

**SET-“Y”** (Total No. of printed pages : 17)

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

**UG-EE-June, 2026**  
**(GENETICS-4 Year)**

Sr. No. 10265

Code

**A**

Time : 1¼ Hours

Total Questions : 100

Max. Marks : 100

Roll No. \_\_\_\_\_ (in figure) \_\_\_\_\_ (in words)

Name : \_\_\_\_\_

Date of Birth : \_\_\_\_\_

Father's Name : \_\_\_\_\_

Mother's Name : \_\_\_\_\_

Date of Examination : \_\_\_\_\_

(Signature of the candidate)

(Signature of the Invigilator)

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

1. All questions are compulsory.
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 / 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.
4. Question Booklet along-with answer key of all the A,B,C and D code will be got uploaded on the University Website after the conduct of Entrance Examination. Candidates may raise valid objection/complaint if any, with regard to discrepancy in the question booklet/answer key within 24 hours of uploading the same on the University website. The complaint be sent by the students to the Controller of Examinations by hand or through email. Thereafter, no complaint in any case will be considered.
5. The candidate **MUST NOT** do any rough work or writing in the OMR Answer-Sheet. Rough work, if any, may be done in the question book-let itself. Answers **MUST NOT** be ticked in the Question book-let.
6. 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.
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.**

Question No.	Questions
1.	Which of the following is an example of asexual reproduction? (1) Binary fission (2) Fertilization (3) Copulation (4) Pollination
2.	What is the female gamete in plants? (1) Seed (2) Pollen grain (3) Ovule (4) Sperm
3.	What is the smallest unit of heredity? (1) Chromosome (2) RNA (3) DNA (4) Gene
4.	The bacteria divides by means of : (1) Binary fission (2) Spore formation (3) Fragmentation (4) Budding
5.	What is the receptor of pollen grain in a flower? (1) Sepal (2) Petal (3) Stigma (4) Style
6.	What is the ratio of a test cross? (1) 1:1 (2) 2:1 (3) 9:3:3:1 (4) 1:2:1
7.	Which part of the flower produces male gametes? (1) Stigma (2) Anther (3) Ovule (4) Sepal





Question No.	Questions
21.	<p>Who discovered jumping gene?</p> <p>(1) Gregor Johann Mendel                      (2) Watson and Crick (3) Hugo de Vries                                (4) Barbara McClintock</p>
22.	<p>The transfer of character from one generation to another is known as:</p> <p>(1) Evolution                                      (2) Heredity (3) Generation                                  (4) Inheritance</p>
23.	<p>The genotypic ratio of a monohybrid cross is :</p> <p>(1) 1:2:1    (2) 3:1 (3) 2:1:1    (4) 9:3:3:1</p>
24.	<p>_____ is a vestigial organ.</p> <p>(1) Intestinal villi                                (2) Papillae (3) Vermiform appendix                      (4) None of the above</p>
25.	<p>An example of convergent evolution is :</p> <p>(1) Wing of Hawkmoths, the wing of hawks (2) Teeth of domestic dog, teeth of a wolf (3) Wings of Geospiza magnirostris, wings of Geospiza fortis (4) None of the above</p>
26.	<p>The last common ancestor of humans is :</p> <p>(1) Pan troglodytes                                (2) Homo neanderthalensis (3) Lemuroidea                                      (4) Dromaeosaurus</p>
27.	<p>The theory of evolution of species by natural selection was given by:</p> <p>(1) Mendel    (2) Darwin (3) Lamarck    (4) Weismann</p>















Question No.	Questions
70.	Excision and insertion of a gene is called : (1) Biotechnology (2) Genetic engineering (3) Cytogenetics (4) Gene therapy
71.	The natural place of an organism or community is known as : (1) Niche (2) Biome (3) Habitat (4) Habit
72.	Which is the renewable exhaustible natural energy resource? (1) Coal (2) Petroleum (3) Kerosene (4) Biomass
73.	According to Shelford's Law of Tolerance, the organisms wide environmental factor tolerance limit show : (1) Narrow distribution with low population size (2) Wide distribution with high population size (3) Narrow distribution with high population size (4) Wide distribution with low population size
74.	Plants growing under direct sunlight are known as : (1) Heliophytes (2) Sciophytes (3) Psamophytes (4) Dicots
75.	An orchid living on a tree exhibits : (1) Predator (2) Mutualism (3) Commensalism (4) Parasitism



Question No.	Questions
82.	<p>Which of these species do we use in indigenous medicine?</p> <p>(1) Babul (2) Zizyphus (3) Tamarind (4) None of the above</p>
83.	<p>Which of these are also known as Detrivores?</p> <p>(1) Decomposers (2) Carnivores (3) Herbivores (4) None of the above</p>
84.	<p>Which of these countries constitute approximately 57% of the various large dams in the world?</p> <p>(1) Brazil and India (2) Japan and India (3) China and India (4) Brazil and China</p>
85.	<p>How many total numbers of biodiversity hotspots are there in the world?</p> <p>(1) 36 (2) 32 (3) 28 (4) 18</p>
86.	<p>Which metal has lowest melting point?</p> <p>(1) Cs (2) Na (3) Hg (4) Sn</p>
87.	<p>When manganese dioxide is fused with KOH in air, it gives :</p> <p>(1) potassium permanganate (2) potassium manganate (3) manganese hydroxide (4) <math>Mn_3O_4</math></p>

