SET-"X" (Total No. of printed pages: 21)

(DO NOT OPEN THIS QUESTION BOOKLET BEFORE TIME OR UNTIL YOU ARE ASKED TO DO SO)

UG-EE-June, 2025 (Genetics 4 year)

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Codo	
Code	H

Sr. No. 10017

Time: 14 Hours	Total Questions: 100	Max. Marks: 100
Roll No.	_ (in figure)	(in words)
Name :	Date of Bir	th:
Father's Name:	Mother's N	Name :
Date of Examination:		

(Signature of the candidate)

(Signature of the Invigilator)

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

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8. 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.

,	Coue-A	
Question No.	Questions	
1.	Which of the following structure is absent in bacterial cells?	
	(1) Ribosomes (2) Nucleus	
	(3) Plasma membrane (4) Cell wall	
2.	The movement of water across semipermeable membrane is called:	
	(1) Diffusion (2) Osmosis	
	(3) Active Transport (4) Facilitated diffusion	
3.	Polymorphism is best exhibited in:	
e Just	(1) Obelia (2) Hydra	
	(3) Physalia (4) Aurelia	
4.	Gymnosperms are characterized by:	
	(1) Naked seeds (2) Enclosed seeds	
· /	(3) Flowers (4) Fruits	
5.	Which of the following is a complex permanent tissue?	
	(1) Parenchyma (2) Collenchyma	
	(3) Sclerenchyma (4) Xylem	
6.	Following is involuntary muscle found in hollow organs:	
	(1) Skeletal (2) Cardiac	
	(3) Smooth (4) Striated	

Question No.	anni) a Vil Que	estions
7.	Which tissue helps in dispersal of	seed?
	(1) Endosperm	(2) Embryo
	(3) Pericarp	(4) Cotyledon
8.	Which structure prevents self-pol	llination in plants?
	(1) Ovule RECORD (E)	(2) Petal material
P	(3) Self-incompatibility gene	(4) Integument
9.	Which among the following is tru	e about cleistogamous flowers?
	(1) Promote cross-pollination	(2) Always open for pollinators
	(3) Do not require pollinators	(4) Do not produce seeds
10.	The acrosome of sperm is derived	from:
	(1) Mitochondria	(2) Golgi apparatus
	(3) Nucleus (1)	(4) Lysosome
11.	Menstruation is due to sudden d	rop of:
	(1) FSH	(2) Estrogen
	(3) LH make (4)	(4) Progesterone
12.	Fertilization occurs in which par	t of the fallopian tube:
	(1) Infundibulum	(2) Ampulla
	(3) Isthmus	(4) Fimbriae

Question No.	Questions
13.	ART used for male infertility where sperm is directly injected into the
	ovum:
	(1) IVF (2) ICSI
	(3) GIFT (4) ZIFT
14.	Artificial seed production uses:
	(1) Pollen (2) Somatic embryos
•	(3) Ovules (4) Zygotes
15.	In angiosperms, triple fusion results in:
	(1) Zygote (2) Ovule
	(3) Endosperm (4) Embryo sac
16.	Which organism can reproduce through binary fission and also form
	spores?
	(1) Paramecium (2) Amoeba
	(3) Rhizopus (4) Plasmodium
17.	Which of the following is a bacterial STD?
	(1) AIDS (2) Herpes
	(3) Gonorrhea (4) Warts

Question No.	Questions	PARTY.
18.	Apomixis is used in agriculture to:	6.1
	(1) Increase hybrid vigor	
	(2) Increase recombination	
	(3) Avoid fertilization	
	(4) Produce genetically variable seeds	
19.	Fragmentation occurs in:	
No.	(1) Hydra (2) Spirogyra	
	(3) Amoeba (4) Yeast	
20.	The function of the synergids in the embryo sac is to:	1 . 12
	(1) Produce endosperm)
	(2) Help in fertilization by guiding pollen tube	
all to be	(3) Develop into zygote	A.
7	(4) Form antipodals	
21.	Which of the following is an outbreeding device?	
((1) Bisexual flower (2) Self-incompatibility	7
	(3) Fertilization (4) Anther dehiscence	
22. I	Double fertilization is a characteristic feature of :	7
-	1) Gymnosperms (2) Bryophytes	
	3) Angiosperms (4) Algae	

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Question No.	Questions (without)
23.	Which of the following disorders is caused by a sex-linked recessive
	gene?
	(1) Thalassemia (2) Sickle cell anemia
	(3) Haemophilia (4) Down's syndrome
24.	In polygenic inheritance, the phenotype is influenced by:
, *	(1) A single dominant gene (2) A single recessive gene
	(3) Multiple genes (4) Environmental factors only
25.	The packaging of DNA into chromosomes involves:
201	the packaging of Bitti into enfolicement and and only
	(1) Lipids (2) Non histones
	(3) Histone proteins (4) RNA polymerase
26.	DNA replication is:
	(1) Conservative (2) Dispersive
136 44 8	(3) Semiconservative (4) Degenerative
27.	Which syndrome is caused by the presence of an extra X chromosome
	in males? Evolution timough motor on and recognitional materials 22. Evolution timough materials
6 76 10	(1) Turner's syndrome (2) Klinefelter's syndrome
	(3) Down's syndrome (4) Edward's syndrome

Question		dina sul
No.	Questions	300
28.	The Hardy-Weinberg principle is applicable under:	2".
	(1) Natural selection	
. h	(2) Mutation	•
	(3) Large population without mutation	
	(4) Gene flow	5
29.	The Lac Operon is an example of:	· 2+
y	(1) Gene amplification (2) Gene deletion	
	(3) Gene regulation (4) Gene mutation	
30.	Who first performed the experiment demonstrating	bacteria
	transformation?	
	(1) Griffith (2) Hershey	
	(3) Avery (4) Watson	<i>d</i> '_
31.	The central dogma of molecular biology is:	
	(1) $DNA \rightarrow RNA \rightarrow Protein$ (2) $RNA \rightarrow DNA \rightarrow Protein$	otein
in osonia	(3) Protein \rightarrow RNA \rightarrow DNA (4) RNA \rightarrow Protein \rightarrow 1	DNA
32.	Evolution through mutation and recombination is explained i	n:
O.F	(1) Darwin's theory (2) Modern synthetic t	heory
	(3) Lamarkism (4) Catastrophism	***

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Question No.	Questions	and the state of
33.	Which of the following is a chromosomal disorder?	18.8
	(1) Haemophilia (2) Thalassemia	nl · .;
	(3) Colour blindness (4) Turner's syndrom	ė
34.	Which type of evolution is indicated by the presence	of simila
	anatomical features in different species?	
	(1) Divergent evolution (2) Adaptive radiation	n l
	(3) Convergent evolution (4) Artificial selection	Th.
35.	Thalassemia affects:)
	(1) Blood clotting (2) Melanin production	on
	(3) Hemoglobin formation (4) Bleeding disorder	i iai
36.	Which of the following is a mechanism of evolution?)·1 ~
	1) Food chain (2) Reproduction)
	3) Natural selection (4) Carbon dating	45
37. G	enetic drift is most likely to occur in:	1
(1) Large populations (S)
(2)	Populations under selection pressure	43.
		, · .
(3)	Small isolated populations	

Question No.	Questions
38.	Typhoid is transmitted primarily through:
	(1) Insect bite (2) Contaminated water
. 1	(3) Sexual contact (4) Air droplets
39.	Ringworm is caused by a:
	(1) Bacterium (2) Virus
	(3) Protozoan (4) Fungus
40.	Vaccines development is by stimulating:
	(1) Toxin production (2) Pathogen growth
	(3) Immune response (4) Hormone secretion
41.	HIV primarily attacks which type of immune cells:
41	(1) B-Cells (2) Cytotoxic T-cells
	(3) Helper T-cells (4) Natura! killer cells
42.	Adolescence is the period between the ages of:
	(1) 6-12 years (2) 10-19 years
	(3) 18–25 years (4) 1–5 years
43.	Long-term alcohol abuse can be detected by dysfunction of:
	(1) Lungs (2) Liver
	(3) Pancreas (4) Intestine

Question No.	Questions	troustrough to M
44.	Which of the following is used in single-cell protein production?	507.
•	(1) Saccharomyces cerevisiae (2) Rhizobium	
	(3) Mucor (4) Spirulina	
45.	The aim of biofortification is to:	30
,	(1) Increase food yield (2) Increase taste of food	
	(3) Improve nutrient quality (4) Decrease fertilizers	
46.	Apiculture involves the management of:	52
•.	(1) Silkworms (2) Honeybees	
	(3) Fish (4) Poultry	
47.	Artificial insemination is commonly used in:	63
•	(1) Animal tissue culture (2) Animal husbandry	
	(3) Cloning (4) Cross-pollination	:
48.	Lactobacillus is important in the production of:	.70
	(1) Dhokla (2) Dosa	
	(3) Yogurt (4) Soft drinks	
49.	Methane is produced during sewage treatment by:	55.
The s	(1) Methanogens (2) Cyanobacteria	.,
	(3) Fungus (4) Algae	

Question No.	Questions
50.	Trichoderma species act as:
	(1) Antibiotic producers (2) Biocontrol agents
	(3) Fuel producers (4) Vitamin supplement
51.	Which technique is primarily used in recombinant DNA technology?
	(1) Southern Blotting (2) PCR
	(3) Gene cloning (4) Northern blotting
52.	Bt toxin gene has been cloned from:
	(1) Agrobacterium (2) Rhizobium
	(3) Bacillius thuringiensis (4) Escherichia coli
53.	What is the main purpose of gene therapy?
*	(1) Replace defective genes (2) Clone organisms
	(3) Cure disease (4) Create Super genes
54.	Golden rice is a genetically modified crop rich in:
1	(1) Iron (2) Vitamin A
	(3) Vitamin C (4) Calcium
55.	Which of the following organism is used for producing human insulin
	(1) Agrobacterium (2) Bacillus
Terreto Cara	(3) E. coli (4) Yeast (5)

