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STD: XII

BIOLOGY SET-5

(B L-6,Z L-5,11)

MARKS-50

I.CHOOSE THE CORRECT ANSWER :

35X1=35

1. Groundnut is native of _____
 a) Philippines b) India c) North America d) Brazil
- 2.Desired improved variety of economically useful crops are raised by
 a) Natural Selection b) hybridization c) mutation d) biofertilisers
3. The plants which are grown in silivpasture system are
 a) Sesbania and Acacia b) Solenum and Crotalaria
 c) Clitoria and Begonia d) Teak and sandal
4. Ecosystem consists of
 a) decomposers b) producers c) consumers d) all of the above
- 5.Which of the following are not regulating services of ecosystem services
 i) Genetic resources ii) Recreation and aesthetic values iii) Invasion resistance iv) Climatic regulation
 a) i and iii b) ii and iv c) i and ii d) i and iv
- 6.Read the given statements and select the correct option.
 i) Loamy soil is best suited for plant growth as it contains a mixture of silt, sand and clay.
 ii) The process of humification is slow in case of organic remains containing a large amount of lignin and cellulose.
 iii) Capillary water is the only water available to plant roots as it is present inside the micropores.
 iv) Leaves of shade plant have more total chlorophyll per reaction centre, low ratio of chl *a* and chl *b* are usually thinner leaves.
 a) i, ii and iii only b) ii, iii and iv only c) i, ii and iv only d) ii and iii only
7. In soil water available for plants is
 a) gravitational water b) chemically bound water c) capillary water d) hygroscopic water
- 8.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) P^H of the culture medium is 5.0 to 6.0
- 9.Select the incorrect statement from given statement
 a) A tonic used for cardiac arrest is obtained from Digitalis purpuria
 b) Medicine used to treat Rheumatic pain is extracted from Capsicum annum
 c) An anti malarial drug is isolated from Cinchona officinalis.
 d) Anti-carcinogenic property is not seen in Catharanthus roseus.
- 10.Virus free plants are developed from
 a) Organ culture b) Meristem culture c) Protoplast culture d) Cell suspension culture
11. Consider the following statements:
 I. Recombinant DNA technology is popularly known as genetic engineering is a stream of biotechnology which deals with the manipulation of genetic materials by man invitro

II. pBR322 is the first artificial cloning vector developed in 1977 by Boliver and Rodriguez from E.coli plasmid

III. Restriction enzymes belongs to a class of enzymes called nucleases.

Choose the correct option regarding above statements

- a. I & II b. I & III c. II & III d. I,II & III

12. Which one of the following palindromic base sequence in DNA can be easily cut at about the middle by some particular restriction enzymes?

- a. 5 CGTTCG 3 3 ATCGTA 5 b. 5 GATATG 3 3 CTAATA 5
c. 5 GAATTC 3 3 CTTAAG 5 d. 5 CACGTA 3 3 CTCAGT 5

13.If haploid number in a cell is 18. The double monosomic and trisomic number will be

- a) 35 and 37 b) 34 and 35 c) 37 and 35 d) 17 and 19

14. Test cross involves

- a) Crossing between two genotypes with recessive trait
b) Crossing between two F₁ hybrids
c) Crossing the F₁ hybrid with a double recessive genotype
d) Crossing between two genotypes with dominant trait

15. Transmitting tissue is found in

- a) Micropylar region of ovule b) Pollen tube wall
c) Stylar region of gynoecium d) Integument

16. Animals giving birth to young ones:

- a) Oviparous b) Ovoviviparous c) Viviparous d) Both a and b

17.The Androgen Binding Protein (ABP) is produced by

- a. Leydig cells b. Hypothalamus c. Sertoli cells d.Pituitary gland

18.Identify the correct statements from the following

- (a) Chlamydia is a viral disease.
(b) Gonorrhoea is caused by a spirochaete bacterium, *Treponema palladium*.
(c) The incubation period for syphilis is 2 to 14 days in males and 7 to 21 days in females.
(d) Both syphilis and gonorrhoea are easily cured with antibiotics.

