



# BIOLOGY

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BIOLOGY (HINGLISH)

Plant Morphology & Reproduction

## Assertion And Reason

1. [A] : Leaf base is the point of attachment of leaf to stem .

[R] : Entire leaf axis is called anisophylly .

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer:**



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2. [A] : Above ground stolons produce new plants where nodes touch the ground .

[R] : Rhizomes survive the winter and contribute to asexual reproduction .

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer:**



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**3. [A] :** Bulb does not function in vegetative reproduction .

**[R] :** It is a modified structure , either a bulbil or root .

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer:**



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4. [A] : The function of phyllotaxy is to display leaves properly .

[R] : It is for getting maximum light by all leaves so that chance of shading is reduced .

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer:**



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5. [A] : Stilt roots are common in sugarcane,

[R] : In sugarcane, these roots are stout which grow straight from lower internodes.

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer:**



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**6. [A] :** Thorns may bear nodes and internodes in some plants.

**[R] :** Thorns are modified stems as they arise in the axil of a leaf or at the apex a branch.

A. If both A and R are true and R is the correct explanation of A



B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer:**



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7. [A] : Insectivorous plants grow in carbohydrate deficient soil.

[R] : Insectivorous plants grow in nitrogen rich soil.

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer:**



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8. [A] : Synandrous condition is found in curcurbits.

[R] : The male flower of curcurbits, generally, contains five stamens which are laterally fused (anthers and filaments both).

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer:**



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**9. [A] :** Thorns may bear nodes and internodes in some plants.

**[R] :** Thorns are modified stems as they arise in the axil of a leaf or at the apex a branch.

- A. If both A and R are true and R is the correct explanation of A
- B. If both A and R are true but R is not the correct explanation of A
- C. If A is true and R is false
- D. If both A and R are false

**Answer:**



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**10. [A]** : For dispersal by wind fruits and seeds should be light.

**[R]** : So that their buoyancy may help them to fly upto a long distance.

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer:**



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**11.** Assertion. Dispersal of fruits in *Xanthium* takes place by wind and water.

Reason. Fruits are light and floating.

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer:**



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**12. [A] :** For dispersal by wind fruits and seeds should be light.

**[R] :** So that their buoyancy may help them to fly upto a long distance.



- A. If both A and R are true and R is the correct explanation of A
- B. If both A and R are true but R is not the correct explanation of A
- C. If A is true and R is false
- D. If both A and R are false

**Answer:**



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**13. [A] :** Xenogamy is defined as the transference of pollen grain to stigma of same flower.

**[R] :** In xenogamy, the pollen grain of a flower are transferred to stigma of a different flower of a different plant of different species.

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer:**



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**14. [A] :** Anemophilous plants have to produce enormous quantities of pollen.

**[R] :** Because during the transit of pollen through a wind, a considerable amount of pollen is lost.

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer:**



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**15. Assertion.** The time involved between pollination and fertilization varies from species to species

**Reason.** All the pollen that reach the stigma succeed in affecting fertilization .

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer:**



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**16. [A] :** Synergids play an important role in directing the pollen tube growth .

**[R] :** Because synergids secrete some chemotropically active substance .

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer:**



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**17. Assertion.** In apomixis , plants of new genetic sequence are produced.

**Reason.** In apomixis , two individuals of same genetic sequence meet .

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false



**Answer:**



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**18. [A]:** Incompatibility is a gene physiological process.

**[R]:** Moderately high temperatures are also known to reduce self incompatibility reaction in certain plants.

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer: B**



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**19. [A]:** The pollen sterility has been attributed to the malfunctioning of tapetum.

**[R]:** Premature degeneration of the tapetum

deprives the developing spores of its nutrition.

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer: A**



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20. [A]: The three cells of the egg apparatus are arranged in a triangular fashion.

[R]: The degenerating synergid forms the seat for pollen tube discharge in the embryo sac

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer: D**



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21. [A]: Pollen grains from male parent are mostly transferred to the stigma in the female parent by some external agency. [R]: This is because the male flowers or male organs have no internal device to reach the female organs in another flower

- A. If both A and R are true and R is the correct explanation of A
- B. If both A and R are true but R is not the correct explanation of A
- C. If A is true and R is false
- D. If both A and R are false

**Answer: A**



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22. [A]: The two sperms cells in a pollen tube often change their shape.

[R]: The sperms are released in the synergid as intact cells but only their nuclei migrate

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer: B**



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**23. [A] :** Synandrous condition is found in curcurbits.

**[R] :** The male flower of curcurbits, generally, contains five stamens which are laterally fused (anthers and filaments both).

A. If both A and R are true and R is the correct explanation of A



B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer: A**



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**24. [A]:** In certain plants the stem that twines around the support is hard and woody, such plants are called psammophytes.

[R]: The hygroscopic roots have a spongy tissue called exodermis

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer: D**



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25. [A]: Leaf in *Daucus carota* is decomposed.

[R]: Saprophytic and parasitic modes of nutrition are considered as advanced feature

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer: B**



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**26. [A]:** The colour of flowers in Bougainvillia is due to the coloured bracts.

**[R]:** The flowers of Bougainvillia are largest among the plant kingdom.

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer: A**



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27. [A]: The endosperm contains the triploid number of chromosomes.

[R]: The endosperm is formed as a result of

fusion of two polar nuclei and one of the male nuclei

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer: A**



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**28.** [A]: Spore mother cells within the anther pollen sacs form four haploid pollen grains.

[R]: Spore mother cells divide meiotically to form four haploid pollen grains.

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer: B**



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**29. [A]:** One diploid embryo sac mother cell develops within the nucellus of the ovule.