Code-A

Question No.	Questions	Pour de
56.	Biosafety protocols aim to:	IA /
	(1) Improve productivity (2) Protect biodiversity	
	(3) Reduce pollution (4) Enhance shelf-life	,
57.	The term 'biopiracy' refers to:	6.9
	(1) Illegal cloning	
0.64.1	(2) Patent violation of indigenous knowledge	
	(3) Unsafe vaccines	
	(4) Unauthorized use of antibiotics	
58.	In genetic engineering, restriction enzymes are used to:	
	(1) Join DNA (2) Ligate DNA	
•	(3) Cut DNA (4) Denature DNA	· · · · · · · · · · · · · · · · · · ·
59.	Bt crops are genetically modified to:	1. 17.1
	(1) Increase nutrient content (2) Resist herbicides	
	(3) Produce insecticidal protein (4) Resist viral infection	ns
60.	A vector must have which one of the following features:	
ا سنعت	(1) Small size & Origin of replication	58
1	(2) Origin of replication & antibiotic resistance	
	(3) Small size & Antibiotic resistance gene	
	(4) Antibiotic resistance	

Question No.	
61.	The role of Agrobacterium tumefaciens in genetic engineering is:
	(1) Antibiotic production (2) Inducing tumors
	(3) Delivering genes (4) Inducing fertilization
62.	What type of vaccine is produced using recombinant DNA technology?
· · · · · · · · · · · · · · · · · · ·	(1) Killed pathogen (2) Live-attenuated vaccine
	(3) Subunit vaccine (4) Toxoid vaccine
63.	The primary goal of the Human Genome Project was to:
	(1) Create synthetic DNA
(2) Identify all genes in human DNA
(6	3) Cure genetic disorders
(4	Engineer superhumans
1. W	hich method is commonly used to insert foreign DNA into cells?
(1) Centrifugation (2) Electroporation
(3)	Chromatography (4) Spectroscopy
W	hich is a concern associated with GM crops?
(1)	
(3)	Biosafety and ecological impact (4) Short shelf life

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Questio No.	Questions	in in
66.	Which of the following best defines a niche in ecology?	Ui
	(1) Total area occupied by a species	
	(2) Role and position a species has in its environment	
	(3) Number of individuals in a population	46
	(4) Type of food consumed by the species	
67.	In mutualism,	
	(1) One species benefits, the other harmed	
,	(2) Both species are benefitted	.21
	(3) One species benefits, the other unaffected	,
	(4) Both species are neutral and a second with a second way and a second way and a second way and a second way a second wa	,
68.	Which of the following is NOT a density-dependent popu	lation
-	attribute?	
	400110400.	
- FE	(1) Birth & death rate (2) Population density	87
Ÿ.	The Report of the Control of the Con	.85
69.	(1) Birth & death rate (2) Population density	.87
	 (1) Birth & death rate (2) Population density (3) Species distribution (4) Earthquake 	.8.

Question No.	Questions
70.	Which of the following cycles does carbon fixation belong to?
	(1) Nitrogen cycle (2) Phosphorus cycle
	(3) Sulphur cycle (4) Carbon cycle
71.	Primary productivity refers to:
	(1) Energy released during respiration
	(2) Energy available at the top level of pyramid
	(3) Amount of biomass produced by consumers
	(4) Rate of biomass production by producers
72.	The term "hotspot" in biodiversity refers to areas that:
	(1) Are extremely hot out ato an although someograph (1)
	(2) Have low biodiversity & more habitant
the state	(3) Are rich in endemic species and under threat
	(4) Have only endangered species
73.	Red Data Book is maintained for:
	(1) Extinct animals (2) Extinct plants
	(3) Endangered species (4) Living fossils
74.	Which zone has maximum biodiversity?
	(1) Arctic & Antarctica (2) Desert ecosystems
*	(3) Temperate forests (4) Tropical rainforests

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Question No.	Questions
75.	Which gas is mainly responsible for ozone layer depletion?
	(1) CO ₂ (2) CH ₄
	(3) CFCs (4) SO ₂
76.	An example of in situ biodiversity conservation is:
	(1) Seed bank (2) Botanical garden
	(3) National Park (4) Zoological park
77.	The main cause of radioactive increase in the environment is:
	(1) Automobile exhaust (2) Nuclear power plants
j -	(3) Ozone depletion (4) Open defecation
78.	Which of the following pollutants is primarily responsible for acid
	rain?
	(1) CO ₂ (2) SO ₂
	(3) O ₃ (4) CH ₄
79.	Which of the following is a consequence of deforestation?
	(1) Increased ozone
	(2) Enhanced carbon fixation
	(3) Soil erosion
	(4) Decrease in greenhouse gases

Question No.	uestion Questions Questions				
80.	Which of the following is an effect of the greenhouse effect?				
	(1) Ozone formation	· · .			
	(2) Increase in Earth's average temperature				
	(3) Ozone hole	87			
	(4) Desertification in polar regions				
81.	Which of the following is a property of crystalline solids?				
	(1) Irregular shape (2) Sharp melting point				
	(3) Isotropic nature (4) No definite structure				
82.	An example of an amorphous solids is:	97			
	(1) Quartz (2) Sugar				
	(3) Glass . (4) Diamond				
83.	Which of the following is not a type of binding force in solids?	•			
	(1) Ionic (2) Metallic	19.			
	(3) Hydrogen bonding (4) Gravitational				
84.	Which of the following represents a suspension?				
	(1) Blood (2) Muddy water				
	(3) Salt in water (4) Air				

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Questio No	Questions	63.65
85.	A true solution is:	
•	(1) Heterogeneous and transparent	
	(2) Homogeneous and transparent	
	The second of th	100
	(3) Heterogeneous and opaque	
	(4) Homogeneous and opaque	
86.	A characteristics of lyophobic colloids is:	10
11.9674	(1) High stability (2) Strong affinity to sol	lvent
1 1 1 Co.	(3) Easily coagulated (4) Self-preparing	vent
37.		d durin
37.	(3) Easily coagulated (4) Self-preparing Which law states that the mass of substances deposited	d durin
37. E	(3) Easily coagulated (4) Self-preparing Which law states that the mass of substances deposited	d durin
87. S	(3) Easily coagulated (4) Self-preparing Which law states that the mass of substances deposited electrolysis is proportional to the quantity of electricity passed?	d durin
87. E	(3) Easily coagulated (4) Self-preparing Which law states that the mass of substances deposited electrolysis is proportional to the quantity of electricity passed: 1) Ohm's law (2) Faraday's first law	d during?
87. E	(3) Easily coagulated (4) Self-preparing Which law states that the mass of substances deposited electrolysis is proportional to the quantity of electricity passed: 1) Ohm's law (2) Faraday's first law 3) Faraday's second law (4) Avogadro's law substance used to destroy or inhibit microbes on living tissue.	d during?

1-oho		Code-A
Question No.	SanoitsauQuestions	Question No.
89.	Antacids help to relieve:	85. A
11/4	(1) Bacterial infections (2) Allergies	(1).
	(3) Headache (4) Acidity	(0)
90.	Which is not an artificial sweetening agent?	100
	(1) Sucralose (2) Saccharin	(6) 1:
. 14 -81	(3) Glucose (4) Aspartame	(1-)
91.	Preservatives in food prevent:	12
vent	(1) Change in flavor (2) Growth of micro	oorganisms
	(3) Oxidation (4) Emulsification	(8)
92.	Which is a commonly used antioxidant in packaged food?	87. TVb
311111111111111111111111111111111111111	(1) BHT (2) Vitamin B complete grant of the control	olex
	(3) Sodium chloride (4) Lactic acid	
93.	Which is a disinfectant?	
	(1) Silver nitrate	(0)
; 21 N	(2) Tincture iodine	5.4 f 1. 38.
	(3) Hydrogen peroxide (strong solution)	. (1)
	(4) Zinc	

UG-EE-2025 (Bachelor of Science (Genetics)) Code-A
(18)

		Code-F				
Question No.	question and the state of the s					
94.	Which soap molecule part interacts with oil and grease?					
4 7980°A	(1) Hydrophilic head (2) Ionic group	(1)				
is need a	(3) Hydrophobic tail (4) Water molecule	(2)				
95.	Electrolysis involves:					
	(1) Magnetic field					
	(2) Heat conduction	(t)				
4	(3) Chemical decomposition by electricity (4) Radioactivity	(8)				
96.	Which of the following is an example of a macromolecular co	olloid?				
	(1) Milk (2) Rubber					
	(3) Smoke (4) Fog					
97.	Which compound can be used as both antiseptic and disinfe	ctant?				
	1) Hydrogen peroxide (2) Penicillin					
	3) Sodium benzoate (4) Ampicillin					
98. T	he basic unit of a crystalline solid is called:					
(1) Lattice point (2) Unit cell					
(3	3) Atom (4) Molecule					

Question No.	Questions	in notice
99.	Which of the following best describes soaps?	
	(1) Acidic salts of long-chain fatty acids(2) Basic salts of fatty acids	
	(3) Neutral esters	14
100.	(4) Acidic & Esters	
100.	Macro element essential for plants is:	
	(1) Iron (2) Zinc	
	(3) Calcium (4) Copper	

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			Sr. No. 10006
Code Hours	Total Questic	ons : 100	Max. Marks: 100
Roll No.	(in figure)		(in words)
Name:		Date of Birth: Mother's Name:	
Father's Name:		Mother 8 Mame.	
Date of Examination:			
(Signature of the candidat	:e)		ure of the Invigilator)
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9	(2) Energy available at the top level of pyramid
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3.	
3.	(4) Have only endangered species
3.	(4) Have only endangered species Red Data Book is maintained for: (1) Extinct animals (2) Extinct plants
3.	(4) Have only endangered species Red Data Book is maintained for: (1) Extinct animals (2) Extinct plants
	(4) Have only endangered species Red Data Book is maintained for: (1) Extinct animals (2) Extinct plants (3) Endangered species (4) Living fossils

Question No.	Questions				
5.	Which gas is mainly responsible for ozone layer depletion?				
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	(3) CFCs (4) SO ₂				
6.	An example of in situ biodiversity conservation is:				
	(1) Seed bank (2) Botanical garden				
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7.	The main cause of radioactive increase in the environment is:				
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8.	Which of the following pollutants is primarily responsible for ac				
	rain? tare only endangered species				
	(1) CO ₂ (2) SO ₂				
	(3) O ₃ (4) CH ₄ element southed				
9.	Which of the following is a consequence of deforestation?				
-,*	discol grive (1) because because (1) In supposed orong				
	(1) Increased ozone				
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	(2) Enhanced carbon fixation (3) Soil erosion				

