		The reducer of an ancho
5.	The	e following is a polyuns	saturated	fatty acid
	(1)	Palmitic acid	(2)	Palmitoleic acid
	(3)	Linoleic acid	(4)	Oleic acid
6.	Ah	normone used for deter	ction of pr	regnancy is
	(1)	Estrogen	(2)	Progesterone
	1			Chorionic gonadotropin

PG-EE-2015 (Life Science)Code-D(1)

uestion No.	Questions				
7.	Insulin increases				
	(1) Glycogenesis (2) Gluconeogenesis				
	(3) Lipolysis (4) Blood glucose				
8.	Mammary glands are the modification of				
	(1) Sebaceous glands (2) Sweat glands				
	(3) Meibomian glands (4) Perineal glands				
9.	Sinus venosus is not present in the heart of				
	(1) Fish (2) Amphibian				
-	(3) Reptile (4) Mammal				
10.	The photosensitive pigment, rhodopsin which is present in rods of eye is synthesised from				
	(1) Vitamin-D (2) Vitamin-A				
	(3) Vitamin-B (4) Vitamin-E				
11.	If an endosperm of an angiosperm has 18 chromosomes what would be the number of chromosome in megaspore mother cell of the same plant ?				
	(1) 6 (2) 12				
	(3) 18 (4) 24				
12.	Fertilization in which male gametes are carried through pollen tube is				
	 Syngamy Siphonogamy 				
	(-) Sphonoguniy				

Science)Code-D(2)

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Question No.	Questions				
13.	Pollination through air is termed as				
	(1) Anemophily (2) Cheiropterophily				
	(3) Entomophily (4) Ornithophily				
14.	The female gametophyte of typical dicot plant at the time of fertilization is				
	(1) 6-celled (2) 7-celled				
	(3) 8-celled (4) 4-celled				
15.	Development of 'seedless fruits' is called'				
	(1) Parthenogenesis (2) Parthenocarpy				
	(3) Polyembryony (4) Apomixis				
16.	What is the general term used to describe the degradation of pollutants				
	using a biological approach.				
	(1) Biodegradation (2) Bioaugmentation				
	(3) Bioremediation (4) Biostimulation				
17.	Biological magnification of DDT will affect the most at which tropical level				
	(1) First tropical level (2) Second tropical level				
	(3) Third tropical level (4) Fourth tropical level				
18.	VAM (vesicular arbuscular mycorrhizae) are important for the plants to				
alles of	supply from soil				
	(1) Phosphate (2) Nitrogen				
	(3) Iron (4) Potassium				

PG-EE-2015 (Life Science)Code-D(3)

Question No.	Questions	Quéobias No			
19.	CNG is	1.3			
	(1) Carbonitrogen (2) Complete nitrogen gas				
	(3) Compressed natural gas (4) Coal nitrogen gas				
20.	In coming years, the skin diseases will be more common due to				
ei mite.	(1) Increase in air pollution (2) Increase in CO_2				
	(3) Excess use of detergent (4) Depletion of ozone				
21.	Plasmids can easily hold the DNA of which of the following sizes :				
	(1) 10 kb (2) 50 kb				
	(3) 300 kb (4) 600 kb				
22.	LSD (lysergic acid) is obtained from				
	(1) Aspergillus niger (2) Pencillium notatum				
	(3) Claviceps purpurea (4) Fusarium udum				
23.	Which of the following algae has "Plakea stage" in its life cycle ?				
	(1) Chlamydomonas (2) Volvox				
	(3) Vaucheria (4) Batrachospermum				
24.	Winged pollen grains are present in				
	(1) Cycas (2) Pinus				
	(3) Ephedra (4) Ginkgo				
25.	Puccinia spores that are stalked, unicellular, oval and binucleate ar				
	(1) Uredospores (2) Teleutospores				
	(3) Basidiospores (4) Pycniospores				

PG-EE-2015 (Life Science)Code-D(4)

