

BIOLOGY

- Largest cell of the ovule is
 - Magaspore mother cell.
 - Antipodal cells.
 - Central cell.
 - Synergids.
- A flower is a modified shoot because
 - flowers where thalamus shows nodes & internodes.
 - flowers aggregate to form inflorescence.
 - epicalyx is present in some flowers.
 - essential organs are present in some flowers.
- Human egg is
 - centrolecithal
 - teloecithal
 - alecithal
 - megalecithal
- Why are there so many possible combinations of maternal and paternal traits in each generation of offspring?
 - because there are same number of chromosomes in each cell.
 - because of the random grabbing of chromosomes by the microtubules during metaphase 1.
 - because of the biological components that chromosomes are made of.
 - because of the high frequency of viral invasion.
- Successful immunization can be impaired by
 - Adjuvants.
 - Cytokines.
 - Cloning the vaccine.
 - Maternal antibody

6. Match the following hormones with their targets:

Column A

- GnRH
- LH
- Oxytocin
- prolactin
- FSH

Column B

- mammary glands
- smooth muscles of uterus
- sertoli cells
- theca internal cells, luteal cells
- anterior pituitary glands

- a-(v), b-(iv), c-(ii), d- (i), e-(iii)
- a-(iv), b-(v), c-(i), d- (iii), e-(ii)
- a-(v), b-(i), c-(iv), d- (ii), e-(iii)
- a-(i), b-(iii), c-(iv), d- (v), e-(ii)

7. Connective tissue is
- Ectodermal in origin without intercellular spaces.
 - Mesodermal in origin without intercellular spaces.
 - Ectodermal in origin with intercellular spaces.
 - Mesodermal in origin with intercellular spaces.
8. By studying analogous structures we look for _____
- similarities in appearance and function but different in structure.
 - similarities in appearance but differences in functions.
 - similarities in organ structure.
 - similarities in cell make up.
9. A couple expecting their second child is worried about Rh incompatibility. Their first child was Rh+. They have their blood typed. Which result would be cause for alarm?
- Both parents Rh-
 - Both parents Rh+
 - Man Rh- and woman Rh+
 - Man Rh+ and woman Rh-
10. Which of the following statements given below is correct about meristematic tissue?
- Is made of cells that are incapable of cell division.
 - Is made of cells that are capable of cell division.
 - Is composed of single type of cells.
 - Is composed of more than one type of cell.
11. ATPase enzyme needed for muscle contraction is located in _____
- Actinin
 - Troponin
 - Myosin
 - Actin
12. Following are some of characteristics of a division of the Kingdom Plantae.
- Evergreen plants
 - Haploid endosperm produced before fertilization
 - Cotyledons absent
 - Seeds naked
- Identify the group of plants
- Angiosperms
 - Pteridophytes
 - Bryophytes
 - Gymnosperms

13. Match the following groups of animals with their respective heart chambers:

- | Column A | Column B |
|------------------------------|------------------|
| a. 2-chambered | i. Flying Lizard |
| b. 3-chambered | ii. Salamander |
| c. 3 ½ - chambered | iii. Blue Whale |
| d. 4-chambered | iv. Ostrich |
| | v. Scoliodon |
| A. a-v, b-ii, c-i, d- iii,iv | |
| B. a-v, b-i,iv, c-ii, d- iii | |
| C. a-i, b-v, c-ii,iv, d- iii | |
| D. a-v,i b-ii, c-iii, d- iv | |

14. Match the revolutions with their crop production practices:

- | Column A | Column B |
|---------------------------------|------------------------------|
| a. Blue Revolution | i. Oil seeds production |
| b. Yellow Revolution | ii. Meat & Tomato Production |
| c. White Revolution | iii. Food grains |
| d. Red Revolution | iv. Fish production |
| e. Green Revolution | v. Milk / Dairy production |
| A. a-i, b-iii, c-v, d- ii, e-iv | |
| B. a-iv, b-i, c-v, d- ii, e-iii | |
| C. a-v, b-iii, c-ii, d- i, e-iv | |
| D. a-iii b-ii, c-iv, d- i, e-v | |

15. Nitrogen accounts for 79% of the air. Still Nitrogen is the most limiting factor for plant growth because

- A. N₂ cannot be directly utilized by plants.
- B. high energy is required to break the triple bond.
- C. Nitrogen is almost an inert gas so reactions involving nitrogen requires extreme conditions such as high temperature.
- D. All of the above.

16. Conversion of nitrogen to ammonia or nitrogenous compounds is termed as

- A. Nitrogen fixation B. Nitrification C. Denitrification D. Nitrogen assimilation

17. How many mitotic divisions are essential to produce 256 cells in a proliferating cell system, if divisions start from a single cell?

- A. 8 B. 7 C. 254 D. 255

18. A doctor advised a person to take injection of insulin because
- A. his sugar level was high. B. his blood pressure was low.
C. he was suffering from goiter. D. his heart was beating slowly.
19. Select the mismatched pair.
- A. Adrenaline- Pituitary gland B. Testosterone – Testes
C. Estrogen-Ovary D. Thyroxin- Thyroid gland
20. Lack of oxygen in muscles often leads to cramps among cricketers. This results due to
- A. conversion of pyruvate to ethanol
B. conversion of pyruvate to glucose
C. non-conversion of glucose to pyruvate
D. conversion of pyruvate to lactic acid
21. If salivary amylase is lacking in the saliva, which of the following events in the mouth cavity will be affected?
- A. Proteins breaking down into amino acids.
B. Starch breaking down into sugars
C. Fats breaking down into fatty acids and glycerol
D. Absorption of vitamins
22. Which of the following groups of organisms food material is broken outside the body?
- A. mushroom, green plants, amoeba B. yeast, mushroom, bread mould
C. paramecium, amoeba, cuscuta D. cuscuta, lice, tapeworm
23. Germinating pollen grain is a rich source of
- A. Cytokinin B. Gibberellin C. Auxin D. Rennin
24. Parthenogenesis has advantage of
- A. accelerating normal reproductive rate. B. accelerating normal respiratory activity.
C. accelerating normal flowering. D. accelerating normal growth.
25. Human seminal plasma, the fluid part of semen, is produced by contributions from the:
- i. Urethra ii. Prostate iii. Seminal vesicle iv. Bulbourethral gland
- A. i and iii B. i and iv C. i, iii and iv D. ii, iii and iv
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