Higher Secondary Second Year

BOTANY

Model Question Paper – 3

Time : 2.30 hours Marks: 70

Section – I 15x1=15

Answer all the questions:-

Choose the most suitable answer from the given four alternatives and write the option code and the corresponding answer.

1. The advanced family in monocotyledons is.
a) Musaceae b) Arecaceae
c) Orchidaceae d) Zingiberaceae

2. 'Pyrethrum' is obtained from
a) Eclipta prostrata b) Tagetus
c) Helianthus annus d) Chrysanthemum cocsineum

3. Genera plantarum of Bentham and Hooker was published in
a) a single volume b) two volumes
c) three volumes d) three volumes

4. Phloem parenchyma is absent in
a) Pteridophyte b) Monocots
c) Gymnosperms d) Dicots

5. During the formation of Periderm, a few layers of meristematic tissue are formed in the cortex. This is called
a) Cork b) Phellogen
c) Phelloderm d) Phellem

6. Intercalary meristem is prominently found in
a) Nymphaea b) Helianthus

c) Grasses d) Clitoria

7. According to Bateson and Punnet, in Lathyrus odaratus how many percent of the test cross progeny were recombinants?
a) 7 b) 1
c) 12 d) 6

8. Cistron is a unit of…
a) Recombination b) Function
c) Mutation d) Genetic map

9. The pH of the plant tissue culture medium is adjusted to
a) 5.8 b) 7.6
c) 8.2 d) 8.5

10. One of the following organisms is a SCP
a) Nostoc b) Rhizobium
c) Mushroom d) Spirulina

11. These enzymes catalyze the cleavage of specific covalent bonds and removal of groups without hydrolysis are called
a) Ligases b) Hydrolases
c) Lyases d) Transferase

12. Who postulated 'Law of limiting factor'?
a) Calvin b) Hatch-slack
c) Blackmann d) Dickens

13. Cytokinin found in the endosperm of coconut is
a) 2, 4-D b) Zeatin
c) ABA d) GAI

14. Induced mutation yields a new variety called
a) Rust resistant wheat b) Atomita-2 rice
c) Drought resistant maize d) Vitamin-A rich rice

15. The strongest painkiller is obtained from

a) Ginseng b) Morphine

c) Quinine d) Ephedrine

Section – II 6x2=12

Answer any six of the following. Question No.22 is compulsory:-

16. What is syngenesious stamen?
17. Write the systematic position of musaceae.
18. What is differentiation?
19. What are tyloses?
20. Draw the four morphogenic types of chromosomes and label them
21. Give the binomials of at least two monocot transgenic plants.
22. What is holoenzyme?
23. What is Richmond Lang effect?
24. What is humulin?

Section – III 6x3=18

Answer any six of the following. Question No.27 is compulsory:-

25. Define biomedicine. Give one example.
26. What is Papilionaceous corolla?
27. Bring out any three merits of Bentham and Hooker's classification of plants.
28. Explain different types of meristems based on their position.
29. Draw and label the parts of a T.S of a dicot leaf.
30. Write any three significance of ploidy.
31. Write the algal organisms used for SCP production.
32. Write the differences between photo respiration and dark respiration.
33. Write the physiological effects of Cytokinin.

Section – IV 5x5=25

Answer all the following:-

34. Discuss the outline of Bentham and Hooker's classification of plants. (Flow chart (or) explanation).

(Or)

Describe Musa paradisiaca in technical terms.

35. Describe Vascular tissue system.

(Or)

Differentiate the Vascular bundles of the dicot stem from that of monocot stem.

36. Write an account on the structure of RNA and its types.

(Or)

Write the economic importance of cotton.

37. Write the basic concepts of plant tissue culture.

(Or)

Write an essay on DNA recombinant technology.

38. Write short notes on Ganong's high screen experiments.

(Or)

Draw the flow chart of Glycolysis