

NEET

BOTANY MODEL QUESTIONS

- Secondary protonema, paraphyses and peristomal teeth are seen in
 - 1) Liverworts
 - 2) Hornworts
 - 3) Mosses
 - 4) Gymnosperms
- Protists are
 - 1) Cellular, heterotrophic, eukaryotic
 - 2) Cellular, autotrophic and heterotrophic, eukaryotic
 - 3) Multicellular, autotrophic, eukaryotic
 - 4) Cellular, heterotrophic, prokaryotic
- Which of the following is wrongly matched?
 - 1) Golden algae – Chrysophytes
 - 2) Whirling whips – Dinoflagellates
 - 3) Bracket fungi – Basidiomycetes
 - 4) Sac fungi – Deuteromycetes
- Identify the correct pair among the following.
 - 1) Smuts – *Puccinia*
 - 2) Red rot – *Trichoderma*
 - 3) Early blight – *Alternaria*
 - 4) White rust – *Rhizopus*
- Sexual reproduction in plants was discovered by
 - 1) Nehemiah Grew
 - 2) Camerarius
 - 3) Stephen Hales
 - 4) Hugo de Vries
- Among the following algae which is/are a good source of iodine?
 - 1) *Gelidium*
 - 2) *Gracilaria*
 - 3) *Laminaria*
 - 4) All of these
- The common type of life cycle found in first vascular land plants is
 - 1) Diplontic life cycle
 - 2) Diplo-haplontic life cycle
 - 3) Diplobiontic life cycle
 - 4) Haplo-diplontic life cycle
- Match the following plants with their life cycles.

List - I	List - II
A) Ectocarpus	i) Diplobiontic
B) Polysiphonia	ii) Diplontic
C) Pteris	iii) Diplohaplontic
D) Fucus	iv) Haplodiplontic

 - 1) A-iv, B-i, C-iii, D-ii
 - 2) A-iv, B-i, C-ii, D-iii
 - 3) A-iii, B-i, C-ii, D-iv
 - 4) A-iii, B-i, C-iv, D-ii
- Many plants belonging to Apiaceae family show the following type of inflorescence
 - 1) Umbel
 - 2) Corymb
 - 3) Panicle
 - 4) Spike

10. Sessile, unisexual and neuter flowers are characteristic of the inflorescence
- 1) Head 2) Spike 3) Cymule 4) Spadix
11. In pome the fruit develops from
- 1) Monocarpellary gynoecium and superior ovary
2) Monocarpellary gynoecium and inferior ovary
3) Bicarpellary gynoecium and superior ovary
4) Bicarpellary gynoecium and inferior ovary
12. The edible part of *Artocarpus* fruit is
- 1) Endosperm
2) Fleshy thalamus
3) Succulent perianth
4) Inflorescence and juicy succulent bracts
13. Arrange the following in descending order of their life span
- A. Carrot B. Rice C. Wolfia D. Rose
- 1) ADBC 2) DABC 3) DBCA 4) ACBD
14. Which of the following plants reach reproductive phase early than the others
- 1) *Triticum* 2) *Agave* 3) *Strobilanthus* 4) Bamboo
15. Which of the following substance is considered non-degradable
- 1) Pectin 2) Cellulose
3) Lignin 4) Sporopollenin
16. If an angiosperm plant sheds its pollen at three celled stage what would be the ratio of vegetative cells and male gametes?
- 1) 1 : 1 2) 1 : 2 3) 1 : 3 4) 1 : 4
17. The performance of race horses is enhanced by using
- 1) Pollen grains 2) Carrot seeds
3) Beetroots 4) Papaya and Water melon
18. Which of the following group has one ovule in its ovary?
- 1) Wheat, papaya and orchid
2) Paddy, watermelon and sunflower
3) Wheat, paddy and sunflower
4) Papaya, water melon and orchids
19. Which of the following statements is true?
- 1) Cellulose is made up of glucose and fructose
2) Insulin is made up of glucose and fructose
3) Cotton fibre is made up of glycogen
4) Chitin is a heteropolymer