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1	(3) Bacillius thuringiensis (4) Escherichia coli
13.	What is the main purpose of gene therapy?
13.	(b) Edominas orializagament
13.	What is the main purpose of gene therapy?
13.	What is the main purpose of gene therapy? (1) Replace defective genes (2) Clone organisms
	What is the main purpose of gene therapy? (1) Replace defective genes (2) Clone organisms (3) Cure disease (4) Create Super genes

Question No.	Questions Code-B				
15.	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				
200	Which of the following organism is used for producing human insulin?				
1 4-	(1) Agrobacterium (2) Bacillus				
1 *** 1 ***	(3) E. coli				
16.	Biosafety protocols aim to:				
	(1) Improve productivity (2) Protect biodiversity				
المام ا	(3) Reduce pollution (4) Enhance shelf-life				
17.	The term 'biopiracy' refers to:				
	(1) Illegal cloning				
	(2) Patent violation of indigenous knowledge				
	(3) Unsafe vaccines				
	(4) Unauthorized use of antibiotics				
18.	In genetic engineering, restriction enzymes are used to:				
	(1) Join DNA (2) Ligate DNA				
	(3) Cut DNA (4) Denature DNA				
19.	Bt crops are genetically modified to:				
4.	(1) Increase nutrient content (2) Resist herbicides				
	(3) Produce insecticidal protein (4) Resist viral infections				

	Code-B
Question No.	Questions
20.	A vector must have which one of the following features:
	(1) Small size & Origin of replication
·	(2) Origin of replication & antibiotic resistance
	(3) Small size & Antibiotic resistance gene
	(4) Antibiotic resistance
21.	The central dogma of molecular biology is:
	(1) $DNA \rightarrow RNA \rightarrow Protein$ (2) $-RNA \rightarrow DNA \rightarrow Protein$
	(3) Protein \rightarrow RNA \rightarrow DNA (4) RNA \rightarrow Protein \rightarrow DNA
22.	Evolution through mutation and recombination is explained in:
*.	(1) Darwin's theory (2) Modern synthetic theory
	(3) Lamarkism (4) Catastrophism
23.	Which of the following is a chromosomal disorder?
	(1) Haemophilia (2) Thalassemia
	(3) Colour blindness (4) Turner's syndrome
24.	Which type of evolution is indicated by the presence of similar
	anatomical features in different species?
	(1) Divergent evolution (2) Adaptive radiation
	(a) Convergent evolution (4) Artificial selection

Question	Code-E
No.	Questions
25.	Thalassemia affects:
	(1) Blood clotting (2) Melanin production
	(3) Hemoglobin formation (4) Bleeding disorder
26.	Which of the following is a mechanism of evolution?
	(1) Food chain (2) Reproduction
	(3) Natural selection (4) Carbon dating
27.	Genetic drift is most likely to occur in:
A.V	(1) Large populations
	(2) Populations under selection pressure
	(3) Small isolated populations
	(4) Mutated populations only
28.	Typhoid is transmitted primarily through:
	(1) Insect bite (2) Contaminated water
alians.	(3) Sexual contact (4) Air droplets
29.	Ringworm is caused by a:
	(1) Bacterium (2) Virus
	(3) Protozoan (4) Fungus

Question			Questi	ons		mir in
No. 30.	Vaco	cines development			In angiosperms, angl	73. T
		20 Clopment	15 by Summanau	***	The second secon	
	(1)	Toxin production	(2)	Pathogen growth	
ाय हो। स्व	(3)	Immune response	(4)	Hormone secretion	
31.	Men	struation is due to	sudden drop o	of:	ario i	
•	(1)	FSH 50-0mA	(2)	Estrogen	
	(3)	LH consense	(1)	4)	Progesterone	
32.	Ferti	lization occurs in	which part of t	he f	allopian tube:	
	(1)	Infundibulum	. (2)	Ampulla 2014 (1)	
	(3)	Isthmus	(4)	Fimbriae 1000 (8)	
33.	ART	used for male inf	ertility where	sper	rm is directly injected	into th
	ovum				(i) Increase hybrid v	
	(1) T				idmoer seembl (2)	
	(1) I	IVF	•	(2)	ICSI	
	(3) (GIFT		(4)	TIIX Triching egice (4)	
34.	Artifi	cial seed producti	on uses:	1/ 1/ 1	empoo coltamany seeme	0.0
	(1) I	Pollen	(2)	(2)	Somatic embryos	
The second of the second of			o* 1		Zygotes Edeom A (S	

Question No.	Questions
35.	In angiosperms, triple fusion results in:
	(1) Zygote (2) Ovule
	(3) Endosperm (4) Embryo sac
36.	Which organism can reproduce through binary fission and also form
	spores?
	(1) Paramecium (2) Amoeba
	(3) Rhizopus (4) Plasmodium
37.	Which of the following is a bacterial STD?
	(1) AIDS (2) Herpes
V85	(3) Gonorrhea (4) Warts
38.	Apomixis is used in agriculture to:
	(1) Increase hybrid vigor
	(2) Increase recombination
	(3) Avoid fertilization
	(4) Produce genetically variable seeds
39.	Fragmentation occurs in:
	(1) Hydra (2) Spirogyra
1	(3) Amoeba (4) Yeast

	000	
Question No.	Questions	Mark of
40.	The function of the synergids in the embryo sac is to:	1.5
	(1) Produce endosperm	
	(2) Help in fertilization by guiding pollen tube	
	(3) Develop into zygote	
	(4) Form antipodals	
41.	Preservatives in food prevent:	
	(1) Change in flavor (2) Growth of microorgani	sms
	(3) Oxidation (4) Emulsification	
42.	Which is a commonly used antioxidant in packaged food?	
	(1) BHT (2) Vitamin B complex	
	(3) Sodium chloride (4) Lactic acid	
43.	Which is a disinfectant?	
	(1) Silver nitrate	
	(2) Tincture iodine	.8
	(3) Hydrogen peroxide (strong solution)	
	(4) Zinc	

Question	Questions Code-B				
No.		100			
44.	Which soap molecule part i	nteracts with oil and grease?			
	(1) Hydrophilic head	(2) Ionic group			
	(3) Hydrophobic tail	(4) Water molecule			
45.	Electrolysis involves:	Amprica mission to			
	(1) Magnetic field	strugging mod 8.			
:	(2) Heat conduction				
of Dis	(3) Chemical decomposition	on by electricity			
	(4) Radioactivity	Change in the			
46.	Which of the following is an				
	of the following is an	example of a macromolecular colloid?			
	(1) Milk	(2) Rubber			
41 " 10 10	THE RESERVE OF THE PROPERTY OF				
	(3) Smoke	(4) Fog			
		(4) Fog			
17.					
17.	Which compound can be use	ed as both antiseptic and disinfectant?			
17.	Which compound can be use (1) Hydrogen peroxide	ed as both antiseptic and disinfectant? (2) Penicillin (4) Ampicillin			
47. 18.	Which compound can be use (1) Hydrogen peroxide (3) Sodium benzoate	ed as both antiseptic and disinfectant? (2) Penicillin (4) Ampicillin			

Question No.	Questions
49.	Which of the following best describes soaps?
	(1) Acidic salts of long-chain fatty acids
	(2) Basic salts of fatty acids
	(3) Neutral esters
	(4) Acidic & Esters
50.	Macro element essential for plants is:
	(1) Iron Zinc (2) Zinc
	(3) Calcium (4) Copper
51.	The role of Agrobacterium tumefaciens in genetic engineering is:
	(1) Antibiotic production (2) Inducing tumors
	(3) Delivering genes (4) Inducing fertilization
52.	What type of vaccine is produced using recombinant DNA technology
	(1) Killed pathogen (2) Live-attenuated vaccine
	(3) Subunit vaccine (4) Toxoid vaccine
53.	The primary goal of the Human Genome Project was to:
	(1) Create synthetic DNA
I 1	(2) Identify all genes in human DNA
	(3) Cure genetic disorders
	(4) Engineer superhumans

0 11	Co	de-B
Question No.	Questions	national sections
54.	Which method is commonly used to insert foreign DNA into cell	ls?
1	(1) Centrifugation (2) Electroporation	
	(3) Chromatography (4) Spectroscopy)
55.	Which is a concern associated with GM crops?	k.
	(1) Reduced yield (2) Nutrient deficiency	.03
	(3) Biosafety and ecological impact (4) Short shelf life) 1
56.	Which of the following best defines a niche in ecology?	,1
	(1) Total area occupied by a species	i dei
	(2) Role and position a species has in its environment	
20	(3) Number of individuals in a population	
	(4) Type of food consumed by the species	
57.	In mutualism,	× /
	(1) One species benefits, the other harmed	r Sa
	(2) Both species are benefitted	1
	(3) One species benefits, the other unaffected	3
((4) Both species are neutral	

Question No.	Questions		noneous(c)	
58.	Which of the following is NOT a density-dependent population			
	attribute?	LN _{2.00}	Con	
	(1) Birth & death rate	(2) Population d	ensity	
	(3) Species distribution	(4) Earthquake	innitt	
59.	The pyramid of biomass in terrestrial ecosystem is:			
	(1) Always inverted	(2) Always uprig	ght	
	(3) Diamond-shaped	(4) Not defined		
60,	Which of the following cycles does carbon fixation belong to?			
	(1) Nitrogen cycle	(2) Phosphorus	cycle	
	(3) Sulphur cycle	(4) Carbon cycle	et (4)	
61.	Which of the following is a property of crystalline solids?			
	(1) Irregular shape	(2) Sharp melti	ng point	
	(3) Isotropic nature	(4) No definite	structure	
i a pris de la la		orit tort of the News	45, 77 . 13	
62.	An example of an amorphous solids is:			
	(1) Quartz	(2) Sugar	0 m	
	(3) Glass	(4) Diamond	M RY	

Gode-B

Question No.	Questions		
63.	Which of the following is not a type of binding force in solids?		
	(1) Ionic (2) Metallic		
	(3) Hydrogen bonding (4) Gravitational		
64.	Which of the following represents a suspension?		
	(1) Blood (2) Muddy water		
	(3) Salt in water (4) Air		
65.	A true solution is:		
	(1) Heterogeneous and transparent		
	(2) Homogeneous and transparent		
	(3) Heterogeneous and opaque		
	(4) Homogeneous and opaque		
66.	A characteristics of lyophobic colloids is:		
	(1) High stability (2) Strong affinity to solvent		
	(3) Easily coagulated (4) Self-preparing		
67.	Which law states that the mass of substances deposited durin		
	electrolysis is proportional to the quantity of electricity passed?		
	(1) Ohm's law (2) Faraday's first law		
	(3) Faraday's second law (4) Avogadro's law		