Question No.	Questions
88.	Which is the first man-made element? (1) Sc (2) Os (3) Tc (4) Zr
89.	Which of the following oxides is amphoteric in nature? (1) NiO (2) ZnO (3) CoO (4) FeO
90.	Rutile is an ore of : (1) Scandium (2) Titanium (3) Manganese (4) Chromium
91.	Which of the following would be diamagnetic? (1) $\text{Cu}^{2+}$ (2) $\text{Ni}^{2+}$ (3) $\text{Cd}^{2+}$ (4) $\text{Ti}^{3+}$
92.	Which of the following is not an actinide? (1) Curium (2) Californium (3) Uranium (4) Turbium
93.	Vanadium (III) oxide is a strong : (1) Drying agent (2) Oxidizing agent (3) Reducing agent (4) Witting agent
94.	Lanthanides and actinides resemble in : (1) Electronic configuration (2) Oxidation state (3) Ionisation energy (4) Formation of complexes

Question No.	Questions
95.	<p>Which of the following is the finest iron ore?</p> <p>(1) Hematite (2) Magnetite (3) Siderite (4) Iron Pyrites</p>
96.	<p>Polymers are not classified on the basis of which of the following ?</p> <p>(1) Source (2) Number of monomers (3) Method of preparation (4) Structure</p>
97.	<p>Which of the following is not a natural polymer?</p> <p>(1) Rayon (2) Starch (3) Cellulose (4) RNA</p>
98.	<p>Why is ozone a powerful bleaching agent?</p> <p>(1) It is highly electronegative (2) Nascent oxygen (3) Instability of molecule (4) Large negative Gibbs energy</p>
99.	<p>Two or more compounds that have the same chemical formula, but different arrangement of atoms are called :</p> <p>(1) Isotopes (2) Isotones (3) Isomers (4) Allotropes</p>
100.	<p>Which of the following artificial sweeteners can be only used in soft drinks?</p> <p>(1) Aspartame (2) Alitame (3) Sucralose (4) Saccharin</p>

**SET-“Y”** (Total No. of printed pages : 17)

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

**UG-EE-June, 2026**  
**(GENETICS-4 Year)**

Code

**B**

Sr. No. 10274

Time : 1½ Hours

Total Questions : 100

Max. Marks : 100

Roll No. \_\_\_\_\_ (in figure) \_\_\_\_\_ (in words)

Name : \_\_\_\_\_

Date of Birth : \_\_\_\_\_

Father's Name : \_\_\_\_\_

Mother's Name : \_\_\_\_\_

Date of Examination : \_\_\_\_\_

(Signature of the candidate)

(Signature of the Invigilator)

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

1. **All questions are compulsory.**
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 / 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.**
4. **Question Booklet along-with answer key of all the A,B,C and D code will be got uploaded on the University Website after the conduct of Entrance Examination. Candidates may raise valid objection/complaint if any, with regard to discrepancy in the question booklet/answer key within 24 hours of uploading the same on the University website. The complaint be sent by the students to the Controller of Examinations by hand or through email. Thereafter, no complaint in any case will be considered.**
5. **The candidate MUST NOT do any rough work or writing in the OMR Answer-Sheet. Rough work, if any, may be done in the question book-let itself. Answers MUST NOT be ticked in the Question book-let.**
6. **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.**
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.**

Question No.	Questions
1.	<p>A plant cell wall is mainly composed of :</p> <p>(1) Protein (2) Cellulose (3) Lipid (4) Starch</p>
2.	<p>A cell without a cell wall is termed as :</p> <p>(1) Tonoplast (2) Protoplast (3) Symplast (4) Apoplast</p>
3.	<p>Which cell organelle is involved in apoptosis?</p> <p>(1) Lysosome (2) ER (3) Golgi (4) Mitochondria</p>
4.	<p>Which phenotype divides angiosperms in two major groups ?</p> <p>(1) Cotyledons (2) Seed coat (3) Germ cells (4) Embryo</p>
5.	<p>The period of pregnancy is called :</p> <p>(1) Gestation period (2) Incubation period (3) Ovulation (4) Menstruation period</p>
6.	<p>The function of the centrosome is :</p> <p>(1) Formation of spindle fibres (2) Osmoregulation (3) Secretion (4) Protein synthesis</p>
7.	<p>The genetic recombination in bacteria is :</p> <p>(1) Transformation (2) Complementation (3) Conversion (4) Binary fission</p>

Question No.	Questions
8.	<p>Which of the following is a food borne toxin ?</p> <p>(1) Botulinum toxin                      (2) Tetanus toxin (3) Diphtheria toxin                      (4) Cholera toxin</p>
9.	<p>Which of the following is essential for continuation of species ?</p> <p>(1) Health                                      (2) Nutrition (3) Reproduction                              (4) Food</p>
10.	<p>The membrane around the vacuole is known as :</p> <p>(1) Tonoplast                                      (2) Elaioplast (3) Cytoplast                                      (4) Amyloplast</p>
11.	<p>Which of the following would be diamagnetic?</p> <p>(1) <math>\text{Cu}^{2+}</math>                                      (2) <math>\text{Ni}^{2+}</math> (3) <math>\text{Cd}^{2+}</math>                                      (4) <math>\text{Ti}^{3+}</math></p>
12.	<p>Which of the following is not an actinide?</p> <p>(1) Curium                                      (2) Californium (3) Uranium                                      (4) Turbium</p>
13.	<p>Vanadium (III) oxide is a strong :</p> <p>(1) Drying agent                                      (2) Oxidizing agent (3) Reducing agent                                      (4) Witting agent</p>
14.	<p>Lanthanides and actinides resemble in :</p> <p>(1) Electronic configuration                      (2) Oxidation state (3) Ionisation energy                      (4) Formation of complexes</p>