19. If the child's blood group is 'O' and father's blood group is 'A' and mother's blood group is 'B' the genotype of the parents will be

- a) I_A I_A and I_B I_B b) I_A I_O and I_B I_O c) I_A I_O and I_O I_O d) I_O I_O and I_B I_B

20.XO type of sex determination and XY type of sex determination are examples of

- a) Male heterogamety b) Female heterogamety
c) Male homogamety d) Both (b) and (c)

21.In an accident there is great loss of blood and there is no time to analyse the blood group which blood can be safely transferred?

- a) 'O' and Rh negative b) 'O' and Rh positive c) 'B' and Rh negative d) 'AB' and Rh positive

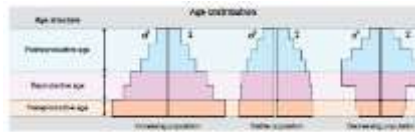
22. Hershey and Chase experiment with bacteriophage showed that

- a) Protein gets into the bacterial cells b) DNA is the genetic material
c) DNA contains radioactive sulphur d) Viruses undergo transformation

23. DNA and RNA are similar with respect to

- a) Thymine as a nitrogen base b) A single-stranded helix shape
c) Nucleotide containing sugars, nitrogen bases and phosphates

- d) The same sequence of nucleotides for the amino acid phenyl alanine
24. The wings of birds and butterflies is an example of
a) Adaptive radiation b) convergent evolution c) divergent evolution d) variation
25. AIDS virus has
a) Single stranded RNA b) Double stranded RNA c) Single stranded DNA d) Double stranded DNA
26. Which of the following pair is correctly matched for the product produced by them?
a) *Acetobacter aceti* - Antibiotics b) *Methanobacterium* - Lactic acid
c) *Penicillium notatum* - Acetic acid d) *Saccharomyces cerevisiae* - Ethanol
27. Dolly, the sheep was obtained by a technique known as
a) Cloning by gene transfer b) Cloning without the help of gametes
c) Cloning by tissue culture of somatic cells d) Cloning by nuclear transfer.
28. What type of human population is represented by the following age pyramid?



- a) Vanishing population
b) Stable population
c) Declining population
d) Expanding population
29. Who introduced the term biodiversity?
a) Edward Wilson b) Walter Rosen c) Norman Myers d) Alice Norman
30. Which of the following forests is known as the lungs of the planet earth?
a) Tundra forest b) Rain forest of north east India c) Taiga forest d) Amazon rain forest
31. Which one of the following are at high risk extinction due to habitat destruction
a) Mammals b) Birds c) Amphibians d) Echinoderms
32. As per 2017 statistics, the highest per capita emitter of Carbon dioxide in the world is
a) USA b) China c) Qatar d) Saudi Arabia
33. The use of microorganism metabolism to remove pollutants such as oil spills in the water bodies is known as
a) Biomagnification b) Bioremediation c) Biomethanation d) Bioreduction
34. A specific place in an ecosystem, where an organism lives and performs its functions is
a) habitat b) niche c) landscape d) biome
35. Read the given statements and select the correct option.
i) Hydrophytes possess aerenchyma to support themselves in water.
ii) Seeds of *Viscum* are positively photoblastic as they germinate only in presence of light.
iii) Hygroscopic water is the only soil water available to roots of plant growing in soil as it is present inside the micropores.
iv) High temperature reduces use of water and solute absorption by roots.

II. ANSWER THE FOLLOWING QUESTIONS :

3X5=15

36. Explain different types of hydrophytes with examples.

OR

Enumerate the anatomical adaptations of xerophytes.

37. List out any five morphological adaptations of halophytes.

OR

Write about the methodologies of HGP.

38. It is established that RNA is the first genetic material. Justify giving reasons.

OR

What are the factors that drive habitat loss?

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