Ser-X

Question No.	Questions
68.	A substance used to destroy or inhibit microbes on living tissues is:
	(1) Disinfectant (2) Antiseptic
	(3) Antibiotic (4) Preservative
69.	Antacids help to relieve:
La	(1) Bacterial infections (2) Allergies
	(3) Headache (4) Acidity
70.	Which is not an artificial sweetening agent?
	(1) Sucralose (2) Saccharin
	(3) Glucose (4) Aspartame
71.	HIV primarily attacks which type of immune cells:
	(1) B-Cells (2) Cytotoxic T-cells
	(3) Helper T-cells (4) Natural killer cells
72.	Adolescence is the period between the ages of:
i da	(1) 6–12 years (2) 10–19 years
8	(3) 18–25 years (4) 1–5 years
73.	Long-term alcohol abuse can be detected by dysfunction of:
	(1) Lungs (2) Liver
	(3) Pancreas (4) Intestine

Gade-B

Question No.	Questions
74.	Which of the following is used in single-cell protein production?
	(1) Saccharomyces cerevisiae (2) Rhizobium (1)
	(3) Mucor (4) Spirulina (6)
75.	The aim of biofortification is to:
	(1) Increase food yield (2) Increase taste of food
	(3) Improve nutrient quality (4) Decrease fertilizers
76.	Apiculture involves the management of:
	(1) Silkworms (2) Honeybees
	(3) Fish (4) Poultry
77.	Artificial insemination is commonly used in:
	(1) Animal tissue culture (2) Animal husbandry
	(3) Cloning . (4) Cross-pollination
78.	Lactobacillus is important in the production of:
*	(1) Dhokla (2) Dosa
	(3) Yogurt (4) Soft drinks
79.	Methane is produced during sewage treatment by:
	(1) Methanogens (2) Cyanobacteria
(3) Fungus (4) Algae (8)

Question No.	10.0	Questions	
80.	Trichoderma species ac	ct as: manda de la	-1 12 494 2 11 200
	(1) Antibiotic produce	ers (2)	Biocontrol agents
	(3) Fuel producers	(4)	Vitamin supplement
81.	Which of the following	is an outbreeding	device?
and the second	. લંક, ત્વારા	(L)	ार राज्यक्त को ान है
Total .	(1) Bisexual flower	(2)	Self-incompatibility
wins.	(3) Fertilization	(4)	Anther dehiscence
82.	Double fertilization is	a characteristic fe	
55	. s apurbone sea (R 18)		This halfa super and a
h is	(1) Gymnosperms	(2)	Bryophytes
5	which as the following	i de la companya de La companya de la companya de l	chewick?
	(3) Angiosperms		
* -	11) Lisexual Hower		. Soft incoming this to
83.	Which of the followin	g disorders is ca	used by a sex-linked recessive
	gene?		radio Secure V. To
•	rule trible to	g and the second of a	restant of runter of little in the
49.4	(1) Thalassemia	(2)	Sickle cell anemia
	til Vivannasperra	no than we day	(K. R. A. Paris Replace The Co.)
	(3) Haemophilia	(4)	Down's syndrome
84.	In polygenic inheritance, the phenotype is influenced by:		
	(1) A single dominan	t gene (2)	A single recessive gene
	(3) Multiple genes	(4)	Environmental factors only

UG-EE-2025 (Bachelor of Science (Genetics)) Code-B
(17)

Question	Code-B
No.	Questions
85.	The packaging of DNA into chromosomes involves:
	(1) Lipids (2) Non histones
	(3) Histone proteins (4) RNA polymerase
86.	DNA replication is:
	(1) Conservative (2) Dispersive
3 2	(3) Semiconservative (4) Degenerative
87.	Which syndrome is caused by the presence of an extra X chromosom
	in males?
31	(1) Turner's syndrome (2) Klinefelter's syndrome
	(3) Down's syndrome (4) Edward's syndrome
88.	The Hardy-Weinberg principle is applicable under:
1.5	(1) Natural selection
(2) Mutation
(3) Large population without mutation
(4) Gene flow
89. 7	The Lac Operon is an example of :
C	1) Gene amplification (2) Gene deletion
(3) Gene regulation (4) Gene mutation

90.	Who first performal Questions Code-
	Who first performed the experiment demonstrating bacterial (1) Crieffer.
	(1) Griffith
	(3) Avery (2) Hershey
91.	
	Which of the following structure is absent in bacterial cells? (1) Ribosomes
	(3) Plasma membrane (2) Nucleus
92.	The movement of
	The movement of water across semipermeable membrane is called: (1) Diffusion
	(3) Active Transport (2) Osmosis
93.	4-1 HOOLI I I I
Exade	Polymorphism is best exhibited in:
	(1) Obelia (2) Hydra
. 1	(3) Physalia (4) Aurelia
94.	Gymnosperms are characterized by:
	(1) Naked seeds (2) Enclosed seeds
	(3) Flowers (4) Fruits
95.	Which of the following is a complex permanent tissue?
	(1) Parenchyma (2) Collenchyma
	(3) Sclerenchyma (4) Xylem

UG-EE-2025 (Bachelor of Science (Genetics)) Code-B (19)

SET-X

Question	Questions	de-B
No.		30
96.	Following is involuntary muscle found in hollow organs:	- 7. Mg
	(1) Skeletal (2) Cardiac	
	(3) Smooth (4) Striated	
97.	Which tissue helps in dispersal of seed?	
	(1) Endosperm (2) Embryo	
	(3) Pericarp (4) Cotyledon	
98.	Which structure prevents self-pollination in plants?	
- Test	(1) Ovule . (2) Petal	- "-4"
7.4	(3) Self-incompatibility gene (4) Integument	
99.	Which among the following is true about cleistogamous flowers	?
17	(1) Promote cross-pollination (2) Always open for poll	
1 8	(3) Do not require pollinators (4) Do not produce seed	
100.	The acrosome of sperm is derived from:) (
	(1) Mitochondria (2) Golgi apparatus	
	(3) Nucleus (4) Lysosome	ý,

SET-"X" (Total No. of printed pages: 21)

(DO NOT OPEN THIS QUESTION BOOKLET BEFORE TIME OR UNTIL YOU ARE ASKED TO DO SO)

UG-EE-June, 2025 (Genetics 4 year)

Code	C
Time . 1	1/ Цони

Sr. No. 10019

Time: 14 Hours	Total Quest	ions : 100	Max. Marks: 100
Roll No.	(in figure)		
Name:		Date of Birth:	,
Father's Name :		Mother's Name:	
Date of Examination:			
(Signature of the			

(Signature of the candidate)

(Signature of the Invigilator)

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

All questions are compulsory.

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 / mis-behaviour 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.

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.

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.

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. 7.

Use only Black or Blue BALL POINT PEN of good quality in the OMR Answer-

Sheet.

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.

SET-X

Question No.	Questions	Code-
1.	HIV primarily attacks which type of immune cells:	- Ort - C
	(1) B-Cells (2) Cytotoxic T	-cells
	(3) Helper T-cells (4) Natural kil	ler cells
2.	Adolescence is the period between the ages of:	1. 200
# ·	(1) 6-12 years (2) 10-19 years	ia .i-
	(3) 18–25 years (4) 1–5 years	· / · / · · · · · · · · · · · · · · · ·
3.	Long-term alcohol abuse can be detected by dysfunction	on of:
. *	(1) Lungs (2) Liver	Market, .
	(3) Pancreas (4) Intestine	- F"
4.	Which of the following is used in single-cell protein pro	oduction?
	1) Saccharomyces cerevisiae (2) Rhizobium	7 (0
(3) Mucor (4) Spirulina	4 (5)
5. I	he aim of biofortification is to:	4. 4.
(1) Increase food yield (2) Increase tast	e of food
(3	3) Improve nutrient quality (4) Decrease fer	tilizers
6. A	piculture involves the management of :	12/04/07/12/12/12/12/12/12/12/12/12/12/12/12/12/
(1) Silkworms (2) Honeybees	
(3) Fish (4) Poultry	t ut"

Question No.	Que	estions	N History of
7.	Artificial insemination is common	ly used	in:
	(1) Animal tissue culture	(2)	Animal husbandry
	(3) Cloning	(4)	Cross-pollination
8.	Lactobacillus is important in the	product	ion of:
	(1) Dhokla	(2)	Dosa (1)
	(3) Yogurt (A)	(4)	Soft drinks 81 (8)
9.	Methane is produced during sewa	ge trea	tment by:
	(1) Methanogens	(2)	Cyanobacteria
	(3) Fungus (1)	(4)	Algae
10.	Trichoderma species act as:	ar at an	4. Which of the tollowin
			Biocontrol agents
	(3) Fuel producers	(4)	Vitamin supplement
11.	Which of the following is an outbo	reeding	device?
	(1) Bisexual flower	(2)	Self-incompatibility
	(3) Fertilization (A)	(4)	Anther dehiscence
12.	Double fertilization is a character	ristic fe	eature of : Apiculture Apiculture
	(1) Gymnosperms	(2)	Bryophytes
	(3) Angiosperms	(4)	Algae

Code-C

Question No.	suotient Qu	estions	entity 3
13.	Which of the following disorders	s is caused by a sex-linked rece	essiv
	gene?	Town to the Control	
	(1) Thalassemia	(2) Sickle cell anemia	
71	(3) Haemophilia	(4) Down's syndrome	
14.	In polygenic inheritance, the pher	notype is influenced by:	
p. p.	(1) A single dominant gene	(2) A single recessive gene	
	(3) Multiple genes	(4) Environmental factors	only
	The packaging of DNA into chrom	osomes involves:	
ejosć ((1) Lipids	(2) Non histones	21
(3) Histone proteins	(4) RNA polymerase	
16. I	ONA replication is:	(3) Avets	
(1) Conservative	(2) Dispersive	2
(3)	3) Semiconservative	(4) Degenerative	
7. W	hich syndrome is caused by the	presence of an extra X chromo	som
bolin in	males?	2. The movement of water a	2
(1) Turner's syndrome	(2) Klinefelter's syndrome	
. (3). Down's syndrome	(4) Edward's syndrome	

