6. Classification of plants

Extra Question

Q.1 Plants belonging to Thallophata group are only unicellular is the following statement true or false ?

Ans- The following statement is false plants belonging to thallophyta group may be unicellular as well as multi-cellular.

Q.2 To which division does Nephrolepis belong ?

Ans- It belong to division petridophyta.

Q.3 The seeds are covered by fruits, in Angiosperms.

Ans- The following statement is true.

Q.4 Dicotyledonous plants show reticulate venation

Ans- False Dicotyledonous plants show parallel venation.

Q.5 Answer the following and explain is called the amphibian of the plant kingdom

Ans- Bryophyta. Bryophyta grow in moist soil, and need water for reproduction. Hence they are amphibians of the plant kingdeom.

Q.6 Answer the following and explain Male and female flowers of are borne on different sporophylls of the same plant.

Ans- Gymnosperms, as they do not take aid of pollinators or vectors, the male and female flowers are present on different sporophyll of the same plant for reproduction.

Q.7 Differentiate between Bryophyta and pteridophyta

Bryophyta	Pteridophyta
a) Bryphyta grow in moist soil, but need water for reproduction.	a) Pteridophytes grow in soil
b) Plant body is not differentiated in true roots, stem and leaves.	b) Plant body is differentiated into true roots, stem and leaves.
c) Conducting tissues for food and water absent e.g – Moss	c) Conducting tissues for food and water present e.g – Nephrolepis.

Q.8 Write a note on Thallophyta

Ans- a) Thallophyta plants grow in water. A group of plants that do not have parts like root-stem-leaves and flowers, they are autotrophic due to chlorophyll are called as Algae.

b) Algae may be unicellular, multicellular, microscopic or even large in size.

c) Algae are found in fresh water and also in saline water.

d) The different types of fungi as yeasts or moulds, do not contain chlorophyll are also in this group. e.g- spriogyra, ulothrix, ulva etc.

Q.9 Write a note on Gymnosperms

Ans- a) Gymnosperms are evergreen, perennial and also woody.

b) Their stems do not have branches, and they have characteristic of leaves that form a crown

c) These plants do not form fruits and hence are called as gymnosperms. The meaning of gymnosperms-gymnos means naked and sperms means seeds.

d) Gymnosperms contain male and female flowers on different sporophylls of the same plant.

e) These plants are named Gymnosperms because, the seeds of these plants do not have natural coverings eg cycas, peace (charismas tree), pinus (decodar).

Q.10 Write the characteristics of the plants that belong to division Bryophyta.

Ans- a) Bryophyta group of plants grow in the moist soil. They need water for reproduction. Hence Bryophyta group of plants are called amphibians of the plant kingdom.

b) These plants are called as Thalloid, multicellular and autotrophic.

C) The reproduction is through spore-formation.

d) Their plant bodly structure is flat, ribbon-like long, absence of true-roots, stem and leaves.

e) They have stem-like or leaf like parts and root like rhizoids.

f) For conduction of food and water they do not have any specific tissues. E.g Moss (Funaria), Anthoceros, Riccia etc

Q.11 Match the pairs

1) Bryophyta	a) ulothrix
2) Thallophyta	b) Mango
3) Pteridophyta	c) Funaria
4) Gymnosperms	d) Thuja
5) Angiosperms	e) Selaginella

Ans-

1) Bryophyta	Funaria
2) Thallophyta	Ulothrix
3) Pteridophyta	Selaginella
4) Gymnosperms	Thuja
5) Angiosperms	Mango

Q. 12 Why do certain ponds appear green in color?

Ans- The greenish color of some ponds is due to presence of greenish fiber in water. This plant is spirogyra. Hence few ponds appear greenish in color.

Q. 13 What are the reproductive organs in angiosperms?

Ans- In Angiosperms, the flowers that are produced by plants are their reproductive organs. The flowers develop into fruits, with the seeds closed inside them.

Q. 14 Which are the plants that do not have chlorophyll, but are yet classified under thallophyta.

Ans- Yeast and molds are the plants that do not have chlorophyll but yet are classified under thallophyta.

