

Register
Number

--	--	--	--	--	--

Part III – BOTANY

(English Version)

Time Allowed : 3 Hours]

[Maximum Marks : 150

SECTION - ANote : i) Answer *all* questions.

ii) Choose and write the correct answer.

iii) Each question carries *one* mark.

30 × 1 = 30

1. In *Smilax aspera* the phyllotaxy is

- | | |
|--------------|-------------|
| a) alternate | b) opposite |
| c) whorled | d) spiral. |

2. The common name of *Borassus flabellifer* is

- | | |
|-----------------|------------------|
| a) Coconut tree | b) Wine palm |
| c) Royal palm | d) Palmyra palm. |

3. Which of the following is referred to as stone cells ?

- | | |
|--------------------|-------------------------|
| a) Brachysclereids | b) Macrosclereids |
| c) Osteosclereids | d) Sclerenchyma fibres. |

4. Casparian strips are found in the endodermis of

- | | |
|-----------------|----------------|
| a) dicot stem | b) dicot root |
| c) monocot stem | d) dicot leaf. |

[Turn over

12. Which of the following is a long day plant ?

- a) Tobacco
- b) Sunflower
- c) Maize
- d) Wheat.

13. A mung, *Phaseolus mungo* variety was introduced from

- a) Japan
- b) China
- c) Australia
- d) America.

14. *Pyricularia oryzae* cause

- a) Blast disease in rice
- b) Tikka disease in groundnut
- c) Citrus canker
- d) Tungro disease of rice.

15. *Gossypium hirsutum* belongs to the family

- a) Fabaceae
- b) Asteraceae
- c) Malvaceae
- d) Liliaceae.

16. *Species Plantarum* was written by

- a) Carolus Linnaeus
- b) Gaspard Bauhin
- c) Adolf Engler
- d) Charles Darwin.

17. The ovules are naked in

- | | |
|----------------|----------------|
| a) Angiosperms | b) Gymnosperms |
| c) Algae | d) Fungus. |

18. In *Abelmoschus esculentus* the fruit is

- | | |
|----------|-------------------------|
| a) Drupe | b) Schizocarp |
| c) Regma | d) Loculicidal capsule. |

19. *Vernonia arborea* is a

- | | |
|---------|------------|
| a) Herb | b) Shrub |
| c) Tree | d) Twiner. |

20. The stem of all the plants of Euphorbiaceae has

- | | |
|----------|--------------|
| a) gums | b) resins |
| c) latex | d) mucilage. |

21. Guard cells are present in

- | | |
|---------------|---------------|
| a) Endodermis | b) Cortex |
| c) Epiblema | d) Epidermis. |

22. Lenticels are seen in the

- | | |
|-----------|----------|
| a) Root | b) Stem |
| c) Flower | d) Leaf. |

23. Double minute chromosome occurs in

- | | |
|-------------------|------------------|
| a) Adipose tissue | b) Oocyte |
| c) Salivary gland | d) Cancer cells. |

SECTION - B

Note : i) Answer any *fifteen* questions.

ii) Each question carries *three* marks.

15 × 3 = 45

31. What is called nomen ambiguum ?
32. What is polypetalae ?
33. Write the floral formula of *Datura metal*.
34. What is allacin ?
35. Define chlorenchyma. What is its function ?
36. Define gene.
37. What are chiasmata ?
38. What is transcription ?
39. What are plasmids ?
40. Define callus.
41. What are isoenzymes ?
42. What is photolysis of water ?
43. Define Chemosynthesis.
44. Explain anaerobic respiration.
45. What is Glycolysis ?
46. Which are called the power-houses of the cell ? Why are they called so ?

47. What is Sigmoid curve ?

48. Define Vernalization.

49. What is heterosis ?

50. What is humulin ?

SECTION - C

Note : i) Answer any *seven* questions including Question No. 54 which is compulsory.

ii) Each question carries *five* marks.

iii) Draw diagrams wherever necessary.

7 × 5 = 35

51. Bring out the merits of Bentham and Hooker's classification.

52. Give an account of economic importance of the family Arecaceae.

53. Explain the different types of meristems based on their position.

54. Draw the transverse section of dicot root and label the parts.

55. What are Tyloses ? Explain.

56. Write short notes on Crossing over.

57. Draw and label the structure of polytenic chromosome and lampbrush chromosome.

58. What are the outcomes of application of plant tissue culture ?

59. Give an account of SCP.

60. Write the characteristics of Enzymes.

61. Explain the test-tube and funnel experiment.

62. Write a short note on *Cissus quadrangularis*.

SECTION - D

Note : i) Answer any four questions.

ii) Each question carries ten marks.

iii) Draw diagrams wherever necessary.

4 × 10 = 40

63. What are the types of classification of plants ? Add a note on each type.
64. List out the general characters of the family Fabaceae. Draw the floral diagram and write the floral formula.
65. Describe the primary structure of Monocot stem.
66. Give an account on numerical chromosomal aberration.
67. Write an essay on DNA recombinant technology.
68. Describe the light reactions of photosynthesis.
69. Describe the sequences of reactions of Kreb's cycle.
70. Write the economic importance of Rice and Groundnut.
-