Question No.	Questions
21.	The natural place of an organism or community is known as : (1) Niche (2) Biome (3) Habitat (4) Habit
22.	Which is the renewable exhaustible natural energy resource? (1) Coal (2) Petroleum (3) Kerosene (4) Biomass
23.	According to Shelford's Law of Tolerance, the organisms wide environmental factor tolerance limit show : (1) Narrow distribution with low population size (2) Wide distribution with high population size (3) Narrow distribution with high population size (4) Wide distribution with low population size
24.	Plants growing under direct sunlight are known as : (1) Heliophytes (2) Sciophytes (3) Psamophytes (4) Dicots
25.	An orchid living on a tree exhibits : (1) Predator (2) Mutualism (3) Commensalism (4) Parasitism
26.	Which statement is correct with respect to the food chain? (1) Every component of the food chain forms a trophic level (2) Inter-relation between different food chains is known as a food web (3) All the chains formed by nutritional relations is used to understand energy flow (4) All of the above

Question No.	Questions
27.	<p>The ratio between energy flow at different points in a food chain is known as :</p> <p>(1) Ecological capacity                      (2) Ecological efficiency (3) Ecological assimilation                (4) Ecological potential</p>
28.	<p>Which two forms of alcohol do we include in biofuels?</p> <p>(1) Methanol and Ethanol                      (2) Propanol and Ethanol (3) Propanol and Methanol                (4) None of the above</p>
29.	<p>Which of these gases is not permitted to be released by the Prevention and Control of Pollution Act by the Government?</p> <p>(1) Sulphur Dioxide                      (2) Carbon Monoxide (3) Nitrogen Oxide                      (4) All of the above</p>
30.	<p>In which of these years was the Forest Conservation Act amended?</p> <p>(1) 1978    (2) 1988 (3) 1963    (4) 1952</p>
31.	<p>Melanoma is a type of cancer that develops from :</p> <p>(1) Granulocytes                                      (2) Melanocytes (3) Adipocyte    (4) None of the above</p>
32.	<p>Human Immunodeficiency Virus causes aids by attacking a type of white blood cell called :</p> <p>(1) CD4    (2) CD3 (3) CD8    (4) None of the above</p>
33.	<p>Plague is caused by the bacterium :</p> <p>(1) Yersinia pseudotuberculosis              (2) Yersinia pestis (3) Yersinia enterocolitica                      (4) None of the above</p>





Question No.	Questions
45.	<p>Which is the one characteristic of the parents that can be inherited by their children?</p> <p>(1) Deep scar on chin                      (2) Snub nose (3) Technique of swimming                (4) Cut nose</p>
46.	<p>The earliest geological time period among the following is :</p> <p>(1) Cambrian                                      (2) Permian (3) Jurassic                                        (4) Quaternary</p>
47.	<p>The force that initiates evolution is :</p> <p>(1) Variation                                      (2) Mutation (3) Extinction                                      (4) Adaptation</p>
48.	<p>The smallest unit of genetic material which produces a phenotypic effect on mutation is :</p> <p>(1) Muton                                        (2) Gene (3) Recon    (4) Nucleic acid</p>
49.	<p>When the activity of one gene is suppressed by the activity of a non-allelic gene, it is known as :</p> <p>(1) Pseudo - dominance                      (2) Hypostasis (3) Epistasis                                      (4) Incomplete dominance</p>
50.	<p>Mendel's findings were rediscovered by :</p> <p>(1) Correns                                        (2) De Vries (3) Tschermak                                      (4) All above</p>



Question No.	Questions
58.	<p>A pregnant woman has an equal chance of her baby being blood group A or blood group AB. Which one of the following shows the possible genotypes of the woman and the father of her child?</p> <p>(1) <math>I^A I^A</math> and <math>I^B I^O</math> (2) <math>I^A I^B</math> and <math>I^B I^O</math>  (3) <math>I^A I^O</math> and <math>I^B I^O</math> (4) <math>I^O I^B</math> and <math>I^A I^O</math></p>
59.	<p>A cross between a tall pea-plant (TT) and a short pea-plant (tt) resulted in progenies that were all tall plants because :</p> <p>(1) tallness is the recessive trait  (2) shortness is the dominant trait  (3) height of pea-plant is not governed by gene T or t  (4) tallness is the dominant trait</p>
60.	<p>When did dinosaurs die off?</p> <p>(1) 105.1 million years ago (2) 65.5 million years ago  (3) 75.5 million years ago (4) None of the above</p>
61.	<p>Immunosuppressants such as _____ prevent transplanted organs from being rejected in recipients :</p> <p>(1) Thrombin (2) Cyclosporine  (3) Aspirin (4) None of the above</p>
62.	<p>Both B &amp; T lymphocytes are produced in the bone marrow; however, only the T lymphocytes travel to the _____ and mature there.</p> <p>(1) Spleen (2) Thymus  (3) Pituitary gland (4) Adrenal gland</p>

Question No.	Questions
63.	<p>The _____ is at its largest in children, but with the onset of puberty, it eventually shrinks and gets replaced by fat.</p> <p>(1) Thymus (2) Hypothalamus (3) Parathyroid gland (4) None of the above</p>
64.	<p>Which of the following is a Congenital Disease?</p> <p>(1) Kwashiorkor (2) Sickle-cell anaemia (3) Goitre (4) Rheumatoid Arthritis</p>
65.	<p>Which of the following does not affect health?</p> <p>(1) Genetic disorders (2) Infections (3) Life Style (4) Health Insurance</p>
66.	<p>A kind of an injury or damage, which results in the premature death of all the nearby cells in a tissue or an organ through autolysis is called:</p> <p>(1) Neurosis (2) Necrosis (3) Apoptosis (4) Cellular senescence</p>
67.	<p>Hypochondria is also termed as _____</p> <p>(1) Health anxiety (2) Sleep apnea (3) Hypnagogia (4) Narcolepsy</p>
68.	<p>The immune system comprises _____</p> <p>(1) Humoral and fibrous systems (2) Humoral and Cell-mediated systems (3) Antigens (4) Lymphocytes</p>
69.	<p>Who is known as the Father of Immunology?</p> <p>(1) Dmitry Ivanovsky (2) Edward Jenner (3) Erik Acharius (4) Francesco Redi</p>

