



10. Among china rose, mustard, brinjal, potato, guava, cucumber, onion and tulip, how many plants have superior ovary?  
a) Four                      b) Five                      c) Six                      d) Three

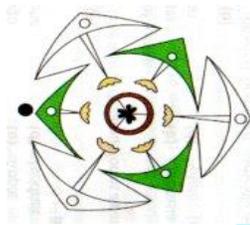
11. Proximal end of the filament of stamen is attached to the  
a) Anther                      b) Connective                      c) Placenta                      d) Thalamus or petal

12. An example of tuberous root is  
a) Colocasia antiquorum                      b) Ipomoea batata                      c) Solanum tuberosum  
d) Raphanus sativus

13. Which of the following is true?  
a) umbel is a racemose inflorescence where all stalked flower aggregate on the flat receptacle.  
b) Racemose is a racemose inflorescence having main axis shortened and flower borne acropetally.  
c) Spadix is a racemose inflorescence having pendulous spike with main axis much flattened.  
d) Spike is a racemose inflorescence having sessile flowers.

14. Inflorescence of Liliaceae is  
a) Cymose                      b) Racemose                      c) Cyathium                      d) Cepitulum

15. Plants having the floral diagram given below are



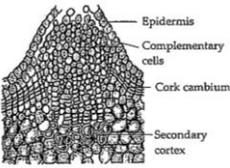
a) Leguminous                      b) Dicots                      c) Medicinal and perennial  
d) Having pinnately compound leaves.

16. Cladode is a characteristic morphological feature of  
a) Asparagus and Ruscus                      b) Casuarina and Opuntia  
c) Cladophora and Cactus                      d) Citrus and Euphorbia

17. Buliform cells are present in  
a. bundle sheath                      b. mesophyll                      c. vascular bundles                      d. epidermis

18. Casparian strips are the characteristics of  
a. cortex                      b. endodermis                      c. pericycle                      d. pith

19. The vascular cambium and cork cambium are the examples of  
a. apical meristem                      b. lateral meristem                      c. intercalary meristem  
d. elements of xylem and phloem

20. Root cap is formed by  
 a. periblem                      b. calyptogens                      c. vascular cambium                      d. wound cambium
21. In a dicotyledonous stem, the sequence tissues from the outside to the inside is  
 a. phellem-pericycle-endodermis-phloem                      b. phellem-phloem-endodermis-pericycle  
 c. phellem-endodermis-pericycle-phloem                      d. pericycle-phellem-endodermis-phloem.
22. The sugarcane plant has  
 a. dumb-bell shaped guard cells                      b. pentamerous flowers  
 c. reticulate venation                      d. capsular fruits
23. Cork cambium results in the formation of cork which becomes impermeable to water due to the accumulation of  
 a. resin                      b. suberin                      c. lignin                      d. tannin
24. Which one of the following statements pertaining to plant structure is correct?  
 a. Cork lacks stomata but lenticels carry out transpiration  
 b. Passage cells help in transfer of food from cortex to phloem.  
 c. Sieve tube elements possess cytoplasm but no nuclei  
 d. The shoot apical meristem has a quiescent centre
25. In the sieve elements, which one of the following is the most likely function of p-proteins?  
 a. Deposition of callose on sieve plates                      b. Providing energy for active translocation  
 c. Autolytic enzymes                      d. Sealing mechanism on wounding
26. Chlorenchyma is known to develop in the  
 a. cytoplasm of Chlorella                      b. mycelium of a green mould such as Aspergillus  
 c. Spore capsule of a moss                      d. pollen tube of Pinus
27. The branched sclereids present in hydrophytes are  
 a. osteosclereids                      b. trichosclereids                      c. macrosclereids                      d. astrosclereids
28. Given figure shows  

  
 a. structure of lenticels                      b. hydathode showing gaseous vapour exchange  
 c. fungus reproducing by spore formation                      d. algae reproducing by spore formation
29. Why are vascular bundles closed in monocots?  
 a. Xylem and phloem are present                      b. Xylem and phloem occur in separate bundles  
 c. Vascular cambium is present between xylem and phloem  
 d. Vascular cambium is not present

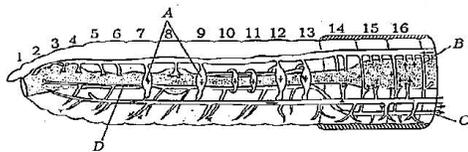
30. Select the correct pair amongst the following
- |   |  |
|---|--|
| a. Spring wood-light colour, high density   | b. Spring wood-dark colour, low density  |
| c. Autumn wood – light colour, high density | d. Autumn wood-dark colour, high density |
31. As secondary growth proceeds, in a dicot stem, the thickness of
- |  |                        |
|--|------------------------|
| a. sapwood increases                           | b. heartwood increases |
| c. both sapwood and heartwood increases        |                        |
| d. both sapwood and heartwood remains the same |                        |

32. **Assertion:** In woody stems, the amount of heart wood continues to increase year after year.  
**Reason:** The tracheary elements of heartwood are plugged by tyloses
- |   |
|---|
| a. If both assertion and reason are true and reason is the correct explanation of assertion |
| b. If both assertion and reason are true but reason is not correct explanation of assertion |
| c. If assertion is true but reason are false  |
| d. If both assertion and reason are false   |

33. **Assertion:** The collenchymas is a thick walled living tissues  
**Reason:** The collenchyma is thickened parenchyma cell due to the deposition of pectin
- |   |
|---|
| a. If both assertion and reason are true and reason is the correct explanation of assertion |
| b. If both assertion and reason are true but reason is not correct explanation of assertion |
| c. If assertion is true but reason are false  |
| d. If both assertion and reason are false   |

34. In cockroach, the arthroial membrane
- |                          |                             |
|--------------------------|-----------------------------|
| a) forms the hind wings  | b) covers the compound eyes |
| c) forms the hypopharynx | d) joins the sclerites      |
35. Frogs
- |                                    |  |
|------------------------------------|--|
| a) are uricotelic                  | b) have olfactory lobes midbrain         |
| c) do not have renal portal system | d) have gall bladder which secretes bile |

36. In the circulatory sytem of Pheretima A,B ,C and D represents



- |   |
|---|
| a) A-Lateral hearts, B-Subneural vessel, C-Commissural vessel, D- Lateral oesophageal vessel  |
| b) A- Lateral hearts, B-Lateral oesophageal vessel, C- Subneural vessel, D-Commissural vessel |
| c) A-Commissural vessel, B-Lateral hearts, C-Lateral oesophageal vessel, D-Subneural vessel   |
| d) A-Commissural vessels, B-Lateral vessel, C-Subneural vessel, D-Lateral oesophageal vessel  |



# STELLA MARIS MEDICAL FOUNDATION

## BIOLOGY

### STRUCTURAL ORGANISATION IN PLANTS AND ANIMALS

### ANSWER KEY

QUE	ANS								
1	C	11	D	21	C	31	B	41	A
2	D	12	B	22	A	32	B	42	B
3	C	13	D	23	B	33	A	43	D
4	C	14	A	24	C	34	D	44	B
5	B	15	C	25	D	35	D	45	A
6	C	16	A	26	C	36	C	46	D
7	B	17	D	27	D	37	A	47	C
8	C	18	B	28	A	38	C	48	B
9	A	19	B	29	D	39	D	49	C
10	C	20	B	30	D	40	D	50	B

Stella  
MARIS