20. The following protein helps in transport of glucose into cells

- | | |
|-------------|----------------|
| 1) Insulin | 2) GLUT-4 |
| 3) Glycogen | 4) Glucosamine |

21. Match the following

List - I

- A) Curcumin
 - B) Rubber
 - C) Codeine
 - D) Abrin
- 1) A-iii, B-iv, C-i, D-ii
3) A-iii, B-iv, C-ii, D-i

List - II

- i) alkaloid
 - ii) toxin
 - iii) drug
 - iv) polymer
- 2) A-ii, B-iv, C-i, D-iii
4) A-ii, B-iii, C-iv, D-i

22. Erythrocytes of mammals and sieve tubes of vascular plants share the following common character

- 1) They have centrioles
- 2) They do not have mitochondria
- 3) They do not have nucleus
- 4) They do not have ribosomes

23. These two cell organelles are considered as non-membrane bound organelles

- 1) Ribosomes and glyoxysomes
- 2) Peroxysomes and glyoxysomes
- 3) Ribosomes and centrioles
- 4) Centrioles and peroxysomes

24. Recombinase enzyme is found during

- | | |
|--------------|---------------|
| 1) Leptotene | 2) Pachytene |
| 3) Diplotene | 4) Diakinesis |

25. Match the following hydrophytes with their mode of living.

List - I

- 1) Hydrilla
 - 2) Typha
 - 3) Lemna
 - 4) Vallisnaria
- 1) A-iii, B-i, C-iv, D-ii
3) A-iii, B-i, C-ii, D-iv

List - II

- i) Amphibious
 - ii) Submerged suspended
 - iii) Submerged rooted
 - iv) Free floating
- 2) A-iii, B-iv, C-i, D-ii
4) A-ii, B-i, C-iv, D-iii

26. The National Committee for Environmental Planning and Co-ordination, Ministry of Environment and Forests were established respectively in

- | | |
|---------------|---------------|
| 1) 1962, 1984 | 2) 1984, 1986 |
| 3) 1972, 1982 | 4) 1972, 1984 |

27. Which of the following works is referred to as “Webster’s of Plant Biology”?
- 1) Anatomy of Seed Plants by Katherine Easu
 - 2) Conformational Analysis of Biopolymers by G.N. Ramachandran
 - 3) Embryology by P. Maheswari
 - 4) Enquiry into plants by Theophrastus
28. Arrange the following regions from inside to outside according to their position in the secondary dicot stems.
- | | |
|--------------|---------------------|
| A. Phellogen | B. Secondary phloem |
| C. Cork | D. Secondary cortex |
- 1) DBCA 2) DBAC 3) BDCA 4) BDAC
29. Pick out the right statement.
- 1) Exodermis is the outer most region of root
 - 2) Endodermis is the outer most layer of stele
 - 3) Pericycle is the outer most layer of stele
 - 4) Hypodermis lies below the endodermis
30. Tea leaves are rich in
- | | | | |
|-------------|------------------|--------------|-----------|
| 1) Raphides | 2) Sphaeraphides | 3) Sclereids | 4) Fibres |
|-------------|------------------|--------------|-----------|
31. Pressure gradient in the sieve tubes is maintained by
- | | |
|----------------------|--------------------|
| 1) Phloem parenchyma | 2) Companion cells |
| 3) Sieve cells | 4) Phloem fibres |
32. A farmer observed stunted growth in *Solidago* plants. Which PGR do you recommend to spray in his crop?
- | | | | |
|--------|--------|--------------|-------------|
| 1) IAA | 2) GA3 | 3) Cytokinin | 4) Ethophan |
|--------|--------|--------------|-------------|
33. Which of the following is likely to be a source of Pyruvic acid that enters Kreb’s cycle?
- | | |
|---------------|---------------------------|
| 1) Amino acid | 2) Glucose |
| 3) Fatty acid | 4) Any of the above three |
34. During photosynthetic chemical reactions a particular substrate is dephosphorylated to form a product and an ATP is formed with the help of enzyme kinase. We call this
- 1) Oxidative phosphorylation
 - 2) Photo phosphorylation
 - 3) Substrate level phosphorylation
 - 4) Any of the above three
35. Which metal ion co-factor is required for action of proteolytic enzyme carboxypeptidase?
- | | | | |
|-----------|---------|---------|---------------|
| 1) Copper | 2) Iron | 3) Zinc | 4) Molybdenum |
|-----------|---------|---------|---------------|
36. The reactions of the following cycle are common to all photosynthetic plants
- | | |
|-------------------|----------------------------|
| 1) Calvin’s cycle | 2) Hatch and Slack pathway |
| 3) CAM pathway | 4) None of these |