Question No.	Questions
70.	<p>What is the full form of OPV?</p> <p>(1) Oral Polio Vaccine                      (2) Oesophagus Polio Vaccine (3) Oral Plague Vaccine                    (4) Oesophagus Plague Vaccine</p>
71.	<p>Plasmids are used as cloning vectors for which of the following reasons?</p> <p>(1) Can be multiplied in culture (2) Self-replication in bacterial cells (3) Can be multiplied in laboratories with the help of enzymes (4) Replicate freely outside bacterial cells</p>
72.	<p>PCR technique was invented by :</p> <p>(1) Karry Mullis                              (2) Boyer (3) Sanger                                      (4) Cohn</p>
73.	<p>The first transgenic plant to be produced is :</p> <p>(1) Brinjal                                      (2) Tobacco (3) Rice                                         (4) Cotton</p>
74.	<p>Which of the following is the quality of improved transgenic basmati rice?</p> <p>(1) Gives high yield but no characteristic aroma (2) Gives high yield and is rich in vitamin A (3) Does not require chemical fertilizers and growth hormones (4) Resistant to insects and diseases</p>
75.	<p>The expression of a transgene in the target tissue is identified by a :</p> <p>(1) Transgene                                      (2) Promoter (3) Enhancer                                      (4) Reporter</p>









**SET-“Y”** (Total No. of printed pages : 17)

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

**UG-EE-June, 2026**  
**(GENETICS-4 Year)**

Code **C**

Sr. No. **10267**

Time : 1½ Hours

Total Questions : 100

Max. Marks : 100

Roll No. \_\_\_\_\_ (in figure) \_\_\_\_\_ (in words)

Name : \_\_\_\_\_

Date of Birth : \_\_\_\_\_

Father's Name : \_\_\_\_\_

Mother's Name : \_\_\_\_\_

Date of Examination : \_\_\_\_\_

(Signature of the candidate)

(Signature of the Invigilator)

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

1. All questions are compulsory.
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 / 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.
4. Question Booklet along-with answer key of all the A,B,C and D code will be got uploaded on the University Website after the conduct of Entrance Examination. Candidates may raise valid objection/complaint if any, with regard to discrepancy in the question booklet/answer key within 24 hours of uploading the same on the University website. The complaint be sent by the students to the Controller of Examinations by hand or through email. Thereafter, no complaint in any case will be considered.
5. The candidate **MUST NOT** do any rough work or writing in the OMR Answer-Sheet. Rough work, if any, may be done in the question book-let itself. Answers **MUST NOT** be ticked in the Question book-let.
6. **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.
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.**

Question No.	Questions
1.	<p>Immunosuppressants such as _____ prevent transplanted organs from being rejected in recipients :</p> <p>(1) Thrombin (2) Cyclosporine (3) Aspirin (4) None of the above</p>
2.	<p>Both B &amp; T lymphocytes are produced in the bone marrow; however, only the T lymphocytes travel to the _____ and mature there.</p> <p>(1) Spleen (2) Thymus (3) Pituitary gland (4) Adrenal gland</p>
3.	<p>The _____ is at its largest in children, but with the onset of puberty, it eventually shrinks and gets replaced by fat.</p> <p>(1) Thymus (2) Hypothalamus (3) Parathyroid gland (4) None of the above</p>
4.	<p>Which of the following is a Congenital Disease?</p> <p>(1) Kwashiorkor (2) Sickle-cell anaemia (3) Goitre (4) Rheumatoid Arthritis</p>
5.	<p>Which of the following does not affect health?</p> <p>(1) Genetic disorders (2) Infections (3) Life Style (4) Health Insurance</p>
6.	<p>A kind of an injury or damage, which results in the premature death of all the nearby cells in a tissue or an organ through autolysis is called:</p> <p>(1) Neurosis (2) Necrosis (3) Apoptosis (4) Cellular senescence</p>



Question No.	Questions
13.	<p>The genotypic ratio of a monohybrid cross is :</p> <p>(1) 1:2:1 (2) 3:1 (3) 2:1:1 (4) 9:3:3:1</p>
14.	<p>_____ is a vestigial organ.</p> <p>(1) Intestinal villi (2) Papillae (3) Vermiform appendix (4) None of the above</p>
15.	<p>An example of convergent evolution is :</p> <p>(1) Wing of Hawkmoths, the wing of hawks (2) Teeth of domestic dog, teeth of a wolf (3) Wings of <i>Geospiza magnirostris</i>, wings of <i>Geospiza fortis</i> (4) None of the above</p>
16.	<p>The last common ancestor of humans is :</p> <p>(1) Pan troglodytes (2) Homo neanderthalensis (3) Lemuroidea (4) Dromaeosaurus</p>
17.	<p>The theory of evolution of species by natural selection was given by:</p> <p>(1) Mendel (2) Darwin (3) Lamarck (4) Weismann</p>
18.	<p>A pregnant woman has an equal chance of her baby being blood group A or blood group AB. Which one of the following shows the possible genotypes of the woman and the father of her child?</p> <p>(1) <math>I^A I^A</math> and <math>I^B I^O</math> (2) <math>I^A I^B</math> and <math>I^B I^O</math> (3) <math>I^A I^O</math> and <math>I^B I^O</math> (4) <math>I^O I^B</math> and <math>I^A I^O</math></p>

