

Sr. C.V. Raman Coaching Centre
Ddappadi (TK) SALEM (DT) 637101

SUB:- BOTANY

Total marks :- 50m

Time :- 1.30 Hrs

Date :- 03/08/2023

PART - A

Choose the best answer :-

10 x 1 = 10m

- Which of the following represents megagametophyte
 - Ovule
 - Embryo sac
 - Nucellus
 - Endosperm
- The scar left by funiculus in the seed is _____.
 - Tegmen
 - Radicle
 - Epicotyl
 - Hilum
- Fruit colour in squash is an example of _____.
 - Recessive epistasis
 - Dominant Epistasis
 - complementary genes
 - Inhibitory genes
- Initiation codon is _____.
 - UUU
 - UGA
 - AUG
 - UAG

5. Which of the following is the start codon —
- a) AUG b) UGA c) UAA d) UAG
6. The first case of polyembryony was reported in
- a) Mango b) Banana
c) Grapes d) Lemon
7. Example for cellular Endosperm —
- a) Coccinia b) Adoxa
c) Helianthus d) Both (b) and (c)
8. Pollination by moths is called —
- a) Malacophily b) Psychophily
c) Phalaenophily d) Myrmecophily
9. In his classic experiment on pea plant, Mendel did not use —
- a) Flowering position b) Pod length
c) Seed shape d) Flower colour.
10. Which plant is popularly called "Terror of Bengal":
- a) Eichhornia crassipes b) Colerasia
c) Curcuma longa d) Zingiber officinale.

PART - B

Answer any five questions.
(Q.No : 15 is compulsory.)

$$5 \times 2 = 10m$$

11. List any two strategies adopted by bisexual flowers to prevent self pollination with example
12. Give the names of the scientists who rediscovered mendelism?
13. Define crossing over.
14. Differences between missense and nonsense mutation
15. Draw a structure of *Cicer arietinum* and label its parts.
16. Name the seven contrasting traits of Mendel.
17. Define Atavism.

PART - C

Answer any five questions.
(Q.No : 22 is compulsory):-

$$5 \times 3 = 15m$$

18. What is endothelium?
19. List out the functions of Tapetum.
20. What is back cross?
21. Write the salient features of Sutton and Boveri concept.

22. Draw a structure of Embryo sac and label its parts.

23. What is Gene mapping? Write its uses.

24. What is Polyembryony? How it can commercially exploited?

PART - D

Answer any 3 of the following. 3+5=15m

25. Describe dominant epistasis with an example.

26. Explain the mechanism of crossing over.

27. What is endosperm? Explain its types with diagram.

28. (i) Differentiate incomplete dominance with Co-dominance

(ii) What is meant by cytoplasmic inheritance?

29. Explain pollination in Salvia.

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