**[R]:** Embryo sac mother cell divides meiotically and one of the cells produced becomes the haploid embryo sac.



A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer: B**



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30. [A]: Triple fusion results in vegetative fertilization of angiosperms.

[R]: It combines one male gamete with two synergids.

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer: C**



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**31. [A]:** Pollination is essential for fertilization.

**[R]:** Abscission or drooping of ovary is prevented by pollination.

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer: B**



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**32.** [A]: The biennial plants live for two years.

[R]: They flower in both years.

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer: C**



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**33.** Assertion (A): Many visitors to the hills suffer from skin and respiratory allergy problems.

Reason (R): Conifer trees produce a large quantity of wind-borne pollen grains.

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer: B**



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**34.** [A]: Endosperm is triploid in angiosperms.

[R]: In gymnosperms, it is haploid.

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer: B**



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**35.** Assertion. A pollen grain of angiosperm is considered as the male gametophyte .

Reason. All the nuclei of the pollen grain produce male gametes.

A. If both A and R are true and R is the correct explanation of A



B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer: C**



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**36.** Assertion. In apomixis , plants of new genetic sequence are produced.

Reason. In apomixis , two individuals of same genetic sequence meet .

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer: D**



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**37. Assertion :** In collateral vascular bundles phloem is situated toward inner side.

**Reason :** In monocot stem, cambium is present

.

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer: D**



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**38. [A]:** The secondary phloem constitutes a less prominent part of the tree trunk than the secondary xylem

**[R] :** The amount of Phloem produced by the cambium is smaller than that of secondary

- A. If both A and R are true and R is the correct explanation of A
- B. If both A and R are true but R is not the correct explanation of A
- C. If A is true and R is false
- D. If both A and R are false

**Answer: A**



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**39. [A]** : The narrow band of meristematic tissue present between phloem and xylem is called cambium

**[R]** : In dicotyledonous stem a part of the procambium remains meristematic which is called cambium

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer: A**



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**40. [A]:** The inner most distinct layer of the cortex is called endodermis.

**(A):** The cells of endodermis are nonliving and bear casparian strips

- A. If both A and R are true and R is the correct explanation of A
- B. If both A and R are true but R is not the correct explanation of A
- C. If A is true and R is false
- D. If both A and R are false

**Answer: C**



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**41. [A]:** Gramineous type of stomata are found in Gramineae and Cyperaceae.

**[R]:** Gramineous stomata are dumbbell shape

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer: A**



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**42. [A]:** Intercellular spaces are found in mesothematic cells

**(R):** The mesothematic cells are always rounded.

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer: D**



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**43.** [A]: Monocot stem has collateral open vascular bundle.

[R]: Open vascular bundle is without cambium.

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer: D**



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**44.** [A]: Root system in hydrophytes is poorly de-veloped.

[R]: The condition helps hydrophytes to avoid maximum water absorption

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer: A**



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**45. [A]:** Aerenchyma is a characteristic of lithophyte.

**[R]:** It is a specialised tissue for buoyancy in lithophytes

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer: D**



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**46.** [A]: Protostele is most simple primitive type of stele.

[R]: According to Histogen theory there are

three distinct apical layers which give rise to distinct tissue system of the body.

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer: B**



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47. [A]: Rubber is obtained from the latex of *Hevea brasiliensis*.

[R]: Because secretory canals are abundantly found in the secondary phloem

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer: A**



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**48. [A]:** No fibres are found in plants.

**[R]:** Xylem vessels are absent in an- giosperms.

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer: D**



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**49. [A]:** Sclerenchyma cells are rarely found in plants.

[R]: Sclerencyma cells are dead but have protoplasm

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer: D**



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50. [A]: Hanstein's dermatogen is not equivalent to Haberlandt's Protoderm.

[R]: Histogen theory has been proposed by Schemidt

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer: C**



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**51. [A]:** Trichomes may occur on all parts of a plant.

**[R]:** Trichomes either persist throughout the life of an organ or are ephemeral

- A. If both A and R are true and R is the correct explanation of A
- B. If both A and R are true but R is not the correct explanation of A
- C. If A is true and R is false
- D. If both A and R are false

**Answer: B**



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52. [A]: The vascular cambium is absent in monocots.

[R]: The monocots never show secondary growth

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false



**Answer: A**



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**53. [A]:** In the hydrophytes the Xylem is not differentiated into different types of cells.

**[R]:** Xylem provides support and helps in the conduction of water which is not very important in hydrophytes

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer: A**



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**54. [A]:** Dicot stem shows secondary growth.

**[R]:** Tissue system is not differentiated in dicot stem.

- A. If both A and R are true and R is the correct explanation of A
- B. If both A and R are true but R is not the correct explanation of A
- C. If A is true and R is false
- D. If both A and R are false

**Answer: C**



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55. given below are assertion and reson. Point out if

Assertion . In woody stems, the amount of heartwood continues year after year.

Reason. the cambial activity continues uninterrupted.

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer: A**



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**56. [A]:** The inner most distinct layer of the cortex is called endodermis.

**[R]:** The cells of endodermis are nonliving and bear casparian strips

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer: C**



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57. [A]: Sieve tube members have abundant cytoplasm but there is no nucleus.

[R]: The nucleus disintegrates during their development

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer: A**



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**58.** Assertion : In collateral vascular bundles phloem is situated toward inner side.

Reason : In monocot stem, cambium is present

.

A. If both A and R are true and R is the correct explanation of A



B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer: D**



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**59. [A]:** Xylem translocates water and dissolved mineral salts from the roots to the rest of the plant.

[R]: Phloem translocates dissolved organic and inorganic solutes

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

**Answer: B**



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