Question No.	Questions
19.	<p>A cross between a tall pea-plant (TT) and a short pea-plant (tt) resulted in progenies that were all tall plants because :</p> <p>(1) tallness is the recessive trait            (2) shortness is the dominant trait            (3) height of pea-plant is not governed by gene T or t            (4) tallness is the dominant trait</p>
20.	<p>When did dinosaurs die off?</p> <p>(1) 105.1 million years ago                      (2) 65.5 million years ago            (3) 75.5 million years ago                      (4) None of the above</p>
21.	<p>Which of the following is an example of asexual reproduction?</p> <p>(1) Binary fission                                      (2) Fertilization            (3) Copulation    (4) Pollination</p>
22.	<p>What is the female gamete in plants?</p> <p>(1) Seed    (2) Pollen grain            (3) Ovule    (4) Sperm</p>
23.	<p>What is the smallest unit of heredity?</p> <p>(1) Chromosome    (2) RNA            (3) DNA    (4) Gene</p>
24.	<p>The bacteria divides by means of :</p> <p>(1) Binary fission    (2) Spore formation            (3) Fragmentation    (4) Budding</p>
25.	<p>What is the receptor of pollen grain in a flower?</p> <p>(1) Sepal    (2) Petal            (3) Stigma    (4) Style</p>



Question No.	Questions
32.	<p>Which of the following is not an actinide?</p> <p>(1) Curium (2) Californium (3) Uranium (4) Turbium</p>
33.	<p>Vanadium (III) oxide is a strong :</p> <p>(1) Drying agent (2) Oxidizing agent (3) Reducing agent (4) Witting agent</p>
34.	<p>Lanthanides and actinides resemble in :</p> <p>(1) Electronic configuration (2) Oxidation state (3) Ionisation energy (4) Formation of complexes</p>
35.	<p>Which of the following is the finest iron ore?</p> <p>(1) Hematite (2) Magnetite (3) Siderite (4) Iron Pyrites</p>
36.	<p>Polymers are not classified on the basis of which of the following ?</p> <p>(1) Source (2) Number of monomers (3) Method of preparation (4) Structure</p>
37.	<p>Which of the following is not a natural polymer?</p> <p>(1) Rayon (2) Starch (3) Cellulose (4) RNA</p>
38.	<p>Why is ozone a powerful bleaching agent?</p> <p>(1) It is highly electronegative (2) Nascent oxygen (3) Instability of molecule (4) Large negative Gibbs energy</p>



Question No.	Questions
45.	<p>The expression of a transgene in the target tissue is identified by a :</p> <p>(1) Transgene (2) Promoter (3) Enhancer (4) Reporter</p>
46.	<p>_____ is used as a vector for cloning into higher organisms :</p> <p>(1) Retrovirus (2) Baculovirus (3) <i>Salmonella typhimurium</i> (4) <i>Rhizopus nigricans</i></p>
47.	<p>Which bacterium is used in the production of insulin by genetic engineering?</p> <p>(1) <i>Saccharomyces</i> (2) <i>Rhizobium</i> (3) <i>Escherichia</i> (4) <i>Mycobacterium</i></p>
48.	<p>RNA interference helps in :</p> <p>(1) Cell proliferation (2) Micropropagation (3) Cell defence (4) Cell differentiation</p>
49.	<p>ELISA is :</p> <p>(1) Using radiolabelled second antibody (2) Usage of RBCs (3) Using complement-mediated cell lysis (4) Addition of substrate that is converted into a coloured end product</p>
50.	<p>Excision and insertion of a gene is called :</p> <p>(1) Biotechnology (2) Genetic engineering (3) Cytogenetics (4) Gene therapy</p>



Question No.	Questions
55.	Which is the one characteristic of the parents that can be inherited by their children? (1) Deep scar on chin (2) Snub nose (3) Technique of swimming (4) Cut nose
56.	The earliest geological time period among the following is : (1) Cambrian (2) Permian (3) Jurassic (4) Quaternary
57.	The force that initiates evolution is : (1) Variation (2) Mutation (3) Extinction (4) Adaptation
58.	The smallest unit of genetic material which produces a phenotypic effect on mutation is : (1) Muton (2) Gene (3) Recon (4) Nucleic acid
59.	When the activity of one gene is suppressed by the activity of a non-allelic gene, it is known as : (1) Pseudo - dominance (2) Hypostasis (3) Epistasis (4) Incomplete dominance
60.	Mendel's findings were rediscovered by : (1) Correns (2) De Vries (3) Tschermak (4) All above
61.	The natural place of an organism or community is known as : (1) Niche (2) Biome (3) Habitat (4) Habit

Question No.	Questions
62.	<p>Which is the renewable exhaustible natural energy resource?</p> <p>(1) Coal (2) Petroleum (3) Kerosene (4) Biomass</p>
63.	<p>According to Shelford's Law of Tolerance, the organisms wide environmental factor tolerance limit show :</p> <p>(1) Narrow distribution with low population size (2) Wide distribution with high population size (3) Narrow distribution with high population size (4) Wide distribution with low population size</p>
64.	<p>Plants growing under direct sunlight are known as :</p> <p>(1) Heliophytes (2) Sciophytes (3) Psamophytes (4) Dicots</p>
65.	<p>An orchid living on a tree exhibits :</p> <p>(1) Predator (2) Mutualism (3) Commensalism (4) Parasitism</p>
66.	<p>Which statement is correct with respect to the food chain?</p> <p>(1) Every component of the food chain forms a trophic level (2) Inter-relation between different food chains is known as a food web (3) All the chains formed by nutritional relations is used to understand energy flow (4) All of the above</p>