Q. 15 Which scientist proposed the Five kingdom classified of living organism?

Ans- Robert whittaker.

Q. 16 Describe about the plant Marchantia and funarla in brief.

Ans.- The thallus or the main body has two layers. The upper layer performs photosynthesis. The lower layer is used for storage. The rhizoids are root like structures.

Funaria - It has leaf like prostate green, branched filamentous structure. This leaf like structure has root like, rhizoids. The plant body gives rise to long stalk with a pear shaped capsule that contains spores. The plant reproduces by spore formation.

Q. 17 Differentiate in the following Algae and Fungi.

Algae	Fungi
1) These are autorophic organisms.	These are saprophytic organsims.
2) It has presence of chlorophyll.	It has absence of chlorophyll
3) Unicellular or multicellular plants	They are mostly multicellular plants

Q. 18 Write any two examples of each of the following division.

a) Tahllphyta b) Angiosperms c) Bryophyta d) Pteridophyta

e) Gymnosperms.

Ans- a) Thallophyta – Ulothrix, yeast

b) Angiosperms – Bamboo, Onion

c) Bryophyta – Marchantia, Anthoceros
d) Peteridophyta – Marsilea, Petrise
e) Gymnosperms – Cycas, Picea.

Q. 19 Give reason plants are autotrophic

Ans- Plants contain chlorophyll pigments that are present in chloroplast in their cells. The chlorophyll pigments absorb the solar energy and convert it into chemical energy by the process of photosynthesis. They systhesize their own food. Hence plants are autotrophic.

Q. 20 Distinguish between cryptogams and phanerogams.

Ans-

Cryptogams	Phanerogams
a) They inculde three division thallophyta, bryophyte and pteridophyta.	They have two divisions gymnosperms and angisoperms.
b) They do not produce seed, they reproduce by spore formation	They produce seed and have special structures for reproduction.
c) Their reproductive organs are hidden.	They have well differentiated visible reproductive structures.

Q. 21 Describe the special cell organelles that differentiate plant cells form animal cells?

Ans- There are special cell organelles that differentiate plant cells form animal cells

1) Plastids- They are present in plant cells that contain pigments, help in process of photosynthesis, and storing food material. These organelles are not present in animal cells.

2) Vacuoles - Plants have large central vaculoe, and animals have small temporary vacuoles.

Q. 23 Write the classification of Hibiscus

Hierarchy	Hibiscus
Kingdom	Plantae
Division	Angiospermae
Calss	Dicotyledons
Order	Malvales
Family	Malvaceae
Genus	Hibiscus
Species	Rosa-sinesis

Q.23 Write the classificaiton of Tuberose.

Hierarchy	Tuberose
Kingdom	Plantae
Division	Angiospermae
Calss	Monocotyledons
Order	Asparagales
Family	Asparagaceae
Genus	Polianthus
Species	Tuberosa

Q. 24 Find out the similarity between the plants of the groups, Thallopyta, Bryophyta and pteridophyta regardless of the difference in body structure

Ans- In Thallophyta, Bryophyta and pteridophyta reproduction occcurs through spores. They do not have reproductive system. Hence they are called cryptogams.

Q. 25 Based on the number of cotyledons what are the groups of plants classified into ?
Ans- Monocotyledonous and Dicotyledonous are the groups of plants classified according to number of cotyledonous.

Q.26 Who classified the plants and describe the gropus ?
Ans- Eicher classified the plants kingdom plantae in two sub kingdoms. Cryptogams and phanerogams.

Q. 27 What is the classification based on criteria if seeds are enclosed in a fruit or not?
Ans- Groups of plants are according to the number of cotyledons are Monocotyledonous and dicotyledonous plants.

Q. 28 What is the criteria to classify the lower groups of plants?
Ans- The criteria to classify the lower groups of plants is if the parts have body organs and if they have conducting tissues for conduction of water and food.

Q. 29 The number of cotyle done is taken into consideration in classifying the plants into angiosperms and gymnosperms. Is the following statement true?
Ans- The following statement is false.