Question No.	Questions	nesher 197	
18.	The Hardy-Weinberg principle is applicable under:	£ . I	
	(1) Natural selection		
	(2) Mutation (2)		
154	(3) Large population without mutation		
	(4) Gene flow,	11.	
19.	The Lac Operon is an example of:		
into siro	(1) Gene amplification (2) Gene deletion		
• ,	(3) Gene regulation (4) Gene mutation	15.	
20.	Who first performed the experiment demonstrating		
-2	transformation?	1	
	(1) Griffith (2) Hershey		
	(3) Avery (4) Watson	91	
21.	Which of the following structure is absent in bacterial cells?		
	(1) Ribosomes (2) Nucleus		
F0017	(3) Plasma membrane (4) Cell wall	17.	
22.	The movement of water across semipermeable membrane is called:		
0.8	(1) Diffusion (2) Osmosis		
. 113.	(3) Active Transport (4) Facilitated diffusion	n	

Code-C

Question		Code-C
No.	Questions	
23.	Polymorphism is best exhibited in:	to addW is
eroje	(1) Obelia (2) Hydra	Selection of the select
,	(3) Physalia (4) Aurelia	er salt in light
24.	Gymnosperms are characterized by:	oran ill by
	(1) Naked seeds (2) Enclosed see	eds
	(3) Flowers (4) Fruits	
25.	Which of the following is a complex permanent tissue?	Sec. 11. 11. 11. 11. 11. 11. 11. 11. 11. 1
4 <u>(13</u> c .	(1) Parenchyma (2) Collenchyma	1
	(3) Sclerenchyma (4) Xylem	1928 - 77p 1
26.	Following is involuntary muscle found in hollow organ	s:
· -1	(1) Skeletal (2) Cardiac	u pari ya 186 uru ya
	(3) Smooth (4) Striated	nu (ii)
27.	Which tissue helps in dispersal of seed?	Charles (Rev.
	(1) Endosperm (2) Embryo	s Haid W
	(3) Pericarp (4) Cotyledon	Ale (Le
28.	Which structure prevents self-pollination in plants?	
	(1) Ovule (2) Petal	yli (u)
	(3) Self-incompatibility gene (4) Integument	3X (1)

Question No.	Questions	No.
29.	Which among the following is true about cleistogamous flowers?	23.
	(1) Promote cross-pollination (2) Always open for pollination	ators
	(3) Do not require pollinators (4) Do not produce seeds	
30.	The acrosome of sperm is derived from:	.1.5
•	(1) Mitochondria (2) Golgi apparatus	
	(3) Nucleus (4) Lysosome	
31.	Preservatives in food prevent:	.03
	(1) Change in flavor (2) Growth of microorgani	sms
	(3) Oxidation (4) Emulsification	
00	THE I I was a serious don't in nackaged food?	- 33
32.	Which is a commonly used antioxidant in packaged food? (1) BHT (2) Vitamin B complex	
	(3) Sodium chloride (4) Lactic acid	.75
33.	Which is a disinfectant?	
	(1) Silver nitrate	. ,
	(2) Tincture iodine	28.
	(3) Hydrogen peroxide (strong solution)	
	(4) Zinc	

SET-X Code-C

Question No.		Questions
34.	Which soap molecule part	interacts with oil and grease?
	(1) Hydrophilic head	(2) Ionic group
	(3) Hydrophobic tail	(4) Water molecule
35.	Electrolysis involves:	eressi & sibi A (i)
F (4)	(1) Magnetic field	or Mark elanual essert of for plants !
	(2) Heat conduction	- nort ((v.,
	(3) Chemical decomposition	on by electricity
	(4) Radioactivity	dt libered of Arrabacteries tuniefne.
36.	Which of the following is ar	n example of a macromolecular colloid?
	(1) Milk	(2) Rubber
V Fifte L	(3) Smoke	(4) Fog
37.	Which compound can be us	ed as both antiseptic and disinfectant?
37.	which compound can be us	ed as both antiseptic and distinectant.
(1) Hydrogen peroxide	(2) Penicillin
<u> </u>	3) Sodium benzoate	(4) Ampicillin
38. 7	The basic unit of a crystalli	ne solid is called:
	1) Lattice point	(2) Unit cell

Question No.	Questions
39.	Which of the following best describes soaps?
	(1) Acidic salts of long-chain fatty acids
	(2) Basic salts of fatty acids
	(3) Neutral esters
·	(4) Acidic & Esters
40.	Macro element essential for plants is:
	(1) Iron (2) Zinc
	(3) Calcium (4) Copper Copper
41.	The role of Agrobacterium tumefaciens in genetic engineering is:
	(1) Antibiotic production (2) Inducing tumors
	(3) Delivering genes (4) Inducing fertilization
42.	What type of vaccine is produced using recombinant DNA technology
	(1) Killed pathogen (2) Live-attenuated vaccine
	(3) Subunit vaccine (4) Toxoid vaccine
43.	The primary goal of the Human Genome Project was to:
	(1) Create synthetic DNA
	(2) Identify all genes in human DNA
	(3) Cure genetic disorders
懂	(4) Engineer superhumans

Question No.	Questions	_
44.	Which method is commonly used to insert foreign DNA into cells?	70, 1
	(1) Centrifugation (2) Electroporation	
. ;	(3) Chromatography (4) Spectroscopy	
45.	Which is a concern associated with GM crops?	-
	(1) Reduced yield (2) Nutrient deficiency	.0
	(3) Biosafety and ecological impact (4) Short shelf life	
46.	Which of the following best defines a niche in ecology?	
	(1) Total area occupied by a species	1,
	(2) Role and position a species has in its environment	
**	(3) Number of individuals in a population	
	(4) Type of food consumed by the species	Ī
47.	In mutualism,	
A.	(1) One species benefits, the other harmed	
	(2) Both species are benefitted	
,Ci	(3) One species benefits, the other unaffected	
	(4) Both species are neutral	

-	Code-C
Question No.	Questions
48.	Which of the following is NOT a density-dependent population
	attribute? (1)
• .	(1) Birth & death rate (2) Population density
	(3) Species distribution (4) Earthquake
49.	The pyramid of biomass in terrestrial ecosystem is:
	(1) Always inverted (2) Always upright (8)
	(3) Diamond-shaped (4) Not defined
50.	Which of the following cycles does carbon fixation belong to?
	(1) Nitrogen cycle (2) Phosphorus cycle
	(3) Sulphur cycle (4) Carbon cycle
51.	The central dogma of molecular biology is:
	(1) $DNA \rightarrow RNA \rightarrow Protein$ (2) $RNA \rightarrow DNA \rightarrow Protein$
	(3) Protein \rightarrow RNA \rightarrow DNA (4) RNA \rightarrow Protein \rightarrow DNA
52.	Evolution through mutation and recombination is explained in:
	(1) Darwin's theory (2) Modern synthetic theory
	(3) Lamarkism (4) Catastrophism
	(3) Lamarkism (4) Catastrophism

SET-X Code-C

Question		e-C
No.	- noite:Questions	miline
53.	Which of the following is a chromosomal disorder?	.88.
	(1) Haemophilia (2) Thalassemia eq. (1)	
	(3) Colour blindness (4) Turner's syndrome	
54.	Which type of evolution is indicated by the presence of	similar
	anatomical features in different species?	
	(1) Divergent evolution (2) Adaptive radiation	
	(3) Convergent evolution (4) Artificial selection	.00
55.	Thalassemia affects:	
	(1) Blood clotting (2) Melanin production	
. 17	(3) Hemoglobin formation (4) Bleeding disorder	.19
56.	Which of the following is a mechanism of evolution?	
,	(1) Food chain (2) Reproduction (3) Reproduction (6)	
* .	(3) Natural selection (4) Carbon dating	
57.	Genetic drift is most likely to occur in:	
1.1	(1) Large populations todyloments and (1)	
	(2) Populations under selection pressure (2)	`.
	(3) Small isolated populations along sim and middle arA (8)	
4	(4) Mutated populations only man hangarabne vice evalt (4)	

Question No.	Questions	the
58.	Typhoid is transmitted primarily through:	
	(1) Insect bite (2) Contaminated water	
4.	(3) Sexual contact (4) Air droplets	
59.	Ringworm is caused by a:	511.
	(1) Bacterium (2) Virus	
	(3) Protozoan (4) Fungus	
60.	Vaccines development is by stimulating:	
	(1)—Toxin-production (2) Pathogen growth	75.
s/n*	(3) Immune response (4) Hormone secretion	
61.	Primary productivity refers to:	
	(1) Energy released during respiration (2) Energy available at the top level of pyramid	36
5.	(3) Amount of biomass produced by consumers	
	(4) Rate of biomass production by producers	
62.	The term "hotspot" in biodiversity refers to areas that:	.17
	(1) Are extremely hot	
	(2) Have low biodiversity & more habitant	
	(3) Are rich in endemic species and under threat	
	(4) Have only endangered species	

-sholl Question Questions No. **⇒ 63.** • Red Data Book is maintained for : (antiwolfo) and the start's ally (1)Extinct animals (2)Extinct plants Living fossils (3)Endangered species (4) 64. Which zone has maximum biodiversity? Which of the following is a consequence . . date: tation (1) Arctic & Antarctica (2) Desert ecosystems (3) Temperate forests Tropical rainforests 65. Which gas is mainly responsible for ozone layer depletion? (1) CO_2 100 man 100 man (2) 600 CH4 000 man (4) (3) CFCs and to death of the control of the death of the An example of in situ biodiversity conservation is: 66. (2) Processe in Earth's average temperature (1) Seed bank Botanical garden (2) (3) Ozame hole (3) National Park Zoological park **(4)** The main cause of radioactive increase in the environment 67. (1) Automobile exhaust (2) Nuclear power plants (3) Ozone depletion (4) Open defecation