Question No.	Questions
<b>67.</b>	<p>The ratio between energy flow at different points in a food chain is known as :</p> <p>(1) Ecological capacity                      (2) Ecological efficiency (3) Ecological assimilation                (4) Ecological potential</p>
<b>68.</b>	<p>Which two forms of alcohol do we include in biofuels?</p> <p>(1) Methanol and Ethanol                      (2) Propanol and Ethanol (3) Propanol and Methanol                (4) None of the above</p>
<b>69.</b>	<p>Which of these gases is not permitted to be released by the Prevention and Control of Pollution Act by the Government?</p> <p>(1) Sulphur Dioxide                      (2) Carbon Monoxide (3) Nitrogen Oxide                      (4) All of the above</p>
<b>70.</b>	<p>In which of these years was the Forest Conservation Act amended?</p> <p>(1) 1978    (2) 1988 (3) 1963    (4) 1952</p>
<b>71.</b>	<p>Which of these elements is present in the drinking water that can lead to numerous fatal diseases?</p> <p>(1) Phosphorus                                      (2) Calcium (3) Arsenic    (4) None of the above</p>
<b>72.</b>	<p>Which of these species do we use in indigenous medicine?</p> <p>(1) Babul    (2) Zizyphus (3) Tamarind    (4) None of the above</p>
<b>73.</b>	<p>Which of these are also known as Detrivores?</p> <p>(1) Decomposers                                      (2) Carnivores (3) Herbivores    (4) None of the above</p>



Question No.	Questions
<b>81.</b>	<p>A plant cell wall is mainly composed of :</p> <p>(1) Protein (2) Cellulose (3) Lipid (4) Starch</p>
<b>82.</b>	<p>A cell without a cell wall is termed as :</p> <p>(1) Tonoplast (2) Protoplast (3) Symplast (4) Apoplast</p>
<b>83.</b>	<p>Which cell organelle is involved in apoptosis?</p> <p>(1) Lysosome (2) ER (3) Golgi (4) Mitochondria</p>
<b>84.</b>	<p>Which phenotype divides angiosperms in two major groups ?</p> <p>(1) Cotyledons (2) Seed coat (3) Germ cells (4) Embryo</p>
<b>85.</b>	<p>The period of pregnancy is called :</p> <p>(1) Gestation period (2) Incubation period (3) Ovulation (4) Menstruation period</p>
<b>86.</b>	<p>The function of the centrosome is :</p> <p>(1) Formation of spindle fibres (2) Osmoregulation (3) Secretion (4) Protein synthesis</p>
<b>87.</b>	<p>The genetic recombination in bacteria is :</p> <p>(1) Transformation (2) Complementation (3) Conversion (4) Binary fission</p>
<b>88.</b>	<p>Which of the following is a food borne toxin ?</p> <p>(1) Botulinum toxin (2) Tetanus toxin (3) Diphtheria toxin (4) Cholera toxin</p>

Question No.	Questions
89.	<p>Which of the following is essential for continuation of species ?</p> <p>(1) Health (2) Nutrition (3) Reproduction (4) Food</p>
90.	<p>The membrane around the vacuole is known as :</p> <p>(1) Tonoplast (2) Elaioplast (3) Cytoplast (4) Amyloplast</p>
91.	<p>Melanoma is a type of cancer that develops from :</p> <p>(1) Granulocytes (2) Melanocytes (3) Adipocyte (4) None of the above</p>
92.	<p>Human Immunodeficiency Virus causes aids by attacking a type of white blood cell called :</p> <p>(1) CD4 (2) CD3 (3) CD8 (4) None of the above</p>
93.	<p>Plague is caused by the bacterium :</p> <p>(1) Yersinia pseudotuberculosis (2) Yersinia pestis (3) Yersinia enterocolitica (4) None of the above</p>
94.	<p>Elphantiasis is caused by :</p> <p>(1) Filarial worms (2) Flatworms (3) Tapeworms (4) None of the above</p>
95.	<p>_____ is an example of a stimulant.</p> <p>(1) Lorazepam (2) Amphetamine (3) Oxazepam (4) Phencyclidine</p>

Question No.	Questions
96.	Restriction enzymes were discovered by : (1) Smith and Nathans (2) Alexander Fleming (3) Berg (4) None
97.	Bacteria protect themselves from viruses by fragmenting viral DNA with : (1) Ligase (2) Endonuclease (3) Exonuclease (4) Gyrase
98.	Klenow fragment is derived from : (1) DNA Ligase (2) DNA Pol - I (3) DNA Pol-II (4) Reverse Transcriptase
99.	The Golden Rice variety is rich in : (1) Vitamin C (2) B-carotene and ferritin (3) Biotin (4) Lysine
100.	The DNA fragments have sticky ends due to : (1) Endonuclease (2) Unpaired bases (3) Calcium ions (4) Free methylation

**SET-“Y”** (Total No. of printed pages : 17)

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

**UG-EE-June, 2026**  
**(GENETICS-4 Year)**

Code **D**

Sr. No. **10268**

Time : 1¼ Hours

Total Questions : 100

Max. Marks : 100

Roll No. \_\_\_\_\_ (in figure) \_\_\_\_\_ (in words)

Name : \_\_\_\_\_ Date of Birth : \_\_\_\_\_

Father's Name : \_\_\_\_\_ Mother's Name : \_\_\_\_\_

Date of Examination : \_\_\_\_\_

(Signature of the candidate)

(Signature of the Invigilator)

