

**GOVERNMENT COLLEGE UNIVERSITY, FAISALABAD**

**QUESTION PAPER FOR EXTERNAL EXAMINATIONS**

B Sc. (Composite)

Annual -2012

Subject: Botany

Course Title: Morphology of Plants

Paper: - A

Time Allowed: 03:00 Hours

Maximum Marks: 35

Pass Marks: 33%

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**Note:** Attempt any FIVE questions by selecting TWO questions from Section-I and THREE questions from Section-II. Elaborate your answers with labeled diagrams, where necessary. All questions carry equal marks.

**SECTION-I**

- Q-1** a) What are various steps during the replication of virus?  
b) Explain autotrophic mode of nutrition in bacteria.
- Q-2** Write notes on:  
a) Sexual Reproduction in Vaucheria  
b) Globule of chara
- Q-3** Describe the life Cycle of ustiligo.
- Q-4** Explain the classification of ascomycota.

**SECTION-II**

- Q-5** Compare the Sporogonium of anthoceros with that of porella.
- Q-6** Discuss the life cycle of marsillia.
- Q-7** Describe the internal structure of rhizome of psilotum.
- Q-8** Describe the male and female cone of PINUS.
- Q-9** Describe the stem Anatomy of ephedra.
- Q-10** Write notes on:  
a) Draw the labeled diagram of ovule of angiosperm  
b) Explain the Internal structure of physcia thallus

## Model Paper

Roll No. ....

### GOVERNMENT COLLEGE UNIVERSITY, FAISALABAD

#### QUESTION PAPER FOR EXTERNAL EXAMINATIONS

B Sc. (Composite)

Annual -2012

Subject: Botany

Course Title: plant Systematic Anatomy & Development

Paper: - B

Time Allowed: 03:00 Hours

Maximum Marks: 35

Pass Marks: 33%

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**Note:-** Attempt any FIVE questions by selecting at least TWO questions from each section. Elaborate your answers with labeled diagrams, where necessary. All questions carry equal marks

#### SECTION-I

- Q-1 a) What is plant systematics? Difference between phylogenetic and artificial systems of Classification.  
b) Give significance of binomial nomenclature.
- Q-2 a) Define Inflorescence. Differentiate between cymose & racemose inflorescence.  
b) Define spike, catkin & umbel.
- Q-3 a) Differentiate between tap root & adventitious root. Write modification of tap root.  
b) Define stilt root & prop root.
- Q-4 Write distinguishing features of family solanaceae. Give its economic importance; write botanical names of least four economically important plants.
- Q-5 Write notes on:-  
a) Asteraceae fruits  
b) tendril & its types

#### SECTION-II

- Q-6 a) What are PITS? Differentiate between simple pits and bordered pits.  
b) Give structure of bordered pit pair and half bordered pit pair.
- Q-7 Define tissue. Differentiate between SIMPLE and COMPLEX TISSUE. Write different types of simple tissues.
- Q-8 a) Differentiate between primary and secondary growth.  
b) Write secondary growth in dicot stem.
- Q-9 Write notes on:-  
a) meristem and its types.                      b) vessels and tracheids.

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**QUESTION PAPER FOR EXTERNAL EXAMINATIONS**

B Sc. (Composite)

Annual -2012

Subject: Botany

Course Title: Cell, Biology, Genetics and evolution

Paper: - C

Time Allowed: 03:00 Hours

Maximum Marks: 35

Pass Marks: 33%

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**Note:** - Attempt any FIVE questions by selecting at least TWO questions from each section. Draw suitable diagrams, where necessary. All questions carry equal marks

**SECTION-I**

- Q-1** a) Discuss the structure and function of Lipids.  
b) Describe the structure of DNA
- Q-2** a) Describe Ultra structure and functions of Mitochondria.  
b) Write a note on Dictyosomes.
- Q-3** a) What is Meiosis? Discuss briefly the Meiosis- I  
b) What is significance of Mitosis?
- Q-4** a) Describe Physico-chemical nature of cytoplasm.  
b) Write a note on Karyotype analysis.
- Q-5** a) Give an account of Euploidy.  
b) Differentiate between Deletion and duplication.

**SECTION -II**

- Q-6** a) Differentiate between the followings.  
i) Test cross and Back cross.  
ii) Dominance and incomplete Dominance  
b) Give an account of law of independent assortment.
- Q-7** a) What is sex linked inheritance? Explain sex Linkage in man (colour blindness).  
b) Write a note on linkage and crossing over.
- Q-8** What is translation? Give a detail account of protein synthesis.
- Q-9** a) What is gene mutation? Describe physical and chemical mutagens  
b) Write a note on release of new varieties.
- Q-10** a) Give an account of Darwin's theory of evolution.  
b) Write a brief note on genetic conservation.

**Model Paper**

Roll No. ....

**GOVERNMENT COLLEGE UNIVERSITY, FAISALABAD**

**QUESTION PAPER FOR EXTERNAL EXAMINATIONS**

B Sc. (Composite)

Annual -2012

Subject: Botany

Course Title: Plant Physiology and Ecology

Paper: - D

Time Allowed: 03:00 Hours    Maximum Marks: 35

Pass Marks: 33%

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*Note:- Attempt any FIVE questions in all but not more than THREE from any section*

*All question carry equal mark.*

**SECTION-I**

- Q-1** a) Give a detailed account of Tropic movements in Plants.  
b) Briefly discuss properties and biological significance of colloidal systems.
- Q-2** a) What are psychological role and deficiency symptoms of nitrogen, phosphorus and calcium in plants?  
b) How the molecular nitrogen of the atmosphere is fixed?
- Q-3** a) Briefly discuss the mechanism of photosynthesis explaining photolysis, energy and (CO) 2 fixation.  
b) Write a short note on Plant Tissue Culture.
- Q-4** a) Write a short note on Krebs cycle.  
b) Define and discuss photoperiodism. What is the significance of hormones in Photoperiodism?
- Q-5** a) What are Enzymes? How they are classified? Discuss their nature and properties.  
b) What is Dormancy? Discuss various methods of breaking and dormancy.

**SECTION -II**

- Q-6** a) What is Soil Organic matter and its importance?  
b) What is Soil Erosion? Discuss Soil Erosion by wind and its control.
- Q-7** a) Give an account of water cycle in nature and its importance of atmospheric moisture to plants.  
b) Briefly discuss the impact of Wind as an ecological factor.
- Q-8** a) Define an Ecosystem. Discuss ecological energetic in terms of Food chains, Food web and Tropic levels.  
b) Write a short note on desertification.

- Q-9** a) What is productivity? Briefly give an account of different methods of its measurement.  
b) Write a short note on conservation of natural resources.
- Q-10** a) Give an account of eco-psychological responses of plants to light and temperature.  
b) Critically discuss Environmental Pollution.