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STD: XII

BIOLOGY SET-3 (B L-2,8 Z L -3,9)

MARKS-50

I.CHOOSE THE CORRECT ANSWER :

30X1=30

1. Assertion: Vegetables are important part of healthy eating.
Reason: Vegetables are succulent structures of plants with pleasant aroma and flavours.
- Assertion is correct, Reason is wrong
 - Assertion is wrong, Reason is correct
 - Both are correct and reason is the correct explanation for assertion.
 - Both are correct and reason is not the correct explanation for assertion.
2. Match Column I with Column II
- | Column I | Column II |
|------------------------|---------------------------|
| i) William S. Gaud | I) Heterosis |
| ii) Shull | II) Mutation breeding |
| iii) Cotton Mather | III) Green revolution |
| iv) Muller and Stadler | IV) Natural hybridization |
- i – I, ii – II, iii – III, iv – IV
 - i – III, ii – I, iii – IV, iv – II
 - i – IV, ii – II, iii – I, iv – IV
 - i – II, ii – IV, iii – III, iv – I
3. Deforestation does not lead to
- Quick nutrient cycling
 - soil erosion
 - alternation of local weather conditions
 - Destruction of natural habitat weather conditions
4. Solar energy used by green plants for photosynthesis is only
- 2 – 8%
 - 2 – 10%
 - 3 – 10%
 - 2 – 9%
5. Which of the following is / are not the mechanism of decomposition
- Eluviation
 - Catabolism
 - Anabolism
 - Fragmentation
6. Arrange the correct sequence of ecological hierarchy starting from lower to higher level.
- Individual organism → Population Landscape → Ecosystem
 - Landscape → Ecosystem → Biome → Biosphere
 - community → Ecosystem → Landscape → Biome
 - Population → organism → Biome → Landscape
7. Ecology is the study of an individual species is called
- Community ecology
 - Autecology
 - Species ecology
 - Synecology
- i only
 - ii only
 - i and iv only
 - ii and iii only
8. Which of the molecule have the ability to convert a precursor in the cell of peaplant?
- Le; le
 - GAI
 - Le
 - le
9. The time duration for sterilization process by using autoclave is _____ minutes and the temperature is _____
- 10 to 30 minutes and 125° C
 - 15 to 30 minutes and 121° C
 - 15 to 20 minutes and 125° C
 - 10 to 20 minutes and 121° C
10. Restriction enzymes are
- Not always required in genetic engineering
 - Essential tools in genetic engineering
 - Nucleases that cleave DNA at specific sites
 - both b and c
11. Plasmids are
- circular protein molecules
 - required by bacteria
 - tiny bacteria
 - confer resistance to antibiotics

12. Match list I with list II

List I

List II

- | | |
|---|---------------------|
| A. A pair of chromosomes extra with diploid | i) monosomy |
| B. One chromosome extra to the diploid | ii) tetrasomy |
| C. One chromosome loses from diploid | iii) trisomy |
| D. Two individual chromosomes lose from diploid | iv) double monosomy |
- a) A-i, B-iii, C-ii, D-iv b) A-ii, B-iii, C-iv, D-i c) A-ii, B-iii, C-i, D-iv d) A-iii, B-ii, C-i, D-iv

13. 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

14. Choose the correct statement(s) about tenuinucellate ovule

- a) Sporogenous cell is hypodermal
b) Ovules have fairly large nucellus
c) sporogenous cell is epidermal
d) ovules have single layer of nucellus tissue

15. Which of the following represent megagametophyte

- a) Ovule b) Embryo sac c) Nucellus d) Endosperm

16. Animals giving birth to young ones:

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

17. Human beings are unisexual animals, the type of Syngamy in human beings is __

- a) autogamy b) exogamy c) hologamy d) paedogamy

18. Which among the following animals exhibits Ovoviviparity?

- a) Frog b) shark c) sheep d) hen

19. The glandular accessory organ which produces the largest proportion of semen is

- a. Seminal vesicle b. Bulbourethral gland c. Prostate gland d. Mucous gland

20. The male homologue of the female clitoris is

- a. Scrotum b. Penis c. Urethra d. Testis

21. 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.

22. 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.

23. Choose the correctly match pair.

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

24. A 30 year old woman has bloody diarrhoea for the past 14 hours, which one of the following organisms is likely to cause this illness?

- a) *Streptococcus pyogenes* b) *Clostridium difficile*
c) *Shigella dysenteriae* d) *Salmonella enteritidis*

25. B cells that produce and release large amounts of antibody are called
 a) Memory cells b) Basophils c) Plasma cells d) killer cells
26. Cry toxins obtained from *Bacillus thuringiensis* are effective against for _____
 a) Mosquitoes b) Flies c) Nematodes d) Bollworms
27. 'X' is a microbial product obtained from *Monascus purpureus* and it helps to reduce blood chloestrol level.
 a) X is cyclosporine b) X is Statins c) X is Humulin d) X is Kanamycin
28. The genetic defect adenosine deaminase deficiency may be cured permanently by
 a) Enzyme replacement therapy
 b) periodic infusion of genetically engineered lymphocytes having ADA cDNA
 c) administering adenosine deaminase activators
 d) introducing bone marrow cells producing ADA into embryo at an early stage of development.
- 29 The first clinical gene therapy was done for the treatment of
 a) AIDS b) Cancer c) Cystic fibrosis d) SCID
30. Recombinant Factor VIII is produced in the ----- cells of the Chinese Hamster
 a) Liver cells b) blood cells c) ovarian cells d) brain cells.

II. ANSWER THE FOLLOWING :**10X2=20**

31. What is back cross?
32. Define Genetics.
33. What are multiple alleles
34. Name the seven contrasting traits of Mendel.
35. Differentiate primary introduction from secondary introduction.
36. Define heterosis.
37. Differentiate foeticide and infanticide.
38. Describe the major STDs and their symptoms.
39. How are STDs transmitted?
40. What are transgenic animals? Give examples.
41. What are DNA vaccines?
42. Differentiate between Somatic cell gene therapy and germline gene therapy.
43. What are recombinant vaccines?.