

[NEET Sample Paper 1 PDF for Droppers \(Botany\)](#)

1. Given below are two statements, Assertion (A) and Reason (R). Choose the correct option for them.

Assertion (A): Gametes receive only one allele of a gene.

Reason (R): During gamete formation, homologous chromosomes segregate.

(1) Both Assertion (A) and Reason (R) are true, and Reason (R) is a correct explanation of Assertion (A).

(2) Both Assertion (A) and Reason (R) are true, but Reason (R) is not a correct explanation of Assertion (A).

(3) Assertion (A) is true, and Reason (R) is false.

(4) Assertion (A) is false, and Reason (R) is true.

2. Mendel proposed that the factor controlling any character is discrete and independent. His proposition was based on the;

(1) results of F₃ generation of a cross.

(2) observations that the offspring of a cross made between the plants having two contrasting characters shows only one character without any blending.

(3) self-pollination of F₁ offsprings.

(4) cross pollination of F₁ generation with recessive parent.

3. The concept of carrying capacity is associated with;

(1) maximum population size that a species can reach.

(2) minimum population size required to prevent extinction.

- (3) optimum population size for genetic diversity.
- (4) the number of individuals required for successful reproduction.

4. Find the incorrect statement w.r.t the Pteridophytes:

- (1) Pteridophytes are used for medicinal purposes and as soil-binders.
- (2) Evolutionarily, they are the first terrestrial plants to possess vascular tissues – xylem and phloem.
- (3) In pteridophytes, the main plant body is a gametophyte.
- (4) The pteridophytes are found in cool, damp, shady places though some may flourish well in sandy-soil conditions.

5. _____ of an ecosystem is the rate of production of organic matter during photosynthesis.

- (1) Net primary productivity
- (2) Secondary productivity
- (3) Gross primary productivity
- (4) None of the above

6. Read the given statements carefully and choose the correct option.

Statement I: The 'bakanae' (foolish seedling) disease of rice seedlings, was caused by a fungal pathogen *Gibberella fujikuroi*.

Statement II: E. Kurosawa reported the appearance of symptoms of the bakanae disease in rice seedlings when they were treated with sterile filtrates of the fungus later identified as cytokinins.

- (1) Statement I and Statement II both are correct.
- (2) Statement I is correct but Statement II is incorrect.
- (3) Statement I is incorrect but Statement II is

correct.

(4) Statement I and Statement II both are incorrect.

7. True nucleus is absent in;

(1) Funaria (2) Volvox

(3) Anabaena (4) Mucor

8. Identify the correct statements about pollen grain and choose the correct option.

(A) It has two layered prominent wall.

(B) Hard outer wall layer.

(C) Inner wall is composed of sporopollenin.

(D) Sporopollenin forms continuous exine.

(1) A, B, C, D (2) A, B, C only

(3) A, B only (4) B, D only

9. The terminator site and the promoter site for transcription are located at;

(1) 3' (downstream) end and 5' (upstream) end, respectively of the transcription unit.

(2) 5' (upstream) end and 3' (downstream) end, respectively of the transcription unit.

(3) the 5' (upstream) end.

(4) the 3' (downstream) end.

10. Given below are two statements, Assertion (A) and Reason (R). Choose the correct option for them.

Assertion (A): The codon is read in mRNA in a contiguous fashion.

Reason (R): There are no punctuations in the codon.

(1) Both Assertion (A) and Reason (R) are the true, and Reason (R) is a correct explanation of Assertion (A).

(2) Both Assertion (A) and Reason (R) are the true, but Reason (R) is not a correct

explanation of Assertion (A).

(3) Assertion (A) is true, and Reason (R) is false.

(4) Assertion (A) is false, and Reason (R) is true.

11. Read the given statements carefully and choose the correct option.

Statement I: Joseph Priestley performed a series of experiments that revealed the essential role of air in the growth of green plants.

Statement II: Joseph Priestley discovered oxygen in the year 1774.

(1) Statement I and Statement II both are correct.

(2) Statement I is correct, but Statement II is incorrect.

(3) Statement I is incorrect, but Statement II is correct.

(4) Statement I and Statement II both are incorrect.

12. In the following question, a statement of assertion is followed by a statement of reason. Choose the correct option for them.

Assertion (A): The non-cyclic photophosphorylation represents the Z-scheme.