X-TBS

X-TES D-eboQ

Question No.	sup?questions	stions	nodesto).
68.	Which of the following pollutant	s is primarily responsible	for acid
	or one removing pointed	is princed	
	rain?	(I) Fernet nimals	
	(1) CO ₂ elizable animil (b)	(2) SO ₂ server special (1)	
	(3) O ₃	(4) CH ₄	64.
69.	Which of the following is a consequ		
	(2) Desert occus (2) (1) Increased ozone	(1) Arctic & Antarotica	•
	(2) Enhanced carbon fixation	(3) Temperate forests	
	(3) a Soil erosion eneso and eldismo	Which gas is mainly resp	65.
~ * * * * * * * * * * * * * * * * * * *	(4) Decrease in greenhouse gases	i). (CO ₃	
70.	Which of the following is an effect o	f the greenhouse effect?	
	(1) Ozone formation	A.r example of in Sur bin	8
î .	(2) Increase in Earth's average ten		
	(2) Botanical garden	(I) So d bank	. 1
. '	(3) Ozone hole		
9	(4) Desertification in polar regions	(3) National Park	1
71.	Which of the following is a property	of crystalline solids?	
ζ.	(1) Irregular shape (2)	(2) Sharp melting point	
	(3) alsotropic nature (1)	(4) No definite structure	

Question No.	Questions	Code-
72.	An example of an amorphous solids is:	270
2 01		W W
ÌЪ	(1) Quartz (2) Sugar	ito i
	(3) Glass (4) Diamond	(5)
73.	Which of the following is not a type of binding force in soli	ds?
ies ken	(1) Ionic (2) Metallic	h
	(3) Hydrogen bonding (4) Gravitational	1,
74.	Which of the following represents a suspension?	
	(1) [7]	\$
	(1) Blood (2) Muddy water	
	(3) Salt in water (4) Air	
75.	A true solution is:	
	(1) Heterogeneous and transparent	0)
	(2) Homogeneous and transparent	8U. W
,	(3) Heterogeneous and opaque	1)
6-	(4) Homogeneous and opaque	£., 1
76.	A characteristics of lyophobic colloids is:	W .13
	(1) High stability (2) Strong affinity to	solvent
	(3) Easily coagulated (4) Self-preparing	E)

Question No.	Questions
77.	Which law states that the mass of substances deposited during
	electrolysis is proportional to the quantity of electricity passed?
	(1) Ohm's law (2) Faraday's first law
	(3) Faraday's second law (4) Avogadro's law
78.	A substance used to destroy or inhibit microbes on living tissues is:
	(1) Disinfectant (2) Antiseptic Antiseptic (3) Processing the control of the con
	(3) Antibiotic (4) Preservative
79.	Antacids help to relieve:
	(1) Bacterial infections (2) Allergies
	(3) Headache (4) Acidity
80.	Which is not an artificial sweetening agent?
	(1) Sucralose (2) Saccharin (1)
	(3) Glucose (4) Aspartame
81.	Menstruation is due to sudden drop of:
mari	(1) FSH (2) Estrogen (3)
*	(3) LH (4) Progesterone

ſ	Question	Code-C
No.		Questions
82. Fertilization occurs in which part of the fallopian tube:		
		(1) Infundibulum (2) Ampulla
		(3) Isthmus (4) Fimbriae
	83.	ART used for male infertility where sperm is directly injected into the
	2.4	ovum:
		(1) IVF (2) ICSI
	10.	(3) GIFT (4) ZIFT
-	84.	Artificial seed production uses:
	37	(1) Pollen (2) Somatic embryos
Annual Constitution (Sept.		(3) Ovules (4) Zygotes
	85.	In angiosperms, triple fusion results in:
	· ·	(1) Zygote (2) Ovule
		(3) Endosperm (4) Embryo sac
	86.	Which organism can reproduce through binary fission and also form
and the same and a		spores?
-	,	(1) Paramecium (2) Amoeba
- Annual Property		(3) Rhizopus (4) Plasmodium

Question No.	Questions	Ques
87.	Which of the following is a bacterial STD?	9:
	(1) AIDS (2) Herpes	
	(3) Gonorrhea (4) Warts	
88.	Apomixis is used in agriculture to:	
	(1) Increase hybrid vigor	
	(2) Increase recombination	
	(3) Avoid fertilization	
	(4) Produce genetically variable seeds	
89.	Fragmentation occurs in:	
	(1) Hydra (2) Spirogyra	.88
	(3) Amoeba (4) Yeast	
90.	The function of the synergids in the embryo sac is to:	
7	(1) Produce endosperm	38.3
	(2) Help in fertilization by guiding pollen tube	
	(3) Develop into zygote	
	(4) Form antipodals	

UG-EE-2025 (Bachelor of Science (Genetics)) Code-C (18)

Question	Code-C
No.	Questions
91.	Which technique is primarily used in recombinant DNA technology?
	(1) Southern Blotting (2) PCR
	(3) Gene cloning (4) Northern blotting
92.	Bt toxin gene has been cloned from:
hy se si	(1) Agrobacterium (2) Rhizobium
	(3) Bacillius thuringiensis (4) Escherichia coli
93.	What is the main purpose of gene therapy?
	(1) Replace defective genes (2) Clone organisms
·	(3) Cure disease (4) Create Super genes
94.	Golden rice is a genetically modified crop rich in:
	(1) Iron (2) Vitamin A
	(3) Vitamin C (4) Calcium (4) Calcium
95.	Which of the following organism is used for producing human insulin?
- 1	(1) Agrobacterium (2) Bacillus
	(3) E. coli Yeast Yeast Yeast
96.	Biosafety protocols aim to:
	(1) Improve productivity (2) Protect biodiversity
ű ,	(3) Reduce pollution (4) Enhance shelf-life

UG-EE-2025 (Bachelor of Science (Genetics)) Code-C (19)

Question No.	Questions
97.	The term 'biopiracy' refers to:
	(1) Illegal cloning
	(2) Patent violation of indigenous knowledge
	(3) Unsafe vaccines
· · · · · · · · · · · · · · · · · · ·	(4) Unauthorized use of antibiotics
98.	In genetic engineering, restriction enzymes are used to:
	(1) Join DNA (2) Ligate DNA
	(3) Cut DNA (4) Denature DNA
99.	Bt crops are genetically modified to:
	(1) Increase nutrient content (2) Resist herbicides
; ;	(3) Produce insecticidal protein (4) Resist viral infections
100.	A vector must have which one of the following features:
7.100	(1) Small size & Origin of replication
	(2) Origin of replication & antibiotic resistance
,	(3) Small size & Antibiotic resistance gene
	(4) Antibiotic resistance

SET-"X" (Total No. of printed pages: 21)

(DO NOT OPEN THIS QUESTION BOOKLET BEFORE TIME OR UNTIL YOU ARE ASKED TO DO SO)

UG-E	E-June, 2025 (Genetics)	4 year)
Code		Sr. No. 10008
Time: 1¼ Hours	Total Questions: 100	
Roll No.	(in figure)	(in words)
Name:		rth;
Father's Name:	Mother's	Name:
Date of Examination:		
(Signature of the candida	te)	Signature of the Invigilator)
CANDIDATES MUSTINSTRUCTIONS BEFORM 1. All questions are consistent of the International Actions which a case of the International Actions which are cased and the International Actions which are cased at the In	T READ THE FOLLOW RESTARTING THE QUES	book-let as well as OMR aving the Examination Hall behaviour will be registered

answer-sheet of such a candidate will not be evaluated. Keeping in view the transparency of the examination system, carbonless OMR 3. Sheet is provided to the candidate so that a copy of OMR Sheet may be kept by

the candidate.

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.

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.

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.

Use only Black or Blue BALL POINT PEN of good quality in the OMR Answer-

Sheet. 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-D
Question No.	Questions
1.	Menstruation is due to sudden drop of:
	(1) FSH (2) Estrogen
	(3) LH (4) Progesterone
2.	Fertilization occurs in which part of the fallopian tube:
	(1) Infundibulum (2) Ampulla
•	(3) Isthmus (4) Fimbriae
3.	ART used for male infertility where sperm is directly injected into the
	ovum:
	(1) IVF (2) ICSI
	(3) GIFT (4) ZIFT
4.	Artificial seed production uses:
	(1) Pollen (2) Somatic embryos
	(3) Ovules (4) Zygotes
5.	In angiosperms, triple fusion results in:
	(1) Zygote (2) Ovule
	(3) Endosperm (4) Embryo sac

Question No.	Questions Code-D
6.	Which organism can reproduce through binary fission and also form
	spores?
	(1) Paramecium (2) Amoeba
	(3) Rhizopus (4) Plasmodium
7.	Which of the following is a bacterial STD?
	(1) AIDS (2) Herpes
arti edesi	(3) Gonorrhea (4) Warts
8.	Apomixis is used in agriculture to:
	(1) Increase hybrid vigor
	(2) Increase recombination
	(3) Avoid fertilization
	(4) Produce genetically variable seeds
9.	Fragmentation occurs in:
	(1) Hydra (2) Spirogyra
	(3) Amoeba (4) Yeast

0		Jode-I
Question No.	Questions	1. 64
10.	The function of the synergids in the embryo sac is to:	14. 14.6
	(1) Produce endosperm	1979 1979 20
	(2) Help in fertilization by guiding pollen tube	
	(3) Develop into zygote	B ci
	(4) Form antipodals	
	Duscouratives in facilities	<u>/ </u>
11.	Preservatives in food prevent:	
•	(1) Change in flavor (2) Growth of microo	rganisms
	(3) Oxidation (4) Emulsification	ever age
12.	Which is a commonly used antioxidant in packaged food?	
1	de la company de	41.
. *.	(1) BHT (2) Vitamin B comple	ex
	(3) Sodium chloride (4) Lactic acid	
13.	Which is a disinfectant?	(*)
	(1) Silver nitrate	
	(2) Tincture iodine	di bi
	(3) Hydrogen peroxide (strong solution)	11)
) ((4) Zinc	(10)

Question No.	an area Questions
14.	Which soap molecule part interacts with oil and grease?
	(1) Hydrophilic head (2) Ionic group
	(3) Hydrophobic tail (4) Water molecule
15.	Electrolysis involves:
	(1) Magnetic field
	(2) Heat conduction
a stenore	(3) Chemical decomposition by electricity
	(4) Radioactivity
16.	Which of the following is an example of a macromolecular colloid?
	(1) Milk (2) Rubber
	(3) Smoke (4) Fog
17.	Which compound can be used as both antiseptic and disinfectant?
	(1) Hydrogen peroxide (2) Penicillin
	(3) Sodium benzoate (4) Ampicillin
18.	The basic unit of a crystalline solid is called:
	(1) Lattice point (2) Unit cell
	(3) Atom (4) Molecule

