**CBSE TEST PAPER-04**

**CLASS - XI BIOLOGY (Plant Kingdom)**

**General Instruction:**

- All questions are compulsory.
- Question No. 1 to 3 carry one marks each. Question No. 4 to 7 carry two marks each. Question No. 8 and 9 carry three marks each. Question No. 10 carry five marks.

1. What is the name of the group of plants that bear cones?

2. Give an example for the red algae that is used as vegetable?

3. What do you mean by thallus?

4. Bring out any two important differences between Gymnosperms and Angiosperms

5. Comment on the role of capsule in the life cycle of a moss plant?

6. Distinguish between syngamy and triple fusion?

7. Enlighten the uses of ferns

8. Substantiate the statement “Bryophytes are the amphibians of plant kingdom”.

9. Discuss the salient features of gymnosperms.

10. How will you classify plant kingdom?

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**[ANSWERS]**

1. Conifers of Gymnosperms

2. *Porphyra*

3. Thallus is defined as a plant body which is not differentiated into root, stem and leaves.

4.

| Gymnosperm | Angiosperm |
|---|---|
| i) Seed bearing plants which donot have flowers but produce naked seeds. | i) Angiosperms are known as flowering plants which have seeds encased in fruits |
| ii) Endosperm is formed before fertilization | ii) Endosperms are formed after fertilization |
| iii) Eg. *Cycas, Pinus* | iii) Eg. *Delonix, Rosa* |

5. Capsule is the most important structure of sporophyte of moss plant. In the capsule, spores are produced after meiosis in spore mother cells. When the capsule matures, it dehisces and the spores are liberated out and thery are dispersed by winds. The spores develop under favorable conditions into protonema.

6. Syngamy refers to the fusion of a male gamete (sperm) with the female gamete (egg) to form a zygote in the female gametophyte while triple fusion is the fusion of another male gamete to the diploid secondary nucleus to form primary endosperm nucleus within the female gametophyte in the ovule.

7. i) Some ferns are very much used by florists for decoration.

ii) Some ferns are used as biofertilizers eg. *Azolla*

iii) Wood from tropical tree ferns is used as building material because it resists termite decay.

iv) Ferns are used as astringent during childbirth to stop bleeding.

v) Maiden hair fern is a source of expectorant as it contains falvonoids.

8. Amphibians are capable of living on land & water with equal case but they must come to water for reproduction during the breeding season to lay their egg. Water is therefore, essential for amphibians for breeding.

In the same way, Bryophytes live on land but they must get water for completing their life

cycle because only through the medium of water antherozoids reach the egg located within the venter of archegonia to fertilise the egg. If water is not available during this period bryophytes shall not survive. Hence, on account of this similarity the bryophytes are called as “Amphibians of plant kingdom”

9. i) Gymnosperms grow in habitats which possess cool & warm climate.

ii) They are evergreen woody & perennial plants

iii) They have well developed vascular system but when compared to Angiosperms, they have no vessel in their xylem & their phloem is without companion cell.

iv) Plants are heterosporous.

v) Conifers are cone bearing trees eg. pines, cedrus fir.

vi) They usually have evergreen needle like leaves which are well adapted to withstand extremes of temperature, humidity & wind.

vii) Reduction of gametophytic generation.

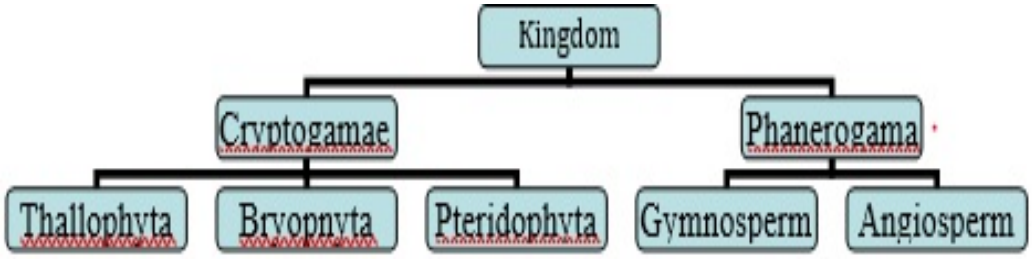
viii) The leaves have a reduced surface area thick cuticle & sunken stomata to conserve moisture & reduce the water loss by transpiration.

ix) Ovules are naked and exposed to receive pollen grains.

x) owing to the naked nature of ovules, the seeds of Gymnosperms are also naked.

xi) Polyembryony is common occurrence.

10.




i) Thallophytic:- plant body is thallus i.e. not differentiated into root, stem & leaves eg. *Chlorella, Ulothrix, Spirogyra* etc.

ii) Bryophyta:- Amphibious in habit, water is necessary for fertilization, Vascular tissues are absent eg. *Riccia, Marchantia, Funaria*. the main Plant body is Gametophyte.

iii) Pteridophyta:- Plant body is differentiated into distinct underground stem like rhizome bearing roots & aerial shoots with leaves. They are called “primitive vascular plants “ eg. *Equistem, Adiantum, Pteris*

iv) Gymnosperm:- seeds are naked eg. *Cycas, Pinus, Cedars*

v) Angiosperm:- seeds are protected inside the friuts eg. i) monocotyledones eg. grass, maize, rice & ii). Dicotyledons eg gram, pea, sunflower.