

# BOTANY

2014

Time: 15 Minutes

Max. Marks: 09

## SECTION "A" (MULTIPLE CHOICE QUESTION)

1. Choose the correct answer for each from the given options:
- (i) The Amoeboid stage of Slime mold is called:  
\* Plasmodium \* Water mold \* Entamoeba \* none of these
  - (ii) These Fungi lack sexual reproduction:  
\* Zygomycota \* Ascomycota  
\* Basidiomycota \* Deuteromycota
  - (iii) This is heterosporous:  
\* Rhynia \* Selaginella \* Moss \* Lycopodium
  - (iv) Hydathodes take part in the process of:  
\* Transpiration \* Translocation \* Guttation \* Ascent of sap
  - (v) Chloroplast contains densely packed stacks of thylakoids known as: \* Stroma \* Grana \* Frets \* Matrix
  - (vi) Lycopersicum-esculentum is the biological name of:  
\* brinjal \* potato \* tomato \* apple
  - (vii) Fertilization in Spermatophytes does not need water because of: \* roots \* pollen tubes \* styles \* stigma
  - (viii) During pregnancy, this type of hepatitis passes through mother to child via blood: \* A \* B \* C \* D
  - (ix) Oyster mushrooms are an example of:  
\* Symbiotic fungi \* Parasitic fungi  
\* Saprophytic fungi \* Predator fungi
  - (x) Bryophytes are:  
\* Non-vascular plants \* Vascular plants  
\* Aquatic plants \* none of these
  - (xi) Seed plants are included in:  
\* Psilopsida \* Lycopsida \* Sphenopsida \* Spermopsida
  - (xii) Process of absorption of water and swelling up of hydrophilic substance is known as:  
\* Plasmolysis \* De-plasmolysis \* Imbibition \* Osmosis
  - (xiii) Late blight of potato is caused by:  
\* Phytophthora \* Puccinia \* Penicillium \* Mucor
  - (xiv) Ulva is also known as:  
\* Sea-grass \* Sea-lettuce \* Sea-urchin \* none of these
  - (xv) Bacteria grow and multiply very rapidly during:  
\* LAG phase \* LOG phase  
\* Stationary phase \* Declining phase
  - (xvi) Cell membrane is composed of:  
\* Protein & Carbohydrate \* Carbohydrate & Lipid  
\* Protein and Lipid \* Lipid and Vitamin
  - (xvii) The process by which cell membrane absorb solid particles is called:  
\* Pinocytosis \* Diffusion \* Phagocytosis \* Absorption
  - (xviii) The final tool for classification is:  
\* Cytology \* Homology \* Biochemistry \* Genetics

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Time: 1 Hours 45 Minutes

Marks: 36

## SECTION 'B' (SHORT-ANSWER QUESTIONS) (22)

**NOTE: Answer 11 questions from this section.**

- 2.(i) Draw a labeled diagram of Fluid mosaic model of cell membrane.
  - (ii) Define any one of the following: (a) Facilitated diffusion (b) Active transport (c) Plasmolysis
  - (iii) Trace the evolution of leaf in green plants.
  - (iv) Draw a labeled diagram of any one:  
(a) Bacteriophage virus (b) L.S. of Ovule
  - (v) State the role of Phosphorus OR Potassium in the development of plants and its deficiency symptoms.
  - (vi) Explain the two factors which affect the opening and closing of Stomata.
  - (vii) How are Bacteria classified on the basis of Flagella?
  - (viii) Name any four Viral disease with their respective causative agents.
  - (ix) Why do biologists consider kingdom Protocista as a polyphyletic group of organisms?
  - (x) Write a note on Oxidative phosphorylation.
  - (xi) Draw a diagram showing efficiency of Food chain.
  - (xii) Name five major groups of Tracheophyta with examples.
  - (xiii) Write a note on Lysosomal storage disease.
  - (xiv) Discuss the techniques to isolate the components of a cell. (xv) Write a note on Cytoskeleton OR Nucleus.
  - (xvi) Differentiate between Prokaryotes and Eukaryotes.
- OR Draw structure of Chlorella (no description is required)

## SECTION 'C' (DETAILED- ANSWER QUESTIONS)

**NOTE: Answer 2 question from this section (14)**

- 3. Describe and draw the life cycle of a Basidiomycetes fungus. OR Define HIV virus. Describe the disease caused by this virus.
  - 4. Discuss the life cycle of Moss.
  - 5. Give floral characters, floral formula, floral diagram and economic importance of family Solanaceae.
- OR Explain the events that take place during light reaction of photosynthesis.