		Code-D
Question No.	Questions Questions	mai mar 2
19.	Which of the following best describes soaps?	1 24 Res
	(1) Acidic salts of long-chain fatty acids	a^{\dagger}
	(2) Basic salts of fatty acids	
	(3) Neutral esters	A'11 .6.
	(4) Acidic & Esters	.st) (15)
20.	Macro element essential for plants is:	100
.1	(1) Iron (2) Zinc	1VI 2
	(3) Calcium (4) Copper	(9)
21.	Primary productivity refers to:	
	(1) Energy released during respiration	
	(2) Energy available at the top level of pyramid	
((3) Amount of biomass produced by consumers	27. The I
	4) Rate of biomass production by producers	A STATE OF
2. 7	The term "hotspot" in biodiversity refers to areas that:	1. (6)
(1) Are extremely hot	niew 82
(2) Have low biodiversity & more habitant	Srds2
(3) Are rich in endemic species and under threat	(0)
(4	4) Have only endangered species	(3)

Question No.	e most-suffQuestions	1. 3.
23.	Red Data Book is maintained for:	
	(1) Extinct animals (2) Extinct plants	
	(3) Endangered species (4) Living fossils	
24.	Which zone has maximum biodiversity?	·
	(1) Arctic & Antarctica (2) Desert ecosystems	
	(3) Temperate forests (4) Tropical rainforests	
25.	Which gas is mainly responsible for ozone layer depletion?	
7.	(1) CO ₂ (2) CH ₄	
	(3) CFCs (4) SO ₂	
26.	An example of in situ biodiversity conservation is:	
- 1	(1) Seed bank (2) Botanical garden	
	(3) National Park (4) Zoological park	
27.	The main cause of radioactive increase in the environment is:	,
	(1) Automobile exhaust (2) . Nuclear power plants	
]	(3) Ozone depletion (4) Open defecation	9
28.	Which of the following pollutants is primarily responsible for	ac
	rain? the per teron. throughout a store fit (%)	
	(1) CO ₂ (2) SO ₂	
	(3) O ₃ (4) CH ₄	

	Couch
Question No.	Questions
29.	Which of the following is a consequence of deforestation?
	(1) Increased ozone
	(2) Enhanced carbon fixation
	(3) Soil erosion
•	(4) Decrease in greenhouse gases
30.	Which of the following is an effect of the greenhouse effect?
1100	The Which of the following ong cases is used a width of the
	(1) Ozone formation
	(1) Agrebactorium (2) Carrillus (1)
	(2) Increase in Earth's average temperature
	(3) Ozone hole
•	(4) Desertification in polar regions
31.	Which technique is primarily used in recombinant DNA technology?
	(1) Southern Blotting (2) PCR
	(3) Gene cloning (4) Northern blotting
32.	Bt toxin gene has been cloned from:
	(1) Agrobacterium (2) Rhizobium
	(3) Bacillius thuringiensis (4) Escherichia coli

Question	Code-I
No.	Questions
33.	What is the main purpose of gene therapy?
	(1) Replace defective genes (2) Clone organisms
	(3) Cure disease (4) Create Super genes
	(3) Cure disease (4) Create Super genes
34.	Golden rice is a genetically modified crop rich in:
·	
	(1) Iron (2) Vitamin A
	(3) Vitamin C (4) Calcium
	entre to the matrix of the party of the part
35.	Which of the following organism is used for producing human insulin
	(1) Agrobacterium (2) Bacillus
	(1) Agrobacterium (2) Bacillus
	(3) E. coli (4) Yeast
0.0	The borne of the second
36.	Biosafety protocols aim to:
	(1) Improve productivity (2) Protect biodiversity
	where the Grand and the state of the state o
	(3) Reduce pollution (4) Enhance shelf-life
37.	The term 'biopiracy' refers to:
01.	The term biopiracy refers to:
	(1) Illegal cloning
in the second	(2) Patent violation of indigenous knowledge
	(3) Unsafe vaccines
	(c) Chair vaccinos
j ·	(4) Unauthorized use of antibiotics

Question	Questions
No.	
38.	In genetic engineering, restriction enzymes are used to:
	(1) Join DNA (2) Ligate DNA
	(3) Cut DNA (4) Denature DNA
39.	Bt crops are genetically modified to:
	(1) Increase nutrient content (2) Resist herbicides
•	(3) Produce insecticidal protein (4) Resist viral infections
40.	A vector must have which one of the following features:
•	(1) Small size & Origin of replication
	(2) Origin of replication & antibiotic resistance
•	(3) Small size & Antibiotic resistance gene
	(4) Antibiotic resistance
4.7	AND THE PROPERTY OF THE PROPER
41.	The central dogma of molecular biology is:
41.	The central dogma of molecular biology is: (1) DNA → RNA → Protein (2) RNA → DNA → Protein
	(1) $DNA \rightarrow RNA \rightarrow Protein$ (2) $RNA \rightarrow DNA \rightarrow Protein$ (3) $Protein \rightarrow RNA \rightarrow DNA$ (4) $RNA \rightarrow Protein \rightarrow DNA$
	(1) $DNA \rightarrow RNA \rightarrow Protein$ (2) $RNA \rightarrow DNA \rightarrow Protein$
	(1) $DNA \rightarrow RNA \rightarrow Protein$ (2) $RNA \rightarrow DNA \rightarrow Protein$ (3) $Protein \rightarrow RNA \rightarrow DNA$ (4) $RNA \rightarrow Protein \rightarrow DNA$

SET-X Code-D

Question	T		<u> </u>		de-D
No.		Qu	estions		CISKS ST
43.	Whi	ch of the following is a chrom	osomal	disorder?	. 14
	(1)	Haemophilia	(2)	Thalassemia	
	(3)	Colour blindness	(4)	Turner's syndrome	
44.	Whi	ch type of evolution is in	dicated	by the presence of	simila
	anat	comical features in different s	pecies?	oration sent through	
· · · · · · · · · · · · · · · · · · ·	(1)	Divergent evolution	(2)	Adaptive radiation	
		Convergent evolution	(4)	Artificial selection	.74
45.	Thal	assemia affects:	r Sa cani	Oral one Demis (1)	
	(1)	Blood clotting	(2)	Melanin production	
	(3)	Hemoglobin formation	(4)	Bleeding disorder	
46.	Whi	ch of the following is a mecha	nism of	evolution?	-
	(1)	Food chain	(2)	Reproduction (1)	
	(3)	Natural selection	(4)	Carbon dating	
47.	Gene	etic drift is most likely to occu	ır in:	CAMB V. AMB. (C)	
A343	(1)	Large populations	wd.	(3) Protes - RNA	
	(2)	Populations under selection	pressure	Liveracian through	42.
Trof	(3)	Small isolated populations		Createning (1)	
	(4)	Mutated populations only		chershammel (E)	

Question No.		270 28410	Questions		and may
48.	Typ	phoid is transmitted primar	rily through	1: rates of extragel	64,
	(1)	Insect bite	(2)	Contaminated water	
	(3)	Sexual contact	(4)	Air droplets	
49.	Rin	gworm is caused by a :	obranus k	Commence	34
	(1)	Bacterium	(2)	Virus	
	(3)	Protozoan	(4)	Fungus	
50.	Vac	cines development is by sti	mulating:	TECHNOLOGY A MI	56
•	(1)	Toxin production	(2)	Pathogen growth	
	(3)	Immune response	(4)	Hormone secretion	
51.	Whi	ch of the following is an o	utbreeding	device?	-
•1	(1)	Bisexual flower	(2)	Self-incompatibility	
	(3)	Fertilization	(4)	Anther dehiscence	
52.	Dou	ble fertilization is a charac	cteristic fea	ature of :	
	(1)	Gymnosperms	(2)	Bryophytes	
	(3)	Angiosperms	ોલુંછા (4)	Algae	.87
53.	Whi	ich of the following disord	ders is cau	used by a sex-linked a	recessiv
	gen	e?		inithable by	
	(1)	Thalassemia , modatura	10 or 1 (2)	Sickle cell anemia	
	(3)	Haemophilia	(4)	Down's syndrome	

Question No.	· Kodres Q	uestion	S		
54.	In polygenic inheritance, the ph	enotype	is influenced by:		
	(1) A single dominant gene	(2)	A single recessive gene		
	(3) Multiple genes	(4)	Environmental factors only		
55.	The packaging of DNA into chro	mosome	s involves:		
	(1) Lipids	(2)	Non histones		
	(3) Histone proteins	(4)	RNA polymerase		
56.	DNA replication is:				
	(1) Conservative	(2)	Dispersive		
e.	(3) Semiconservative	(4)	Degenerative		
57.	Which syndrome is caused by the presence of an extra X chromosom				
	in males?		America de la companya della companya de la companya de la companya della company		
	(1) Turner's syndrome	(2)	Zinchi z		
	acteristic for the state of	milo e e	Klinefelter's syndrome		
	(3) Down's syndrome	(4)	Edward's syndrome		
58.	The Hardy-Weinberg principle is	applica	ble under:		
- ~ . Je = 1981	(1) Natural selection		A STANDAR MENT OF THE STANDARD		
	(2) Mutation	MID OF	well and go oggive.		
	(3) Large population without m	utation			
	(4) Gene flow				

Question No.	×11 (19 × 10)	Questions	ning!		
59.	The Lac Operon is an example	of: ેલાકા માટેલી તે જેવા માટેલ	1.5		
	(1) Gene amplification	(2) Gene deletion			
	(3) Gene regulation	(4) Gene mutation			
60.	Who first performed the	experiment demonstrating	bacterial		
	transformation?	Total Vertices Gal			
	(1) Griffith	(2) Hershey	a.)		
	(3) Avery	(4) Watson			
61.	HIV primarily attacks which type of immune cells:				
	(1) B-Cells	(2) Cytotoxic T-cells	1.0		
	(3) Helper T-cells	(4) Natural killer cells			
62.	Adolescence is the period betw	een the ages of:	1.		
	(1) 6–12 years	(2) 10–19 years	38.		
	(3) 18–25 years	(4) 1–5 years			
63.	Long-term alcohol abuse can b	e detected by dysfunction of:	.ca		
	(1) Lungs	(2) Liver			
	(3) Pancreas	(4) Intestine			

UG-EE-2025 (Bachelor of Science (Genetics)) Code-D
(13)