37. The carrier that removes proton from stroma while transporting electron is
- 1) Plasto quinone
 - 2) Plasto cyanin
 - 3) Cytochrome b6
 - 4) Cytochrome f
38. Which elements maintain ribosome structure and formation of mitotic spindle respectively
- 1) Magnesium and sulphur
 - 2) Calcium and magnesium
 - 3) Calcium and sulphur
 - 4) Magnesium and calcium
39. Which of the following statements is true with reference to the element copper in plant nutrition?
- A. It is required for overall metabolism in plants
 - B. It can be reversibly oxidised
 - C. It is a component of cytochrome C oxidase
 - D. It is also a component of plastocyanin
- 1) ABC
 - 2) BCD
 - 3) ACD
 - 4) ABCD
40. The following type of genetic phenomenon is seen in *Antirrhinum*
- 1) Incomplete dominance
 - 2) Complete dominance
 - 3) Co-dominance
 - 4) All the above
41. The study of "The effect of hard X-rays on bacteriophage multiplication was the research work of
- 1) J.D. Watson
 - 2) F.H.C. Crick
 - 3) Wilkinson
 - 4) Rosalind Franklin
42. The 28 S, 18 S and 5.8 S RNAs are transcribed by
- 1) RNA polymerase I
 - 2) RNA polymerase II
 - 3) RNA polymerase III
 - 4) All of these
43. Dominant allele is
- 1) Unmodified and represents original phenotype.
 - 2) Modified and represents original phenotype.
 - 3) Functioning but modified allele.
 - 4) Modified and does not represent original phenotype.
44. **Assertion (A):** Some variations and recombinations may be beneficial to the organism or population.
Reason (R): Sexual reproduction preserves genetic information but does not permit variation.
- 1) Both A and R are true and R is the correct explanation for A.
 - 2) Both A and R are true but R is not the correct explanation for A.
 - 3) Only A is true, R is false.
 - 4) A is false and R is true.
45. Which of the following is not a critical area of research in bio-technology?
- 1) Providing best catalyst in the form of microbes.
 - 2) Creating optimal conditions.
 - 3) Downstream processing technology to purify protein.
 - 4) None of the above

46. **Assertion (A):** The activated toxin of Bt destroys epithelial cells of mid gut and causes death of the insect cotton boll worm.

Reason (R): The pro toxin gets converted into active form of toxin due to alkaline pH of the gut.

- 1) Both A and R are true and R is the correct explanation for A.
- 2) Both A and R are true but R is not the correct explanation for A.
- 3) Only A is true, R is false.
- 4) A is false and R is true.

47. **Assertion (A):** Swiss cheese has large holes.

Reason (R): Propionibacterium sharmanii produces large amount of oxygen during fermentation.

- 1) Both A and R are true and R is the correct explanation for A.
- 2) Both A and R are true But R is not the correct explanation for A.
- 3) Only A is true, R is false.
- 4) A is false and R is true.

ANSWERS

1-3; 2-2; 3-4; 4-3; 5-2; 6-3; 7-2; 8-1; 9-1; 10-4; 11-4; 12-3; 13-2; 14-1; 15-4; 16-2; 17-1; 18-3; 19-4; 20-2; 21-1; 22-3; 23-3; 24-2; 25-4; 26-4; 27-1; 28-4; 29-3; 30-3; 31-2; 32-2; 33-4; 34-3; 35-3; 36-1; 37-1; 38-4; 39-4; 40-1; 41-1; 42-1; 43-1; 44-3; 45-4; 46-1; 47-3.

Writer: Dr. P. Uma Amareswari