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

1. **All questions are compulsory.**
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 / 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.**
4. **Question Booklet along-with answer key of all the A,B,C and D code will be got uploaded on the University Website after the conduct of Entrance Examination. Candidates may raise valid objection/complaint if any, with regard to discrepancy in the question booklet/answer key within 24 hours of uploading the same on the University website. The complaint be sent by the students to the Controller of Examinations by hand or through email. Thereafter, no complaint in any case will be considered.**
5. **The candidate MUST NOT do any rough work or writing in the OMR Answer-Sheet. Rough work, if any, may be done in the question book-let itself. Answers MUST NOT be ticked in the Question book-let.**
6. **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.**
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.**

Question No.	Questions
1.	The natural place of an organism or community is known as : (1) Niche (2) Biome (3) Habitat (4) Habit
2.	Which is the renewable exhaustible natural energy resource? (1) Coal (2) Petroleum (3) Kerosene (4) Biomass
3.	According to Shelford's Law of Tolerance, the organisms wide environmental factor tolerance limit show : (1) Narrow distribution with low population size (2) Wide distribution with high population size (3) Narrow distribution with high population size (4) Wide distribution with low population size
4.	Plants growing under direct sunlight are known as : (1) Heliophytes (2) Sciophytes (3) Psamophytes (4) Dicots
5.	An orchid living on a tree exhibits : (1) Predator (2) Mutualism (3) Commensalism (4) Parasitism
6.	Which statement is correct with respect to the food chain? (1) Every component of the food chain forms a trophic level (2) Inter-relation between different food chains is known as a food web (3) All the chains formed by nutritional relations is used to understand energy flow (4) All of the above

Question No.	Questions
7.	<p>The ratio between energy flow at different points in a food chain is known as :</p> <p>(1) Ecological capacity                      (2) Ecological efficiency (3) Ecological assimilation                (4) Ecological potential</p>
8.	<p>Which two forms of alcohol do we include in biofuels?</p> <p>(1) Methanol and Ethanol                      (2) Propanol and Ethanol (3) Propanol and Methanol                (4) None of the above</p>
9.	<p>Which of these gases is not permitted to be released by the Prevention and Control of Pollution Act by the Government?</p> <p>(1) Sulphur Dioxide                      (2) Carbon Monoxide (3) Nitrogen Oxide                      (4) All of the above</p>
10.	<p>In which of these years was the Forest Conservation Act amended?</p> <p>(1) 1978    (2) 1988 (3) 1963    (4) 1952</p>
11.	<p>Melanoma is a type of cancer that develops from :</p> <p>(1) Granulocytes                                      (2) Melanocytes (3) Adipocyte    (4) None of the above</p>
12.	<p>Human Immunodeficiency Virus causes aids by attacking a type of white blood cell called :</p> <p>(1) CD4    (2) CD3 (3) CD8    (4) None of the above</p>

Question No.	Questions
13.	<p>Plague is caused by the bacterium :</p> <p>(1) <i>Yersinia pseudotuberculosis</i>      (2) <i>Yersinia pestis</i>  (3) <i>Yersinia enterocolitica</i>      (4) None of the above</p>
14.	<p>Elphantiasis is caused by :</p> <p>(1) Filarial worms      (2) Flatworms  (3) Tapeworms      (4) None of the above</p>
15.	<p>_____ is an example of a stimulant.</p> <p>(1) Lorazepam      (2) Amphetamine  (3) Oxazepam      (4) Phencyclidine</p>
16.	<p>Restriction enzymes were discovered by :</p> <p>(1) Smith and Nathans      (2) Alexander Fleming  (3) Berg      (4) None</p>
17.	<p>Bacteria protect themselves from viruses by fragmenting viral DNA with :</p> <p>(1) Ligase      (2) Endonuclease  (3) Exonuclease      (4) Gyrase</p>
18.	<p>Klenow fragment is derived from :</p> <p>(1) DNA Ligase      (2) DNA Pol - I  (3) DNA Pol-II      (4) Reverse Transcriptase</p>
19.	<p>The Golden Rice variety is rich in :</p> <p>(1) Vitamin C      (2) B-carotene and ferritin  (3) Biotin      (4) Lysine</p>



Question No.	Questions
25.	Which is the one characteristic of the parents that can be inherited by their children? (1) Deep scar on chin (2) Snub nose (3) Technique of swimming (4) Cut nose
26.	The earliest geological time period among the following is : (1) Cambrian (2) Permian (3) Jurassic (4) Quaternary
27.	The force that initiates evolution is : (1) Variation (2) Mutation (3) Extinction (4) Adaptation
28.	The smallest unit of genetic material which produces a phenotypic effect on mutation is : (1) Muton (2) Gene (3) Recon (4) Nucleic acid
29.	When the activity of one gene is suppressed by the activity of a non-allelic gene, it is known as : (1) Pseudo - dominance (2) Hypostasis (3) Epistasis (4) Incomplete dominance
30.	Mendel's findings were rediscovered by : (1) Correns (2) De Vries (3) Tschermak (4) All above

Question No.	Questions
<b>31.</b>	<p>A plant cell wall is mainly composed of :</p> <p>(1) Protein (2) Cellulose (3) Lipid (4) Starch</p>
<b>32.</b>	<p>A cell without a cell wall is termed as :</p> <p>(1) Tonoplast (2) Protoplast (3) Symplast (4) Apoplast</p>
<b>33.</b>	<p>Which cell organelle is involved in apoptosis?</p> <p>(1) Lysosome (2) ER (3) Golgi (4) Mitochondria</p>
<b>34.</b>	<p>Which phenotype divides angiosperms in two major groups ?</p> <p>(1) Cotyledons (2) Seed coat (3) Germ cells (4) Embryo</p>
<b>35.</b>	<p>The period of pregnancy is called :</p> <p>(1) Gestation period (2) Incubation period (3) Ovulation (4) Menstruation period</p>
<b>36.</b>	<p>The function of the centrosome is :</p> <p>(1) Formation of spindle fibres (2) Osmoregulation (3) Secretion (4) Protein synthesis</p>
<b>37.</b>	<p>The genetic recombination in bacteria is :</p> <p>(1) Transformation (2) Complementation (3) Conversion (4) Binary fission</p>