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luestion No.	Questions						
26.	The	e seedless vascular plants	s are				
	(1)	Bryophyta	(2)	Pteridophyta			
	(3)	Gymnosperm	(4)	Angiosperm			
27.	Wh	ich of the following are t	he chai	racteristics of Gymnosperms ?			
	(a)	Naked ovules	(b)	Double Fertilization			
	(c)	Absence of tracheids	(d)	Haploid endosperm			
	(1)	(a) and (d)	(2)	(a) and (b)			
	(3)	(c) and (d)	(4)	(b) and (c)			
28.	Which of the following is not a stem?						
	(1)	Potato	(2)	Sweet Potato			
	(3)	Ginger	(4)	Onion			
29.	In India, most of herbaria are based on which system of plant classification						
	(1)	Engler and Prantl's sys	tem				
	(2)	Bentham and Hooker's					
	(3)	Hutchinson's system		stand hour is reprinted to the state			
	(4)	Takhtajan's system		(D. Hopshilds B			
30.	Tropical plants such as sugarcane show high efficiency of CO, fixation by						
	(1)	EMP pathway	(2)	TCA cycle			
	(3)	Hatch Slack cycle		Calvin cycle			

PG-EE-2015 (Life Science)Code-D(5)

Question No.	Questions				
31.	'DOTS' strategy is used to treat				
	(1) HIV	(2)	Malaria		
	(3) Tuberculosis	(4)	Hepatitis		
32.	The most important route of tr	ansn	nission for hepatitis C is		
	(1) Semen	(2)	Vaginal secretion		
	(3) Saliva	(4)	Blood transfusion		
33.	Holding method of pasteurizat	ion is	s carried out at		
	(1) 71.7°C for 15 seconds	(2)	68.4°C for 30 minutes		
	(3) 64.1°C for 45 minutes	(4)	62.8°C for 30 minutes		
34.	Serum can be sterilised by		R. Which of the fallowing is not a		
	(1) Autoclaving	(2)	Dry-heat sterilisation		
	(3) Membrane-filtration	(4)	Incineration		
35.	Widal test is widely used for the diagnosis of				
	(1) Bacillary dysentery	(2)	Tuberculosis		
	(3) Typhoid fever	(4)	Cholera		
36.	HAART strategy is used for the treatment of				
	(1) Hepatitis B	(2)	Syphilis		
	(3) AIDS	(4)	Hepatitis C		
37.	The following bacterium is good example of photolithotrophs				
	(1) Rhodospirillum rubrum		Nitrosomonas europaea		
	(3) Pseudomonas pseudoflava		Chromatium okenii		

PG-EE-2015 (Life Science)Code-D(6)

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Question No.	Questions					
38.	Transduction was discovered by					
	(1) Zinder and Lederberg					
	(2) Elie Wollman and Fra	ncois Jacob				
	(3) Luria and Delbruck					
	(4) Beadle and Tatum					
39.		acterial cell is having flagella all over its s	urface			
	is					
	(1) Amphitrichous	(2) Cephalotrichous				
	(3) Lophotrichous	(4) Peritrichous				
40.	A short stretch of RNA used to initiate replication is termed					
	(1) Promoter	(2) Primer				
	(3) Primase	(4) Replisome				
41.	Sperm capacitation takes place in					
	(1) Epididymis	(2) Seminal vesicles				
64	(3) Female genital tract	(4) Testis				
42.	Graafian follicles are found in					
	(1) Thyroid	(2) Spleen				
	(3) Ovary	(4) Kidney				
43.	Extra-embryonic membranes are absent in embryo of					
	(1) Fish	(2) Reptile				
	(3) Bird	(4) Mammal				

PG-EE-2015 (Life Science)Code-D(7)

Question No.	Questions	io dou No.			
44.	The presence of gray crescent is a characteristic of				
	(1) Fertilized egg of frog (2) Unfertilized egg of frog				
	(3) Fertilized egg of reptile (4) Fertilized egg of mammal				
45.	Sexual reproduction in larval stage is called				
	(1) Parthenogenesis (2) Abiogenesis				
875)20	(3) Neoteny (4) Paedogenesis	99. 1			
46.	Rearing of earthworm is called				
	(1) Apiculture (2) Silviculture				
	(3) Vermiculture (4) Pisciculture	4			
47.	Sting is a modified ovipositor in				
	(1) Centipede (2) Millipede				
	(3) Honey bee (4) Scorpion				
48.	DNA finger printing is based on the presence in DNA of				
	(1) Constant number of tandem repeats				
	(2) Variable number of tandem repeats				
	(3) Non-repetitive sequences in each DNA				
	(4) Introns in eukaryotic DNA				
49.	PCR was discovered by				
	(1) Kary Mullis (2) Francis Crick				
	(3) Hershey and Chase (4) Rosalind Franklin				

PG-EE-2015 (Life Science)Code-D(8)