SET-X

duestion	Questions	Code-D
No.		The state of the s
64.	Which of the following is used in single-cell protein produc	etion?
	(1) Saccharomyces cerevisiae (2) Rhizobium	
	(3) Mucor (4) Spirulina	- 2000 - 1100
65.	The aim of biofortification is to:	n Dr
	(1) Increase food yield (2) Increase taste of	f food
	(3) Improve nutrient quality (4) Decrease fertilize	zers
66.	Apiculture involves the management of:	
	(1) Silkworms (2) Honeybees	
	(3) Fish (4) Poultry	40. A. (
67.	Artificial insemination is commonly used in:	71.
	(1) Animal tissue culture (2) Animal husban	dry
	(3) Cloning (4) Cross-pollination	on
68.	Lactobacillus is important in the production of:	•
	(1) Dhokla (2) Dosa	
	(3) Yogurt (4) Soft drinks	
69.	Methane is produced during sewage treatment by:	
	(1) Methanogens (2) Cyanobacteria	
	(3) Fungus (4) Algae	

SET-X Code-D

Question No.	Questions
70.	Trichoderma species act as:
	(1) Antibiotic producers (2) Biocontrol agents
	(3) Fuel producers (4) Vitamin supplement
71.	The role of Agrobacterium tumefaciens in genetic engineering is:
	(1). Antibiotic production (2) Inducing tumors
	(3) Delivering genes (4) Inducing fertilization
72.	What type of vaccine is produced using recombinant DNA technology?
	(1) Killed pathogen (2) Live-attenuated vaccine
	(3) Subunit vaccine (4) Toxoid vaccine
73.	The primary goal of the Human Genome Project was to:
	(1) Create synthetic DNA
	(2) Identify all genes in human DNA
	(3) Cure genetic disorders
a sets in	(4) Engineer superhumans
74.	Which method is commonly used to insert foreign DNA into cells?
	(1) Centrifugation (2) Electroporation
	(3) Chromatography (4) Spectroscopy

Code-D
Questions
Which is a concern associated with GM crops?
(1) Reduced yield (2) Nutrient deficiency
(3) Biosafety and ecological impact (4) Short shelf life
Which of the following best defines a <i>niche</i> in ecology?
(1) Total area occupied by a species
(2) Role and position a species has in its environment
(3) Number of individuals in a population
(4) Type of food consumed by the species
In mutualism,
(1) One species benefits, the other harmed
(2) Both species are benefitted
(3) One species benefits, the other unaffected
(4) Both species are neutral
Which of the following is NOT a density-dependent population
attribute?
(1) Birth & death rate (2) Population density
(3) Species distribution (4) Earthquake

Question		7	Code-D
No	Questi		- 11
79.	The pyramid of biomass in terrestria	l ecos	ystem is:
	(1) Always inverted	(2)	Always upright
			Not defined
80.	Which of the following cycles does ca	rbon	fixation belong to?
n is destinated	(1) Nitro manthan 1 1/01		Phosphorus cycle
	(3) Sulphur cycle	(4)	Carbon cycle
81.	Which of the following structure is al	bsent	in bacterial cells?
	(1) Dil and make (C)		Nucleus
SIM	(3) Plasma membrane	(4)	Cell wall
82.	The movement of water across semip	erme	able membrane is called:
		(2)	Osmosis
5 ,	(3) Active Transport	(4)	Facilitated diffusion
83.	Polymorphism is best exhibited in:	A CONTRACTOR	Place co
anada.	(1) Obelia	(2)	Hydra
63.	(3) Physalia	(4)	Aurelia
84.	Gymnosperms are characterized by:		
	(1) Naked seeds	(2)	Enclosed seeds
3.	(3) Flowers	(4)	Fruits

UG-EE-2025 (Bachelor of Science (Genetics)) Code-D
(17)

SET-X

Question		Code-
No.	anoitesu Questions	a luestion
85.	Which of the following is a complex permanent tissue?	No.
	(1) Parenchyma (2) Collenchyma	
,	(3) Sclerenchyma (4) Xylem momail	(3)
86.	Following is involuntary muscle found in hollow organs:	80. Wh
in a light	(1) Skeletal (2) Cardiac Cardiac (2)	(D)
à 1.	(3) Smooth (4) Striated define	(3)
87.	Which tissue helps in dispersal of seed? miwollor and to no	81. Whi
	(1) Endosperm (2) Embryo (2)	
	(3) Pericarp (4) Cotyledon	(8)
.88. led:	Which structure prevents self-pollination in plants?	3.07
	(1) Ovule (2) Petal (2)	LIX.
\$ 10 mm	(3) Self-incompatibility gene (4) Integument	(8)
89.	Which among the following is true about cleistogamous flo	wers?
	(1) Promote cross-pollination (2) Always open for	
	(3) Do not require pollinators (4) Do not produce s	
90.	The acrosome of sperm is derived from:	
	(1) Mitochondria (2) Golgi apparatus	
	(3) Nucleus (4) Lysosome	

UG-EE-2025 (Bachelor of Science (Genetics)) Code-D

7150	U Q	de−D
Question No.	Questions	No
91.	Which of the following is a property of crystalline solids?	.00
d drie	(1) Irregular shape (2) (2) Sharp melting point	
	(3) Isotropic nature (4) No definite structure	
92.	An example of an amorphous solids is:	97.
(in thick)	electrolysis is proportional to the quantity of electricity passed (1) Sugar (2) Sugar	
lana Jana Sana	(1) Ohmalaw (2) Faraday's first law (3) Diamond (4) Diamond (5)	
93.	Which of the following is not a type of binding force in solids?	
	A substance used to destroy or inhibit microbes on living tissue	.80
	(1) Ionic (2) Metallic	
	(1) than schant (2) Antiseptic	1,
5 4	(3) Hydrogen bonding (4) Gravitational	
94.	Which of the following represents a suspension?	.00
	(1) Blood asignal (2) Muddy water (2)	
	3) Salt in water (4) Air	
95. A	A true solution is:	.00
(1) Heterogeneous and transparent	
500	2) Homogeneous and transparent	
	3) Heterogeneous and opaque	
(4) Homogeneous and opaque	

Question No.	Questi	ons	TOTAL STATE
96.	A characteristics of lyophobic colloids	is:	100
e e e e e e e e e e e e e e e e e e e	(1) High stability (2	2)	Strong affinity to solvent
	The property of the property o		Self-preparing
97.	Which law states that the mass	of s	ubstances deposited durin
1000	electrolysis is proportional to the qua	ntity	of electricity passed?
	(1) Ohm's law	2)	Faraday's first law
	(3) Faraday's second law (1)	Avogadro's law
98.	A substance used to destroy or inhibi	mic	robes on living tissues is:
* * * * * * * * * * * * * * * * * * * *	(1) Disinfectant	2)	Antiseptic
•	(3) Antibiotic	4)	Preservative
99.	Antacids help to relieve:		Marzday'n firm law
	(1) Bacterial infections	2)	Allergies
	(3) Headache	4)	Acidity
100.	Which is not an artificial sweetening	ager	nt?
4	(1) Sucralose	2)	Saccharin
1 1 1/m	(3) Glucose	4)	Aspartame

UG-EE-2025 (Bachelor of Science (Genetics)) Code-D
(20)

B.Sc Genetics 4 year Entrance Exam 2025 Answer Key

Q. No.	A	В	C	D
1	2	4	3	4.
2	2	3	2	2 ·
3	3	3	2 -	2.
4	1	4	4	2 ·
5	4	3	3	3.
6	1	3	2	2.
7	3	2	2	3.
8	3	2	3	1 -
9 .	3	3	1	2 • ·
10	2	2	2	2 ·
11	4	3	2	2 .
12	2	3	3	1 .
13	2	1	3	3.
14	2	2	3	3 ,
15	3	3	3	3 .
16	2	2	3	2.
17	3	2	2	1.
18	1	3	3	2 ·
19	2	3	3	2.
20	2	2	1	3
21	2	1	2	4 ,
22	3	2	2	3 ,
23	3	4	3	3 .
24	3	3	1	4 .
25	3	3	4	3 -
26	3	3	1	3 ·
27	2	3	3	2 ·
28	3	2	3	2 '
29	3	4	3	3 -
30	1	3	2	2 ·
31	1	4	2	3 '
32	2	2	1	3 ,
33	4	2	3	1 .
34	3	2	3	2 ′
35	3	3	3	3 '
36	3	2	2	2 '
37	3	3	1	2 ,
38	2	1	2	3 ,
39	4	2	2	3.
40	3	2	3	2 -
41	3	2	3	1 1
42	2	1	3	2 `

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B.Sc Genetics 4 year Entrance Exam 2025 Answer Key

Q. No.	A	В	С	D
43	2	3	2	4.
44	4	3	2	3.
45	3	3	3	3.
46	2	2	2	3 .
47	2	1	2	3.
48	3	2	4	2.
49	1	2	2	4,
50	2	3	4	3.
51	3	3	1	2 .
52	3	3	2	3 .
53	1	2	4	3 .
54	2	2	3	3 ,
55	3	3	3	3 ,
56	2	2	3	3 .
57	2	2	3	2 .
58	3	4	2	3 .
59	3	2	4	3 ,
50	2	4	3	1 '
51	3	2	4	3 .
52	3	3	3	2 .
53	2	4	3	2 ,
54	2	2	4	4 .
55	3	2	3	3 -
56	2	3	3	2 .
57	2	2	2	2 .
58	4	2	2	3 '
59	2	4	3	1 ,
70	4	3	2	2 .
71	4	3	2	3 .
72	3	2	3	3 ,
73	3	2	4	2 '
74	4	4	2	2 ·
75	3	3	2	3 ,
76	3	2	3	2 ,
77	2	2	2	2 -
78	2	3	2	4 -
79	3	1	4	2 .
30	2	2	3	4 -
31	2	2	4	2.
32	3	3	2	2-
33	4	3	2	3.
34	2	3	2	1'

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B.Sc Genetics 4 year Entrance Exam 2025 Answer Key

Q. No.	А	В	С	D
85	2	3	3	4
86	3	3	2	1
87	2	2	3	3-
88	2	3	1	3′
89	4	3	2	3.
90	3	1	2	2.
91	2	2	3	2
92	1	2	3	3
93	3	3	. 1	4 .
94	3	1	2	2 ,
95	3	4	3	2 ·
96	2	1	2	3 -
97	1	3	2	2 ,
98	2	3	3	2 -
99	2	3	3	4 ,
100	3	2	2	3 -

my fr Maria 16125 fac 19-06-2025