Model Question Paper for Class XII

Biology

MCQs   **Mark 01**

Tick the correct statement

1. What would happen if corpus luteum is not degenerated

    (a)   Progesterone will not be secreted

    (b)   Endometrium will disintegrate

    (c)   Proliferation of endometrium will take place

    (d)   Ovulation will take place

2. Klinefelten syndrome has the genetic make up

    (a)   44 autosomes + xxy

    (b)   44 autosomes + xo

    (c)   45 autosomes + xx

    (d)   45 autosomes + xy

3. "Cleistogamous flowers are invariably autogamous because"

    (a)   These flowers do not open at all.

    (b)   There is no chance of cross – pollen landing on the stigma.

    (c)   These flowers have exposed anthers and stigma.

    (d)   These flowers are wind pollinated.

4. Which of the following statements is correct

    (a)   Surgical methods of contraception does not prevent gamete formation

    (b)   In E.T techniques, embryos are always transferred into the uterus

    (c)   Oral pills are very popular contraceptives among the rural women

    (d)   All STDs are not completely curable.

5. Non coding sequences present within a gene is called:

    (a)   Exon

    (b)   Operon

    (c)   Promoter

    (d)   Intron

6. Which of the following DNA sequences would a Restriction enzyme recognize and cut?

(a) ATGCAC
    TACGTG

(b) GATATC
    CTATAG

(c) TAGATA
    ATCTAT

(d) AATATA
    TTATAT

7. The conditions of the earth atmosphere conducive for the origin of life were:

(a) Presence of high temperature, CH_4, NH_3, and O_3

(b) High temperature, CH_4, NH_3, volcanic eruption

(c) High temperature, volcanic eruption, O_2, NH_3

(d) Volcanic eruption, CH_3, NH_3 and O_2

8. To analyse the genotype of an organism, it is made to

(a) Self cross

(b) Cross with recessive parent

(c) Cross with dominant parent

(d) Cross with another species

9. An inverted Pyramid of biomass is represented by

(a) Aquatic ecosystem

(b) ecosystem of a big tree

(c) grassland ecosystem

(d) tropical fresh ecosystem.

10. Gene therapy can be used to correct one of the following

(a) Defective ADA

(b) Lack of B-Lymphocytes

(c) Defective Immunoglobuline

(d) Lach of T-Lejmphocytes

MCQ   **Mark 02**

Select the right options

11. Mycorrliza is an example of

(a) Commensalisms

(b) Mutualism

(c) Algal associated with fungi.

(d) Fungi associated with Higher Plants

12. Which of the followings are homologous or analogous (Indicate H for homologous and A for Analogous)

    (a) Wing of bat and butterfly _____

    (b) Wing of bat and flipper of whale _____

    (c) Wing of butterfly and flipper of whale _____

    (d) Flipper of whale and wing of bird _____

13. Read the statement if incorrect provide with correct answer

    'Sickle cell anemia'

    (a) is a six linked disorder

    b) is due to a single base mutation of B globulin gene from GAG

    c) is inherited whose one of the parent is carrier and other normal

    (d) changes shape of RBC from Round to concave.

14. Identify True/False statements. Correct each false statement to make it true

    (a) Spermatozoa get nutrition from Sertoli cells.   (True/False)

    (b) Leydig cells are found in ovary.   (True/False)

    (c) Menstrual cycle ceases during pregnancy.   (True/False)

15. The yellowish fluid colostrum secreted by mother during initial days of lactation has abundant antibodies to protect the infant. Tick the correct answer in Column A. and match the right choices in column B with the correct answer of column A.

    Column A   **Column B**

    (i)   IgE   (a)   Innate immunity

    (ii) IgD   (a)   Acquired immunity

    (iii) IgA   (a)   Active immunity

    (iv) IgM   (a)   Passive immunity

SA   **Marks 02**

16. Apomixis mimics sexual reproduction, do you agree? justify your answer. Also state how does apomixis differ from polyembryony.

17. How has biotechnology helped in improving life of Diabetic people?

18. Mention the role of histone proteins in packaging of DNA to form the structure of chromatin fibre.

19. Whith the help of a suitable example mention the role of microbes in

    (a) Single cell protein

    (b) Organic farming

20. Differentiate between

    (a) Benign and Malignant tumours

    (b) Viral oncogenes and protooncogenes

21. Differentiate between
    (a) Grazing food chain and detritus food chain.
    (b) Primary and secondary productivity.
22. What are selectable markers? Give two examples.

SA **Marks 03**

23. What are STDs? State 3 symptoms of STDs? Give two simple principles to prevent infections.
24. Recently invasion of forest into Arctic region has been reported by environmentalist, which was earlier occupied by Tundra vegetations. Identify this problem and explain its causes.

25. Why males are heterogametic? Can there be female heterogamety. Give example if any.
26. A sportsperson was tested positive for cannabinoid what are these? From where are these extracted? What are its effects on human body?
27. What is Bt toxin? Name an organism that produces it? How has man exploited it?
28. Name the enzymes associated with recombinant DNA technology and explain their roles in correct sequence.
29. What is biofortification? List its objectives and give examples of two improved crops released by IARI.

LA **Marks 05**

30. Trace the development of male gametophyte of angiosperm upto two cell stage with suitable example.

Or

Draw self explanatory schematic representation of oogenesis.

31. What is co-dominance? Explain with reference to ABO blood type in human beings.

Or

What is a repressor molecule? Explain how can a gene be made to induce the metabolic process?

32. Observe the above diagram (Reference may be taken from Fig. 13.1 of Biology textbook for class XII, NCERT) and answer the following-
    (i) Which biome shows maximum range of annual precipitation?
    (ii) Which biome shows maximum range of annual temperature?
    (iii) Give range of mean annual temperature by corniferous forest.
    (iv) Give range of mean annual precipitation by temperate forest.
    (v) What is Biome 'A' (a) Desert or (b) Arctic Alpine Tundra.

Or

Every year in winter Siberian cranes migrate from Russia to India for breeding. In year 2006, a survey was done which has the values in the given equation

$N_{(t+1)} = N_t + \{(B+I)-(D+E)\}$ as followes

$N_{(t+1)} = 1200 + \{(600+700)-(200+800)\}$

On the basis of above answer the followings

(a)   Natality rate

(b)   Mortality rate

(c)   Number of cranes immigrated

(d)   Number of cranes emigrated.

(e)   Population of cranes in India in year 2006.