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Question No.	Questions The pH of a plant tissue culture medium is usually maintained at				
50.					
	(1) 7.0 (2) 5.8				
	(3) 4.0 (4) Any between 4-14				
51.	Red data book provides data on				
	(1) Biota of red sea				
	(2) Effect of red light on photosynthesis				
	(3) Red pigmented plants				
-	(4) Threatened species				
52.	A species inhabiting different geographical areas is known as				
	(1) Sympatric (2) Sibling				
	(3) Allopatric (4) Allelopathy				
53.	"Theory of spontaneous generation" was proposed by				
	(1) Charles Darwin (2) Louis Pasteur				
	(3) Oparin and Haldane (4) Hugo de Vries				
54.	Development of resistance against DDT by mosquito is an example of				
	(1) Natural selection (2) Variation				
	(3) Adaptation (4) Isolation				
55.	Who gave the statement that population tends to multiply more rapidly than the food supply				
	(1) Malthus (2) Darwin				
	(3) Lamark (4) Cope				

PG-EE-2015 (Life Science)Code-D(9)

uestion No.	Questions				
56.		owing phases of cell cycle, the drug colchicine exer			
	its effect ?				
	(1) G1	(2) G2			
	(3) S	(4) M			
57.	The most storage polys	accharide of animal cell is			
	(1) Starch	(2) Chitin			
	(3) Glycogen	(4) Glycan			
58.	Pyrimidines in RNA ar	e			
	(a) Adenine	(b) Uracil			
	(c) Cytosine	(d) Thymine			
	(e) Guanine				
	(1) (a) and (b)	(2) (b) and (c)			
	(3) (a) and (e)	(4) (c) and (d)			
59.	An inorganic ion required for the activity of an enzyme is known as				
	(1) Activator	(2) Cofactor			
	(3) Coenzyme	(4) Holoenzyme			
60.	End product of aerobic glycolysis is				
	(1) Acetyl CoA	(2) Lactate			
	(3) Pyruvate	(4) CO_2 and H_2O			
61.	The amount of air that moves in and out of the lungs with each norma				
	inspiration and expirat				
	(1) Tidal capacity	(2) Vital capacity			
	(3) Tidal volume	(4) Residual volume			

PG-EE-2015 (Life Science)Code-D(10)

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Schizocoel is present in (1) Frog (3) Herdmania	(2) Pila (4) Balanoglossus
(3) Herdmania	
Il minetelia exercition in	
 Conservation of u Raising osmotic c Conservation of v 	Select a Match one of the selection of the new a field of the
Match list I correctly List I	vith list II List II
I. Planaria	A. Green gland
II. Earthworm	B. Malpighian tubes
III. Prawn	C. Nephridia
IV. Scorpion	D. Flame Cell
(1), I-D, II-C, III-A, I	V-B (2) I-B, II-C, III-D, IV-A
(3) 1-C, II-B, III-D, I	V-A (4) I-A, II-D, III-C, IV-B
The flow of blood in th	e veins is at
(1) Atmospheric pre	ssure (2) Low pressure
(3) High pressure	(4) Initially high and then low pressure
	 (2) Raising osmotic collision (3) Conservation of w (4) Storage of waster Match list I correctly w List I I. Planaria II. Prawn IV. Scorpion (1) I-D, II-C, III-A, IW (3) I-C, II-B, III-D, IW The flow of blood in th (1) Atmospheric preside

Question No.	Questions	100. 00			
66.	Flagellated larvae of sponges is				
	(1) Glochidium (2) Amphiblastula				
	(3) Trochophore (4) Miracidium				
67.	Homocercal tail is present in	- 22			
	(1) Electric ray (2) Shark				
	(3) Lung fish (4) Teleosts				
68.	Which one of the following is not a fish ?				
	(1) Silver fish (2) Lung fish				
	(3) Gold fish (4) Flying fish	4			
69.	Notochord like structure in buccal region of hemichordates is				
	(1) Protochord (2) Stomochord				
	(3) Pallium (4) Mantle				
70.	'Crop' in birds is				
	(1) Rectum (2) Modified stomach				
	(3) Modified oesophagus (4) Early part of small intestine				
71.	The cell organelles associated with photorespiration are				
	(1) Chloroplast, peroxisome and mitochondria				
	(2) Chloroplast and peroxisome				
erme	(3) Chloroplast and mitochondria				
	(4) Peroxisome and mitochondria				

