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CBSE 12th Biology 2010 Unsolved Paper Delhi Board

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Note

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CBSE 12th Biology 2010 Unsolved Paper Delhi Board

TIME - 3HR. | QUESTIONS - 30

THE MARKS ARE MENTIONED ON EACH QUESTION

- Q. 1. A bilobed, dithecous anther has 100 microspore mother cells per microsporangium. How many male gametophytes this anther can produce? 1 mark
- Q. 2. Mention two functions of the codon AUG. 1 mark
- Q. 3. Name the scientist who disproved spontaneous generation theory. 1 mark
- Q.4. What is it that prevents a child to suffer from a disease he/she is vaccinated. against. Give one reason. 1 mark
- Q. 5. Why is the enzyme cellulose used for isolating genetic material from plant cells but not for animal cells? 1 mark
- Q. 6. Name a molecular diagnostic technique to detect the presence of a pathogen in its early stage of infection. *I mark*
- Q. 7. If 8 individuals in a laboratory population of 80 fruit flies died in a week, then what would be the death rate for population for the said period? 1 mark
- Q. 8. Mention one positive and one negative application of amniocentesis. 1 marks

SECTION - B

- Q. 9. A moss plant produces a large number of antherozoids but relatively only a few egg cells. Why? 2 marks
- Q. 10. Mention the reasons for difference in ploidy of zygote and primary endosperm nucleus in an angiosperm. 2 marks
- Q. 11. Why do sports persons often fall a victim to cocaine addiction? 2 marks
- Q. 12. Name the type of food chains responsible for the flow of larger fraction of energy in an aquatic and a terrestrial ecosystem respectively. Mention one difference between the two food chains. 2 marks

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- Q. 13. Name the host and the site where the following occur in the life 'cycle of a malarial parasite: 2 marks
 - (a) Formation of gametocytes.
 - (b) Fusion of gametocytes.
- Q. 14. Honey collection improves when beehives are kept in crop-fields during flowering season. Explain. 2 marks

OR

How does addition of a small amount of curd to fresh milk help formation of curd? Mention a nutritional quality that gets added to the curd.

- Q. 15. Why is the introduction of genetically engineered lymphocytes into a ADA deficiency patient not a permanent cure? Suggest a possible permanent cure. 2 marks
- Q. 16. How does a test-cross help in identifying the genotype of the organism? Explain. 2 marks
- Q. 17. How does the floral pattern on Mediterranean orchid Opry's guarantee cross pollination? 2 marks
- Q. 18. In the biosphere, immense biological diversity exists at all levels of biological organization. Explain any two levels of biodiversity. 2 marks

SECTION - C

Q. 19. Draw a longitudinal section a post-pollinated pistil showing entry of pollen tube into a mature embryo - sac. Label filiform apparatus, chalazal end, Hilum, antipodals, male gametes and secondary nucleus. 3 marks

OR

Draw a labelled sectional view seminiferous tubule of a human male.

- Q.20. During the studies on genes in Drosophila that were sex-linked T.H. Morgan found F2-population phenotypic ratios deviated from expected g: B: B: 1. Explain the conclusion he arrived at. 3 marks
- Q. 21. Describe the initiation process of transcription in Bacteria. 3 marks
- Q.22. Explain convergent and divergent evolution with the help of one example of each. 3 marks

- Q.24. Explain the efforts which must be put in to improve health, hygiene and milk yield of cattle in a dairy farm. 3 marks
- Q. 25. Identify a, b, c, d, e and f in the table given below: 3 marks

Organism		Bioactive molecule	Use
1.	Meniscus perpureus (yeast)	a	b and the same of
2.	c	d of the second	Antibiotic
3.	e	Cyclosporine A	f. f.

- Q.26. Eco RI is used to cut a segment of foreign DNA and that of a vector DNA to form a recombinant DNA. Show with the help of schematic diagrams. 3 marks
 - (i) The set of palindronic nucleotide sequence of baes pairs the Eco RI will recognise in both the DNA segment. Mark the site at which Eco RI will act and cut both the segments.
 - (ii) Sticky ends of formed on both the segments where the two DNA segments will join later to form a recombinant DNA.
- Q.27. How does RNA interference help in developing resistance in tobacco plant against nematode in infection? 3 marks

SECTION - C

- Q.28. (a) How does a chromosomal disorder differ from a Mendelian disorder? 5 marks
 - (b) Name any two-chromosomal aberration associated disorders.
 - (c) List the characteristics of the disorders mentioned above that help in their diagnosis.

OR

Fitness is the end result of the ability to adapt and get selected by Nature. Explain with suitable example.

Q. 29. When and where are primary oocytes formed in a human female? Trace the development of these oocytes till ovulation (in menstrual cycle). 5 marks

How do gonadotropins influence this developmental process?

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OR

- (a) Explain the events taking place at the time of fertilization of an ovum in a human female.
- (b) Trace the development of the zygote up to the implantation in the uterus.
- (c) Name and draw a labelled sectional view of the embryonic stage that gets implanted.
- Q. 30. Draw and explain a logistic curve for a population of density (N) at time (t) whose intrinsic rate of natural increase is (r) and carrying capacity is (k). 5 marks

OR

Describe the process of decomposition of detritus under the following heads: Fragmentational leaching; catabolism; humification and mineralization.

