



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

STD: XII

BIOLOGY

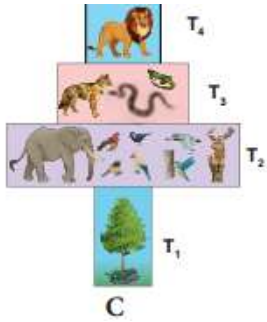
MARKS-50

I. CHOOSE THE CORRECT ANSWER :

30X1=30

- Match the following _____
 (I) External fertilization – (i) pollen grain (II) Androecium – (ii) anther wall
 (III) Male gametophyte – (iii) algae (IV) Primary parietal layer – (iv) stamens
 (a) I-(iv); II-(i); III-(ii); IV-(iii) (b) I-(iii); II-(iv); III-(ii); IV-(i)
 (c) I-(iii); II-(iv); III-(ii); IV-(i) (d) I-(iii); II-(i); III-(iv); IV-(ii)
- In order to find out the different types of gametes produced by a pea plant having the genotype AaBb, it should be crossed to a plant with the genotype _____
 (a) aaBB (b) AaBB (c) AABB (d) aabb
- Which one of the following is an example of polygenic inheritance?
 (a) Flower colour in *Mirabilis Jalapa* (b) Production of male honey bee
 (c) Pod shape in garden pea (d) Skin Colour in humans
- Plasmids are _____
 (a) circular protein molecules (b) required by bacteria
 (c) tiny bacteria (d) confer resistance to antibiotics
- Restriction enzymes are _____
 (a) Not always required in genetic engineering (b) Essential tools in genetic engineering
 (c) Nucleases that cleave DNA at specific sites (d) both b and c
- Which of the following statement is correct?
 (a) Agar is not extracted from marine algae such as seaweeds
 (b) Callus undergoes differentiation and produces somatic embryoids
 (c) Surface sterilization of explants is done by using mercuric bromide
 (d) PH of the culture medium is 5.0 to 6.0
- Read the given statements and select the correct option.
Statement A: Cattle do not graze on weeds of *Calotropis*.
Statement B: *Calotropis* have thorns and spines, as defense against herbivores.
 (a) Both statements A and B are incorrect.
 (b) Statement A is correct but statement B is incorrect.
 (c) Both statements A and B are correct but statement B is not the correct explanation of statement A.
 (d) Both statements A and B are correct and statement B is the correct explanation of statement A.
- Ophrys an orchid resembling the female of an insect so as to be able to get pollinated is due to phenomenon of
 (a) Myrmecophily (b) Ecological equivalents
 (c) Mimicry (d) None of these

9. The following diagram represents _____



- (a) pyramid of number in a grassland ecosystem
 (b) pyramid of number in a pond ecosystem
 (c) pyramid of number in a forest ecosystem
 (d) pyramid of biomass in a pond ecosystem

10. Which of the following is / are not the mechanism of decomposition?

- (a) Eluviation (b) Catabolism (c) Anabolism (d) Fragmentation

Fragmentation

11. One green house gas contributes 14% of total global warming and another contributes 6%. These are respectively identified as _____

- (a) N₂O and CO₂ (b) CFCs and N₂O (c) CH₄ and CO₂ (d) CH₄ and CFCS

12. The unit for measuring ozone thickness _____

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

13. Pick out the odd pair.

- (a) Mass selection – Morphological characters (b) Purline selection – Repeated self pollination
 (c) Clonal selection – Sexually propagated (d) Natural selection – Involves nature

14. **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

15. Which one of the following matches is correct?

- (a) Palmyra – Native of Brazil (b) Saccharun – Abundant in Kanyakumari
 (c) Steveocide – Natural sweetener (d) Palmyra sap – Fermented to give ethanol

16. In which mode of reproduction variations are seen?

- (a) Asexual (b) Parthenogenesis (c) Sexual (d) Both a and b

17. The male homologue of the female clitoris is _____

- (a) Scrotum (b) Penis (c) Urethra (d) Testis

18. A contraceptive pill prevents ovulation by

- (a) blocking fallopian tube (b) inhibiting release of FSH and LH
 (c) stimulating release of FSH and LH (d) causing immediate degeneration of released ovum.

released ovum.

19. Which of the following is not correct?

- (a) Three or more alleles of a trait in the population are called multiple alleles.
 (b) A normal gene undergoes mutations to form many alleles
 (c) Multiple alleles map at different loci of a chromosome
 (d) A diploid organism has only two alleles out of many in the population

20. The total number of nitrogenous bases in human genome is estimated to be about

- (a) 3.5 million (b) 35000 (c) 35 million (d) 3.1 billion

21. The wings of birds and butterflies is an example of _____

- (a) Adaptive radiation (b) convergent evolution (c) divergent evolution (d) variation

22. Amphetamines are stimulants of the CNS, whereas barbiturates are _____

- (a) CNS stimulant (b) both a and b (c) hallucinogenic (d) CNS depressants

23. Choose the correctly match pair.

- (a) Amphetamines – Stimulant (b) LSD-Narcotic
 (c) Heroin – Psychotropic (d) Benzodiazepine – Pain killer

24. Cry toxins obtained from *Bacillus thuringiensis* are effective against for _____
 (a) Mosquitoes (b) Flies (c) Nematodes (d) Bollworms
25. Predation and parasitism are which type of interactions?
 (a) (+,+) (b) (+, 0) (c) (-, -) (d) (+, -)
26. Competition between species leads to _____
 (a) Extinction (b) Mutation (c) Amensalism (d) Symbiosis
27. Which of the following is considered a hotspot of biodiversity in India?
 (a) Western ghats (b) Indo-gangetic plain (c) Eastern Himalayas (d) A and C
28. The organization which published the red list of species is _____
 (a) WWF (b) IUCN (c) ZSI (d) UNEP
29. The 'thickness' of Stratospheric Ozone layer is measured in/on _____
 (a) Sieverts units (b) Dobson units (c) Melson units (d) Beaufort Scale
30. The phenomenon of "Industrial Melanism" demonstrates _____
 (a) Natural selection (b) induced mutation
 (c) reproductive isolation (d) geographical isolation

II. ANSWER ANY TEN OF THE FOLLOWING : 4X5 =20

31. Explain the mechanism of crossing over.

OR

How sex is determined in monoecious plants. write their genes involved in it.

32. List out the new breeding techniques involved in developing new traits in plant breeding.

OR

What are the different types of hybridization?

33i. Describe the structure of the human ovum with a neat labelled diagram.

OR

i. Explain the role of oxytocin and relaxin in parturition and lactation.

ii. Placenta is an endocrine tissue. Justify.

34. Give any two bioactive molecules produced by microbes and state their uses.

OR

What is referred to as industrial alcohol? Briefly describe its preparation .

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