



V.M.G.R.R SRI SARADA SAKTHI MAT. HR. SEC. SCHOOL

STD: XII

BIOLOGY

SET-4

(B L-1,7,Z L-4,10)

MARKS-50

I. CHOOSE THE CORRECT ANSWER :

35X1=35

1. **Statement A:** Coffee contains caffeine**Statement B:** Drinking coffee enhances cancer

- a) A is correct, B is wrong b) A and B – Both are correct
c) A is wrong, B is correct d) A and B – Both are wrong

2. The quickest method of plant breeding is

- a) Introduction b) Selection c) Hybridization d) Mutation breeding

3. The unit for measuring ozone thickness

- a) Joule b) Kilos c) Dobson d) Watt

4. Which of the following ecosystem has the highest primary productivity?

- a) Pond ecosystem b) Lake ecosystem c) Grassland ecosystem d) Forest ecosystem

5. Which of the following is not a sedimentary cycle

- a) Nitrogen cycle b) Phosphorous cycle c) Sulphur cycle d) Calcium cycle

6. A specific place in an ecosystem, where an organism lives and performs its functions is

- a) habitat b) niche c) landscape d) biome

7. Which of the given plant produces cardiac glycosides?

- a) *Calotropis* b) *Acacia* c) *Nepenthes* d) *Utricularia*

8. The prevention of large scale loss of biological integrity

- a) Biopatent b) Bioethics c) Biosafety d) Biofuel

9. Cryopreservation means it is a process to preserve plant cells, tissues or organs

- a) at very low temperature by using ether.
b) at very high temperature by using liquid nitrogen
c) at very low temperature of -196 by using liquid nitrogen
d) at very low temperature by using liquid nitrogen

10. EcoRI cleaves DNA at

- a. AGGGTT b. GTATATC c. GAATTC d. TATAGC

11. Genetic engineering is

- a. making artificial genes. b. hybridization of DNA of one organism to that of the others.
c. production of alcohol by using micro organisms.
d. making artificial limbs, diagnostic instruments such as ECG, EEG etc.,

12. Genes **G S L H** are located on same chromosome. The recombination percentage is between L and G is 15%, S and L is 50%, H and S are 20%. The correct order of genes is

- a) GHSL b) SHGL c) SGHL d) HSLG

13. The point mutation sequence for transition, transition, transversion and transversion in DNA are

- a) A to T, T to A, C to G and G to C b) A to G, C to T, C to G and T to A
c) C to G, A to G, T to A and G to A d) G to C, A to T, T to A and C to G

14. In Mendel's experiments with garden pea, round seed shape (RR) was dominant over wrinkled seeds (rr), yellow cotyledon (YY) was dominant over green cotyledon (yy). What are the expected phenotypes in the F₂ generation of the cross RRYy x rryy?
- Only round seeds with green cotyledons
 - Only wrinkled seeds with yellow cotyledons
 - Only wrinkled seeds with green cotyledons
 - Round seeds with yellow cotyledons and wrinkled seeds with yellow cotyledons
15. In *Haplopappus gracilis*, number of chromosomes in cells of nucellus is 4. What will be the chromosome number in Primary endosperm cell?
- 8
 - 12
 - 6
 - 2
16. In which type of parthenogenesis are only males produced?
- Arrhenotoky
 - Thelytoky
 - Amphitoky
 - Both a and b
17. Colostrum is rich in
- Ig E
 - Ig A
 - Ig D
 - Ig M
18. A contraceptive pill prevents ovulation by
- blocking fallopian tube
 - inhibiting release of FSH and LH
 - stimulating release of FSH and LH
 - causing immediate degeneration of released ovum.
19. Which of the following is true about Rh factor in the offspring of a parental combination DdX^cDd (both Rh positive)?
- All will be Rh-positive
 - Half will be Rh positive
 - About $\frac{3}{4}$ will be Rh negative
 - About one fourth will be Rh negative
20. What can be the blood group of offspring when both parents have AB blood group?
- AB only
 - A, B and AB
 - A, B, AB and O
 - A and B only
21. The first codon to be deciphered was _____ which codes for _____.
- AAA, proline
 - GGG, alanine
 - UUU, Phenylalanine
 - TTT, arginine
22. Meselson and Stahl's experiment proved
- Transduction
 - Transformation
 - DNA is the genetic material
 - Semi-conservative nature of DNA replication
23. Which of the following was the contribution of Hugo de Vries?
- Theory of mutation
 - Theory of natural Selection
 - Theory of inheritance of acquired characters
 - Germplasm theory
24. Allergy involves
- IgE
 - IgG
 - IgA
 - IgM
25. Spread of cancerous cells to distant sites is termed as
- Metastasis
 - Oncogenes
 - Proto-oncogenes
 - Malignant neoplasm
26. B cells that produce and release large amounts of antibody are called
- Memory cells
 - Basophils
 - Plasma cells
 - killer cells
27. Which of the following microorganism is used for production of citric acid in industries?
- Lactobacillus bulgaris*
 - Penicillium citrinum*
 - Aspergillus niger*
 - Rhizopus nigricans*
28. The first clinical gene therapy was done for the treatment of
- AIDS
 - Cancer
 - Cystic fibrosis
 - SCID
29. The relationship between sucker fish and shark is.....
- Competition
 - Commensalism
 - Predation
 - Parasitism.
30. Which of the following is considered a hotspots of biodiversity in India

- a) Western ghats b) Indo-gangetic plain c) Eastern Himalayas d) A and C
31. The organization which published the red list of species is
- a) Both Assertion and Reason are true and Reason explains Assertion correctly.
b) Both Assertion and Reason are true but Reason is not the correct explanation of Assertion.
c) Assertion is true , but Reason is false.
d) Both Assertion and Reason are false.
32. The 'thickness' of Stratospheric Ozone layer is measured in/on:
- a) Sieverts units b) Dobson units c) Melson units d) Beaufort Scale
33. Which among the following is the most abundant Green-House-Gas (GHG) in the earth's atmosphere?
- a) Carbon dioxide b) Water Vapour c) Sulphur Dioxide d) Tropospheric Ozone
34. Assertion : Sporopollenin preserves pollen in fossil deposits
Reason : Sporopollenin is resistant to physical and biological decomposition
- a) assertion is true; reason is false b) assertion is false; reason is true
c) Both Assertion and reason are not true d) Both Assertion and reason are true.
35. Pond ecosystem is
- a) not self sufficient and self regulating b) partially self sufficient and self regulating
c) self sufficient and not self regulating d) self sufficient and self regulating

II. ANSWER THE FOLLOWING QUESTIONS :

3X5=15

36. Enumerate the characteristic features of Entomophilous flowers

OR

Give a detailed account on parthenocarpy. Add a note on its significance

37. Generally human activities are against to the ecosystem, where as you a student how will you help to protect ecosystem?

OR

Explain the genetic basis of ABO blood grouping man.

38. How is sex determined in human beings

OR

Classify the aquatic biomes of Earth.