Reason (R): The shape of the Z- scheme is formed when all the electron carriers are placed in a sequence on a redox potential scale.

(1) Both Assertion (A) and Reason (R) are the true, and Reason (R) is a correct explanation of Assertion (A).

(2) Both Assertion (A) and Reason (R) are the true, but Reason (R) is not a correct explanation of Assertion (A).

(3) Assertion (A) is true, and Reason (R) is false.

(4) Assertion (A) is false, and Reason (R) is

true.

13. In the following question, a statement of assertion is followed by a statement of reason. Choose the correct option for them.

Assertion (A): The golgi apparatus remains in close association with the endoplasmic reticulum.

Reason (R): Proteins synthesized by ribosomes on the endoplasmic reticulum are modified in the cisternae of the golgi apparatus.

(1) Both Assertion (A) and Reason (R) are true, and Reason (R) is a correct explanation of Assertion (A).

(2) Both Assertion (A) and Reason (R) are true, but Reason (R) is not a correct explanation of Assertion (A).

(3) Assertion (A) is true, and Reason (R) is false.

(4) Assertion (A) is false, and Reason (R) is true.

14. In which phase of mitosis, chromosomes lose their individuality?

(1) Prophase

(2) Metaphase

(3) Anaphase

(4) Telophase

15. During chemiosmosis, the function of primary acceptor of electron is to;

(1) transport proton from the stroma to lumen.

(2) transport proton from the lumen to stroma.

(3) donate proton to a proton carrier.

(4) donate electron to a proton carrier.

16. Read the given statements carefully and choose the correct option.

Statement I: The dicot plants not only show open form of growth but also have open vascular bundles.

Statement II: Plant growth can be measured only in the form of absolute growth rate.

- (1) Statement I and Statement II both are correct.
- (2) Statement I is correct, but Statement II is incorrect.
- (3) Statement I is incorrect, but Statement II is correct.
- (4) Statement I and Statement II both are incorrect.

17. In the following question, a statement of assertion is followed by a statement of reason. Choose the correct option for them.

Assertion (A): The axonemal microtubules (9+2 array) are arranged in a cylindrical manner throughout the length of cilium or flagellum.

Reason (R): The base of a cilium or flagellum is made up of centriole-like structure.

(1) Both Assertion (A) and Reason (R) are the true, and Reason (R) is a correct explanation of Assertion (A).

(2) Both Assertion (A) and Reason (R) are the true, but Reason (R) is not a correct explanation of Assertion (A).

(3) Assertion (A) is true, and Reason (R) is false.

(4) Assertion (A) is false, and Reason (R) is true.

18. The evolution of the C4 photosynthesis system is probably one of the strategies for;

- (1) minimizing the availability of CO₂.
- (2) maximizing the water loss.
- (3) maximizing the availability of CO₂ while maximizing the water loss.
- (4) maximizing the availability of CO₂ while

minimizing the water loss.

19. After the primary producer level in an ecosystem;

(1) less and less amount of new chemical energy is added at successive trophic levels.

(2) no new chemical energy is added at successive trophic levels.

(3) more and more amount of new chemical energy is added at successive trophic levels.

(4) less amount of new chemical energy is added at primary consumer level and then the amount of new chemical energy added to successive levels becomes more and more.

20. Assertion (A): Glucose is oxidized in several small steps.

Reason (R): The energy released during respiration can be coupled to synthesize ATP.

(1) Both Assertion (A) and Reason (R) are the true, and Reason (R) is a correct explanation of Assertion (A).

(2) Both Assertion (A) and Reason (R) are the true, but Reason (R) is not a correct explanation of Assertion (A).

(3) Assertion (A) is true, and Reason (R) is false.

(4) Assertion (A) is false, and Reason (R) is true.

21. Statement I: The parenchymatous cells which lie between the xylem and the phloem are called conjunctive tissue in dicot root.

Statement II: In dicot root, pericycle takes part in the formation of vascular cambium.

(1) Statement I and Statement II both are correct.

(2) Statement I is correct, but Statement II is incorrect.

- (3) Statement I is incorrect, but Statement II is correct.
- (4) Statement I and Statement II both are incorrect.

22. One of the major difficulties in the biological control of insect/pest is that;

- (1) the method is less effective as compared with the use of insecticides.
- (2) the practical difficulty of introducing the predator to specific areas.
- (3) the predator develops a preference to other diets and may itself become a pest.
- (4) the predator does not always survive when transferred to a new environment.