Q. 30 What are filaments in spirogyra that contain green spiral shape called?
Ans- Chloroplasts.

Q. 31 Which scientist gave the plant classification ?
Ans- Carl Linnaeus.

Q. 32 What is the criteria is division of kingdom plantae done into cryptogams and phanerogams?
Ans- The seeds enclosed into fruit.

Q. 33 In which subkingdom are the plants belonging to Thallophyta, Bryophyta and pteridophyta
Ans- a) Subkingdom Cryptogarmas.

Q.34 Observe a plant of onion and describe it
Ans- Onion (Allium cepa)

Root- Fibrous
Stem – underground (bulb)
Leaves – Hollow and tublular
Flower – Compelete, bisexual.
Perianth – 6 lobes, arraned in two whorls of 3 each.
Androecium -6 stamens, Epiphyllous
Gynoecium – Tricarpellary, syncarpous.

Q. 35 write a note on Botanist Eichler

Ans- In 1883 botanist Eichler classified kingdom plantae into sub-kingdom cryptogams and phanerogams. These two sub-kingdom were considered for the classification of plants.

Q.36 Describe the characteristics of subkingdom phanerogams.

Ans- a) Phanerogams are the plants that bear seeds. b) Seeds are used for reproduction, It contains embargo and store food. The stored food is used for growth of embryo during germination. c) Phanerogams are further divided as gymnosperms and angiosperms depending on the criteria if seeds are enclosed in the fruit or not.

Q. 37 Write a note on Gymnosperms

Ans- Plants belonging to Gymnosperms are perennial, woody and evergreen. The stems are not having branches and leaves are crown like. The male and female flower occur on different sporphyllsborne by the same plant. The seeds do not possess a natural covering they do not bear fruits eg. Cyas.

Q. 38 Write a note on Angiosperms

Ans- The plants in this category are herbs, shrubs and trees. They are annual, biennial and pernnial. The stems are branched, and have different types of leaves. The male and female reproductive organs occur in the same flower or different flower. The seeds possess a natural covering. They bear fruits eg. Maize

Q. 39 Write two examples of Gymnosperms
Ans- 1) Pinus 2) Thuja

Q.40 Write two examples of Angiosperms
Ans- Wheat, Mustard

Q.41 Write a note on Monocot.
Ans- Monocots have fibrous roots. Stems are unbranched. The leaves show parallel venation, Flower are trimerous type eg. Maize.

Q.42 Write a note on Dicaot
Ans- Dicots are Tap rots. Its stem are branched. Leaves have reticulate venation. Flowers are Tetra or pentamerous. Eg. Sunflower.

Q.43 Write two examples of Monocot
Ans- 1) Wheat 2) Jowar

Q.44 Write two exmaples of Dicot
Ans- 1) Mustard 2) Beans

Q.45 Write examples of two plants belonging to Bryophyta group
Ans- 1)Marchantia 2)Anthoceros

Q.46 Write a note on spirogyra
Ans- a) Spirogyra is a green filamentous Algae it belongings to Thallophyta division
b) It grows in fresh water.

c) Due to presence of chlorophyll, it synthesize. Its food by process of photosynthesis. It contains chloroplast that are spirally arranged thread like structure. In each chloroplast, there are many rounded bodies surrounded by starch. These rounded bodies are called pyrenoids.

Q.47 Write the classification of plants.

Ans- a) Kingdom plantge is divided into two sub dicisions that are cryptogams and phanerogams.b)Cryptogams are divided in Thallophyta, Brypophyta and Pteridophyta.c)Phanerogams are divided into Gymnosperms and Angisoperms d)Angiosperms are further divided into Dicotyledons and Monocotyledons.

Q.48 What is the main distinguishing character between wheat and beans?

Ans- Wheat has a single cotyledon in its see and beans has double cotyledon in its seed.

Q.49 What is the shape of a moss capsule?

Ans- A mass capsule is pear shaped.

Q.50 What is type of flowers in Monocotyledons?

Ans- Trimerous flowers.