EXAMINATION, 2005
BOTANY, PAPER-I

Time Allowed 3Hrs. **Max Marks 100**

Note: Attempt **five** questions in all, including question no. 8, which is compulsory. All questions carry equal marks.

1 (a) Describe in detail the life cycle of Chara. Why it is considered more close to chlorophyceae?

(b) Write a note on followings:

(i) Vegetative reproduction in Nostoc
(ii) Sexual reproduction in Oedogonium
(iii) Plant body of Vaucheria

2 (a) What are different types of Lichens? Give in detail methods of reproductions in Lichens.

(b) Describe in detail the economic importance of fungi.

3 (a) What do you know about Stellar System? Describe different kinds of stele.

(b) Differentiate between the following

(i) Heartwood and Sapwood
(ii) Protoxylem and Mata xylem
(iii) Parenchyma and Collenchyma
(iv) Porouswood and Non porous wood
(v) Apical meristem and Lateral meristem
(vi) Taxonomy and Systematics

4. (a) What are different types of systems of classifications? Illustrate your answer with the help of example.

(b) Write a note on followings:.

(i) Binomial Nomenclature
(ii) Rules of Nomenclature

5 (a) Describe in detail male and female cones of Pinus.

(b) Draw neat and labelled diagrams of TS of leaf of Pinus.

(a) What are stomata? Describe its structure and functions

6 (a) Give an account of life cycle of Equisetum.

(b) Write a detailed note on Pollination.

(a) What do you know about Sporophyte of Riccia

7 (a) Write down the characters of bryophytes.

(b) Write a note on chemo taxonomy.

(a) What is the economic importance of algae?

Compulsory Question

8 Write only correct answer in the Answer Book. Do not reproduce the question.

(1) Bentham and Hooker system of classification is an example of:

(a) Artificial system (b) Natural system
(c) Modern system (d) None of these

(2) Potato belongs to family ;

(a) Solanace (b) Cruciferae
(c) Malvaceae (d) Graminae

(3) Fruit is technically defined as:

(a) endosperm (b) Endocarp
(c) Cosphere (d) None of these

(4) Double fertilization is typical feature of :

(a) Bryophytes (b) Algae
(c) Fungi (d) Angiosperm

(5) Plant cell wall composed of:

(a) cellulose (b) Glucose
(c) chlorophyll (d) None of these

(6) The sieve elements are the major components of:

(a) Xylem (b) phloem
(c) Cambium (d) None of these

(7) The phenomenon of meiosis always takes place in:

(a) Somatic cell (b) Sex cell
(c) Meristematic (d) None of these

(8) Funaria is an example of:

(a) Fern (b) Algae
(c) Fungi (d) Liverworts

(9) Damping off disease is caused by

(a) Ustilayo (b) Aspergillus
(c) Penicillium (d) None of these

(10) Algae are divided into different classes on the basis of:

(a) Body form
(b) Pigments
(c) Methods of Reproduction
(d) All of these

(11) In ascus mother cell after meiosis the number of nuclei produced are:

(a) 2 (b) 4
(c) 16 (d) 8

(12) Rlue green algae is a common name of:

(a) Xanthophyceaé
(b) Chlorophyceae
(c) Cyanophycemae
(d) Charophyceae

(13) The largest algae in size

(a) Acetabularia (b) Kelps
(c) Fucus (d) None of these

(14) Agar agar is obtained from member of class:

(a) Phaeophyceae (b) Chrysophyceae
(c) Rhodophyceae (d) None of these

(15) The fibres found in phloem are called

(a) Wood fibre (b) bast fibre
(c) brush fibre (d) soft fibre

(16) In bryophytes the vegetative by:

(a) Sporphyte (b) Stroboli
(c) Gametophyte (d) None of these

(17) Marchantia reproduces vegetatively by:

(a) budding (b) Gemma cup
(c) apospory (d) None of these

(18) The differentiations of sporophyte into foot seta and capsule is the characteristic of:

(a) angeosperm (b) Gymnosperm
(c) Pteridophytes (d) Bryophytes

(19) If Xylem is present on inner side while phloem occupies outer side then this type of arrangement of vascular bundle is called is:

(a) concentric (b) bicollateral
(c) collateral (d) None of these

(20) Sporophyte generation is borne upon gametophyte and is dependent upon it. This character is found in:

(a) Adiantum (b) Cycas
(c) Equisetum (d) None of these

EXAMINATION, 2005
BOTANY, PAPER-II

Time Allowed 3Hrs. **Max Marks 100**

Note: Attempt **Five** questions in all, including Question no. 8, which is compulsory. All questions carry equal marks.