23. Which of the following statements is incorrect regarding gymnosperms?

- (1) Leaves of gymnosperms are well adapted to withstand extremes of temperature, humidity and wind.
- (2) In Pinus the pinnate leaves persist for a few years.
- (3) In Cycas stems are unbranched.
- (4) In Pinus male or female cones are borne on the same tree.

24. Assertion (A): Interphase nucleus has a loose and indistinct network of nucleoprotein fibres.

Reason (R): During different stages of cell division, cells show structured chromosomes.

- (1) Both Assertion (A) and Reason (R) are true, and Reason (R) is a correct explanation of Assertion (A).
- (2) Both Assertion (A) and Reason (R) are true, but Reason (R) is not a correct explanation of Assertion (A).

(3) Assertion (A) is true, and Reason (R) is false.

(4) Assertion (A) is false, and Reason (R) is true.

25. Respiratory infection is caused by;

(1) Adenovirus

(2) TMV

(3) Propionibacterium

(4) HIV

26. Identify the true statement(s) from the following and choose the correct option.

A. Centrioles are spherical structures that lie parallel to each other.

B. Centrioles have an organization like cartwheel.

C. Centrioles are made up of nine evenly spaced peripheral fibrils of tubulin protein.

D. Each peripheral fibril of centriole is triplet.

27. Statement I: Neurospora is extensively used in biochemical and genetical studies.

Statement II: Both Claviceps and Neurospora have conidia present endogenously on branched or unbranched conidiophores.

(1) Statement I and Statement II both are correct.

(2) Statement I is correct, but Statement II is incorrect.

(3) Statement I is incorrect, but Statement II is correct.

(4) Statement I and Statement II both are incorrect.

28. During alcoholic fermentation by yeast two molecules of glucose produce:

(1) 3 molecules of ethanol + 3 molecules of CO₂

- (2) 6 molecules of ethanol + 6 molecules of CO₂
- (3) 2 molecules of ethanol + 2 molecules of CO₂
- (4) 4 molecules of ethanol + 4 molecules of CO₂

29. Read the following statements and choose correct option.

Statement-I: Root cap protects the root meristem from the friction of the soil.

Statement-II: Meristematic zone cells are thick walled.

- (1) Both statement I and II are correct.
- (2) Statement I is correct but statement II is incorrect.
- (3) Statement I is incorrect but statement II is correct.
- (4) Both statement I and II are incorrect.

30. Assertion (A): Ovary in hypogynous flowers is said to be superior.

Reason (R): Gynoecium in such flowers occupies the highest position, while other parts are situated below it.

- (1) Both Assertion (A) and Reason (R) are the true and Reason (R) is a correct explanation of Assertion (A).
- (2) Both Assertion (A) and Reason (R) are the true but Reason (R) is not a correct explanation of Assertion (A).
- (3) Assertion (A) is true and Reason (R) is false.
- (4) Assertion (A) and Reason (R) both are false.

31. Radial vascular bundle means;

- (1) Xylem and Phloem at the different radius in Stem
- (2) Xylem and Phloem at different radius in root
- (3) Xylem and Phloem at same radius in Stem
- (4) Xylem and Phloem at same radius in leaf

32. ABA acts as an antagonist to;

- (1) NAA (2) IBA
- (3) IAA (4) GAs

48. Two species competing for the same resource can avoid competition by choosing different habits. This phenomenon is called _____ and was supported by _____.

- (1) competitive exclusion, Gause
- (2) competitive exclusion, MacArthur
- (3) resource partitioning, Gause
- (4) resource partitioning, MacArthur

33. Select the group of taxa representing the same category of taxonomic hierarchy.

- (1) sativum, tuberosum, indica
- (2) Solanum, nilotica, Brassica
- (3) Potato, tomato, Fabaceae
- (4) Petunia, Datura, Solanaceae

34. The first step of alcoholic fermentation from pyruvate is;

- (1) Dehydrogenation
- (2) Oxidation
- (3) Decarboxylation
- (4) Oxidative decarboxylation

35. How many molecules of RuBP & CO₂ respectively are required for the production of 6 molecules of 3-PGA?

- (1) 3 and 2 (2) 2 and 3
- (3) 3 and 3 (4) 3 and 1