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Question No.	Questions				
72.	The conversion of ammonia into nitrite and nitrate is called				
	(1) Nitrogen fixation		Denitrification		
	(3) Nitrification	(4)	Ammonification		
73.	If an organism is respiring in radioactivity will be detected	a bel ja l in wh	ar filled with radio-labelled oxygen, the ich product of respiration		
	(1) CO ₂	(2)	H ₂ O		
	(3) $C_6 H_{12} O_6$	(4)	\dot{CO}_2 and H_2O		
74.	The carbohydrates are trans in the form of	ported	from leaves to other parts of the plant		
	(1) Starch	(2)	Glucose		
	(3) Sucrose	(4)	Cellulose		
75.	Match correctly between con	umn (A	and column (B)		
	Column (A)		Column (B)		
	I. Extreme cold treatmen	t A.	Ripening of fruits		
	II. Response to day length	B.	Vernalization		
	III. Apical dominance	C.	Photoperiodism		
	IV. Ethylene	D.	Auxin		
	(1) I-B, II-D, III-C, IV-A	(2)	I-B, II-C, III-D, IV-A		
	(3) I-D, II-C, III-B, IV-A	(4)	I-C, II-B, III-A, IV-D		
76.	Monocot seed contains singl	e cotyle	edon which is known as		
	(1) Aleurone	(2)	Endosperm		
	(3) Scutellum	(4)	Perisperm		
77.	The Central Potato Research Institute is located at				
	(1) Dehradun	(2)	Delhi		
	(3) Shimla	(4)	Coimbatore		

PG-EE-2015 (Life Science)Code-D(13)

Question No.		Questions						
78.	The edible part of litchi is morphologically							
86	(1) Fleshy thalamus	s (2) Mesocarp						
	(3) Aril	(4) Endosperm						
79.	Match list 1 with list	2						
	List I	List II						
	I. Fibre	A. Arachis hypogea						
naniq p	II. Oil	B. Corchorus capsularis						
68.	III. Timber	C. Curcuma longa						
	IV. Spice	D. Tectona grandis						
	(1) I-B, II-A, III-D,	IV-C (2) I-B, II-C, III-D, IV-A						
ug. I	(3) I-C, II-A, III-B,	IV-D (4) I-D, II-B, III-C, IV-A						
80.	The condition where	e a bisexual flower does not open is called						
	(1) Allogamy	(2) Xenogamy						
185.	(3) Geitonogamy	(4) Cleistogamy						
81.	Enzyme that joins t	he Okazaki fragments is						
V	(1) Laccase	(2) Ligase						
-71.	(3) Helicase	(4) Topoisomerase						
82.	Cytochrome C is a protein with							
	(1) Sulphate	(2) Haeme						
	(3) Copper	(4) Magnesium						

PG-EE-2015 (Life Science)Code-D(14)

Question No.	Questions						
83.	Lipopolysaccharide is the crucial component of						
	(1) Gram-positive bacteria (2) Gram-negative bacteria						
	(3) Virus (4) Plant cell wall						
84.	Which type of library would you screen in order to identify the promoter of						
	the hemoglobin gene						
	(1) Genomic library (2) Expression library						
	(3) cDNA library (4) None of the above						
85.	Which of the following is used to select genes of interest from genomi						
-	library?						
podifie	(1) Restriction enzymes (2) Cloning vectors						
	(3) DNA probes (4) Gene targets						
86.	Which technique is used to resolve the different sizes of DNA fragment						
	following a restriction enzyme digest?						
	(1) DNA sequencing (2) Gel electrophoresis						
haller	(3) Genecloning (4) PCR						
87.	Which type of restriction endonuclease enzymes are most widely used i						
	recombinant DNA technology ?						
	(1) Type I enzymes						
	(2) Type II enzymes						
	(3) Type III enzymes						
	(4) All of the above						
	in Submetaconteix - dimensional signature are slightly different in the						

uestion No.	Questions						
88.	Which technique can be used to investigate the transcripts of a gene?						
	(1) Southern blotting (2) Northern blotting						
	(3) Western blotting (4) None of the above						
89.	Crown gall disease is caused by						
	(1) Bacillus thuringiensis						
	(2) Agrobacterium radiobacter						
	(3) Pseudomonas syringae						
	(4) Agrobacterium tumefaciens						
90.	Which one of the following is not a transgenic or genetically modified organism?						
	(1) Sheep 'Dolly'						
dream)	(2) Bt cotton						
	(3) Bacteria that make human insulin						
	(4) Golden rice						
-91.	The enzyme involved in mRNA synthesis during transcription is called :						
	(1) Helicase (2) DNA ligase						
	(3) RNA polymerase (4) DNA polymerase						
92.	The coding sequences in eukaryotic DNA are known as :						
92.	The coding sequences in eukaryotic DNA are known as :(1) Regulatory sequence(2) Exon						

