

CBSE 12th Biology 2016 Unsolved Paper Delhi Board

TIME - 3HR. | QUESTIONS - 26

THE MARKS ARE MENTIONED ON EACH QUESTION

SECTION-A

- Q. 1. According to de-Vries what is saltation? *1 marks***
- Q. 2. Excessive nutrients in a fresh water body cause fish mortality. Give two reasons. *1 marks***
- Q. 3. Suggest the breeding method most suitable for animals that are below average in milk productivity. *1 marks***
- Q.4. State a difference between a gene and an allele. *1 marks***
- Q. 5. Suggest a technique to a researcher who needs to separate fragments of DNA. *1 marks***

SECTION-B

- Q. 6. Explain the significance of meiocytes in a diploid organism. *2 marks***
- Q. 7. Mention the kind of biodiversity of more than a thousand varieties of mangoes in India represent. How is possible? *2 marks***
- Q. 8. List the events that reduce the Biological Oxygen Demand (BOD) of a primary effluent during sewage treatment. *2 marks***
- Q. 9. Discuss the role the enzyme DNA ligase plays during DNA replication. *2 marks***
- Q. 10. Name the causative organism of the disease amoebiasis. List three symptoms of the disease. *2 marks***

OR

Identify 'A' 'B' 'C' and 'D' in the given table.

Crop	Variety	Resistance to disease
A	Himgiri	Leaf rust
Cauliflower	Pusa Shubhra	B
Brassica	Pusa Swarnim	C
Cowpea	D	Bacterial blight

SECTION-C

- Q. 11. Why is breast-feeding recommended during the initial period of an infant's growth? Give reasons. 3 marks**
- Q. 12. Give an example of an autosomal recessive trait in humans. Explain its pattern of inheritance with the help of a cross. 3 marks**
- Q. 13. Describe the experiment that helped Louis Pasteur to dismiss the theory of spontaneous generation of life. 3 marks**
- Q. 14. Plant breeding technique has helped sugar industry in North India. Explain How. 3 marks**
- Q. 15. Suggest and describe a technique to obtain multiple copies of a gene of interest in vitro. 3 marks**
- Q. 16. What is a GMO? List any five possible advantages of a GMO to a farmer. 3 marks**
- Q. 17. Predation is usually referred to as detrimental association. State any three positive roles that a predator plays in an ecosystem. 3 marks**

SECTION-

- Q. 18. How has RNAi technique helped to prevent the infestation of roots in tobacco plants by a nematode *Meloidogyne incognita*? 3 marks**
- Q. 19. "In a food-chain, a trophic level represents a functional level, not a species." Explain. 3 marks**

OR

- (a) Name any two places where it is essential to install electrostatic precipitators. Why it is required to do so?**
- (b) Mention one limitation of the electrostatic precipitator.**
- Q. 20. Prior to a sports event blood and urine samples of sportspersons are collected for drug tests. 3 marks**
- (a) why is there a need to conduct such tests?**
- (b) Name the drugs the authorities usually look for**
- (c) Write the generic names of two plants from which these drugs are obtained.**
- Q. 21. Describe the experiment that helped demonstrate the semi-conservative mode of DNA replication. 3 marks**

Q.22. Given below is a list of six micro-organisms. State their usefulness to humans.

3 marks

- (a) Nucleopolyhedrovirus
- (b) *Saccharomyces cerevisiae*
- (c) *Monascus purpureus*
- (d) *Trichoderma polysporum*
- (e) *Penicillium notatum*
- (f) *Propionibacterium sharmanii*

SECTION-D

Q. 23. Reproductive and Child Healthcare (RCH) programmes are currently in operation. One of the major tasks of these programmes is to create awareness amongst people about the wide range of reproduction related aspects. As this is important and essential for building a reproductively healthy society. *4 marks*

- (a) "Providing sex education in schools is one of the ways to meet this goal." Give four points in support of your opinion regarding this statement.
- (b) List any two 'indicators' that indicate a reproductively healthy society.

SECTION-E

Q. 24. (a) Explain the post-pollination events leading to seed production in angiosperms. *5 marks*

(b) List the different types of pollination depending upon the source of pollen grain.

OR

- (a) Briefly explain the events of fertilization and implantation in an adult human female.

Q. 25. (a) How are the following formed and involved in DNA packaging in a nucleus of a cell? *5 marks*

- (i) Histone octamer
- (ii) Nucleosome
- (iii) Chromatin

OR

Explain the role of lactose as an inducer in a lac operon.

Q.26. (a) Why should we conserve biodiversity? How can we do it? *5 marks*

(b) Explain the importance of biodiversity hot-spots and sacred groves.

OR

- (a) Represent diagrammatically three kinds of age-pyramids for human populations.
- (b) How does an age pyramid for human population at given point of time help the policy-makers in planning for future.