Question No.	Questions
45.	Which of the following is the finest iron ore? (1) Hematite (2) Magnetite (3) Siderite (4) Iron Pyrites
46.	Polymers are not classified on the basis of which of the following ? (1) Source (2) Number of monomers (3) Method of preparation (4) Structure
47.	Which of the following is not a natural polymer? (1) Rayon (2) Starch (3) Cellulose (4) RNA
48.	Why is ozone a powerful bleaching agent? (1) It is highly electronegative (2) Nascent oxygen (3) Instability of molecule (4) Large negative Gibbs energy
49.	Two or more compounds that have the same chemical formula, but different arrangement of atoms are called : (1) Isotopes (2) Isotones (3) Isomers (4) Allotropes
50.	Which of the following artificial sweeteners can be only used in soft drinks? (1) Aspartame (2) Alitame (3) Sucralose (4) Saccharin













Question No.	Questions
89.	<p>A cross between a tall pea-plant (TT) and a short pea-plant (tt) resulted in progenies that were all tall plants because :</p> <p>(1) tallness is the recessive trait            (2) shortness is the dominant trait            (3) height of pea-plant is not governed by gene T or t            (4) tallness is the dominant trait</p>
90.	<p>When did dinosaurs die off?</p> <p>(1) 105.1 million years ago                      (2) 65.5 million years ago            (3) 75.5 million years ago                      (4) None of the above</p>
91.	<p>Which of the following is an example of asexual reproduction?</p> <p>(1) Binary fission                                      (2) Fertilization            (3) Copulation                                        (4) Pollination</p>
92.	<p>What is the female gamete in plants?</p> <p>(1) Seed    (2) Pollen grain            (3) Ovule     (4) Sperm</p>
93.	<p>What is the smallest unit of heredity?</p> <p>(1) Chromosome                                        (2) RNA            (3) DNA    (4) Gene</p>
94.	<p>The bacteria divides by means of :</p> <p>(1) Binary fission                                      (2) Spore formation            (3) Fragmentation                                    (4) Budding</p>
95.	<p>What is the receptor of pollen grain in a flower?</p> <p>(1) Sepal    (2) Petal            (3) Stigma    (4) Style</p>



Answer keys of Bachelor of Science (Genetics) 4-year entrance test dated 10.06.2026

Q. No.	A	B	C	D
1	1	4	2	3
2	3	2	2	4
3	4	4	1	2
4	1	1	2	1
5	3	1	4	3
6	1	1	2	4
7	2	1	1	2
8	1	1	2	1
9	3	3	2	4
10	3	1	1	2
11	4	3	4	2
12	2	4	4	1
13	4	3	2	2
14	1	2	3	1
15	1	1	1	2
16	1	2	1	1
17	1	1	2	2
18	1	2	1	2
19	3	3	2	2
20	1	1	2	2
21	4	3	1	2
22	4	4	3	4
23	2	2	4	4
24	3	1	1	3
25	1	3	3	2
26	1	4	1	1
27	2	2	2	1
28	1	1	1	1
29	2	4	3	3
30	2	2	3	4
31	2	2	3	4
32	4	1	4	2
33	4	2	3	4
34	3	1	2	1
35	2	2	1	1
36	1	1	2	1
37	1	2	1	1
38	1	2	2	1
39	3	2	3	3
40	4	2	1	1
41	2	2	2	3
42	2	4	1	4
43	1	4	2	3
44	2	3	2	2
45	4	2	4	1
46	2	1	1	2
47	1	1	3	1
48	2	1	3	2
49	2	3	4	3
50	1	4	2	1

*Gr2*

*M...*

*Gr2*

*Gr2*

Answer keys of Bachelor of Science (Genetics) 4-year entrance test dated 10.06.2026

Q. No.	A	B	C	D
51	2	4	2	2
52	1	4	4	1
53	2	2	4	2
54	1	3	3	2
55	2	1	2	4
56	1	1	1	1
57	2	2	1	3
58	2	1	1	3
59	2	2	3	4
60	2	2	4	2
61	2	2	3	3
62	1	2	4	4
63	2	1	2	1
64	2	2	1	3
65	4	4	3	1
66	1	2	4	3
67	3	1	2	2
68	3	2	1	3
69	4	2	4	2
70	2	1	2	2
71	3	2	3	2
72	4	1	4	2
73	2	2	1	1
74	1	2	3	2
75	3	4	1	4
76	4	1	3	2
77	2	3	2	1
78	1	3	3	2
79	4	4	2	2
80	2	2	2	1
81	3	1	4	4
82	4	3	2	4
83	1	4	4	2
84	3	1	1	3
85	1	3	1	1
86	3	1	1	1
87	2	2	1	2
88	3	1	1	1
89	2	3	3	2
90	2	3	1	2
91	3	3	2	1
92	4	4	1	3
93	3	1	2	4
94	2	3	1	1
95	1	1	2	3
96	2	3	1	1
97	1	2	2	2
98	2	3	2	1
99	3	2	2	3
100	1	2	2	3

*SM*

*Wm*

*Pat*

*has*