1 (a) Discuss the role of light and the transformation of CO_2 in photosynthesis.

(b) Define respiration. What is meant by respiratory quotient.

(c) What is dormancy? Describe methods of breaking dormancy.

2 (a) Define ecology. Describe applications of ecology in detail.

(b) What is plant succession ? Give detailed account of process of plant succession starting in a lake..

3 (a) Give an account of methods for reclamation of waterlogged soil.

(b) Write an essay on natural resources of Pakistan .

4. (a) What is soil errosion? What are its causes? How we can control it?

(b) Environmental pollution is the result of Urbanization and industrializations. Comment.

(5) Write notes on the following:

(a) Plant Hormones
(b) Vernalization and its significance
(c) Food Web
(d) Methods of Sampling vegetations

6 Describe the structure and functions of following cell organelles.

Draw diagram where necessary:

(a) Mitochonderia (b) Cell Wall
(c) Golgibodies (d) Endoplasmic reticulum.
(e) Ribosomes

7 (a) What do you know about theory of natural selection.

(b) What is mutation? Describe its different types?

(a) Give an account of crossing over and Polyploidy.

Compulsory Question

8. Write only the correct answer in the Answer Book. Do not reproduce the question.

(1) The membrance of vacuole is known as:
(a) Tonoplast (b) Chromoplast
(c) Leucoplast (d) None of these

(2) The RNA which helps in decoding of triplet codon is known as :
(a) r RNA (b) t RNA
(c) m RNA (d) None of these

(3) Transfer of material from higher concentration to lower concentration across semipermeable membrance is called..
(a) mass flow (b) Diffusion
(c) Osmosis (d) None of these

(4) Loss of water in the form of vapours from living surface of plants is termed as:
(a) Evaporation (b) Sublimation
(c) Evapotranspiration
(d) None of these

(5) The movement of material within the plant body is known as:
(a) absorption (b) ascent of sap
(c) Translocation (d) chemotropism

(6) The oxygen produced during photosynthesis comes from
(a) air (b) water
(c) CO_2 (d) ATP

(7) The study of plant community is called
(a) Ecology (b) Autecology
(c) Plant geography (d) None of these

(8) The bending movement of plant in response to light is known as:
(a) Thigmotropism (b) transmotropism
(c) phototropism (d) None of these

(9) The occurrence of vegetation in layers is known as:
(a) Pattern (b) Stratification
(c) Scarification (d) Physiognomy

(10) The plants which prefer to grow in moderate habitats are called as:
(a) Xerophytes (b) Hydrophytes
(c) Heliophytes (d) None of these

(11) A particular place where the organism lives is termed as:
(a) environment (b) Nich
(c) Habitat (d) None of these

(12) Pioneerspecies of xerosere are:
(a) Crustose lichens (b) Foliose lichens
(c) Fungi (d) Grasses

(13) The strip of vegetation planted to check the velocity of wind is called as:
(a) Timberline (b) flag formation
(c) Sheiter belt (d) None of these

(14) The factors which are concerned with soil are called as:
(a) Climatic factor (b) Edaphich factors
(c) Topographic factors
(d) Physiographic factors

(15) The chromosomes are composed of:
(a) Protein (b) DNA
(c) Protein and DNA
(d) None of these

(16) Test cross is a cross between:
(a) F_1 and F_1 (b) F_1 and F_2
(c) F_1 and double recessive
(d) None of these

(17) The colorless plastieds are known as:
(a) Leucoplast (b) Chloroplast
(c) Chromoplast (d) None of these

(18) Genes are located on:
(a) Nucleus (b) DNA
(c) Ribosomes (d) Chromosomes

(19) Division of Nucleus is termed as:
(a) cytokinesis (b) Karyuokinesis
(c) Karyotypo (d) None of these

(20) The cell organelle on which ribosomes are present are called:
(a) Rough ER (b) Smooth E.R.
(c) Cytoplasm (d) None of these

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