PG-EE-2015 (Life Science)Code-D(16)

61

uestion No.	Questions
93.	DNA carries :(1) Positive charge(2) Negative charge(3) Neutral(4) None of the above
94.	 Which of the following is correct with regard to an euploidy? (1) All an euploid individuals die before birth (2) Inversion (3) 4n (4) 2n+1
95.	The X-ray diffraction studies conducted by were key to the discovery of the structure of DNA. (1) Franklin (2) Meselson and Stahl (3) Chargaff (4) McClintock
96.	 Which of the following is not needed for DNA transcription ? (1) DNA (2) Enzymes (3) Ribosomes (4) Nucleotide
97.	 Which of the following descriptions of chromosomes is not correctly matched? (1) Telocentric – there is only one chromosome arm. (2) Acrocentric – chromosome arms are identical in size (3) Metacentric – chromosome arms are almost equal in size. (4) Submetacentric – chromosome arms are slightly different in size

nestion No.	Questions	000
98.	The triplet code of CAT in DNA is represented as in mRNA in tRNA.(1) CAT, CAT(2) GUA, CAU(3) GTA, CAU(4) GAA, CAT	10
99.	What is the probability that a male will inherit an X linked recessive from his father ? (1) 25% (2) 50% (3) 75% (4) 0%	ger
100.	Who demonstrated that genes are located on chromosomes ? (1) Meselson and Stahl (2) Watson and Crick (3) Morgan (4) Chargaff	
	Which of the following description of christian sectors is pole. (i) "Felocentric using a least provide the sector of the secto	

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S.No.	Α	В	С	D	
1	3	3	1	2	
2	2	4	3	4	
3	2	4	2	2	
4	4	3	3	3	
5	1	3	2	3	
6	3	3	3	4	
7	2	4	3	1	
8	2	1	3	2	Routat
9	4	4	1	4	×0
10	3	2	4	2	
11	3	3	2	2	
12	4	3	2	2	
13	4	1	2	1	
14	3	1	1	2	
15	3	3	3	2 •	
16	3	3	2	3 .	
17	4	3	2	4	
18	1	2	2	1	
19	4	1	4	3	
20	2	2	1	4	
21	2	2	3	1	
22	2	4	2	3	
23	2	2	2	2	
24	1	3	4	2	
25	3	•3	1	1	
26	2	4	3	2	
27	2	1	2	1	
28	2	2	2	2	
29	4	4	4	2	
30	1	2	3	3	
31	1	2	3	3	
32	3	2	3	4	
33	2	1	1	4	
34	2	2	1	3	
35	1	2	3	3	
36	2	3	3	3	

37 38 39 40	1 2	4	3	4
39		1	2	4
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40	2	3	1	4
40	3	4	2	2
41	1	1	4	3
42	3	3	3	3
43	2	2	2	1
44	3	2	1	1
45	2	1	1	3
46	3	2	4	3
47	3	1	3	3
48	3	2	2	2
49	1	2	2	1
50	4	3	3	2
51	2	2	1	4
52	2	2	3	3
53	1	2	2	2
54	2	1	2	1
5 5	2	3	1	
56	3	2	2	4
57	4	2	1	3
58	1	2	2	2
59	3	4	2	2
60	4	1	• 3	3
61	4	1	2	3
62	3	3	4	2
63	2	2	2	3
64	1	3	3	1
65	1	2	3	2
66	4	3	4	2
67	3	3	1	4
68	2	3	2	1
69	2	1	4	2
70	3	4	2	3
71	2	4	3	1
72	4	3	2	3
73	2	2	3	2

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	78	2	2	1	3	
	79	4	2	2	1	
	< 80	2	3	3	4	
1	81	3	3	3	2	
	82	2	2	4	2	
	83	3	2	4	2	Rough
	84	1	4	3	1	
	85	2	1	3	3	
	86	2	3	3	2	
	87	4	2	4	2	
	88	1	2	1	2	1.
	89	2	4	4	4	
	, 90	3	3	2	1	
	91	3	3	2	3	
	92	3	2	2	2	
	93	1	3	1	2	
	94	1	1	2	4	
	95	3	2	2	1	
	96	3	2	3	3	
	97	3	4	4	2	
	98	2	1	1	2.	
	99	1	2	3	4	
	100	2	3	4	3	