

**KHYBER PAKHTUNKHWA, PUBLIC SERVICE COMMISSION**

**COMPETITIVE EXAMINATION FOR THE POSTS OF PROVINCIAL MANAGEMENT SERVICES (BPS-17)**

2013

**BOTANY PAPER-I**

**TIME ALLOWED: 03 HOURS**

**MAX. MARKS: 100**

Note: Attempt any FIVE questions.

I.	Which are the criteria used for the classification of algae? Succinctly describe the life cycle of algae. Also describe their economic importance.	20
II.	Fungi cause various diseases in plants. List and describe most common diseases of commercial crops caused by fungi. What are control measures of these diseases?	20
III.	Differentiate between gametophytes and sporophytes of Bryophytes. Describe the process of evolution of both gametophytes and sporophytes.	20
IV.	How are Pteridophytes different from Gymnosperms? What are their general structures? Succinctly describe the life history and seed structure of Gymnosperms.	20
V.	Differentiate between primary and secondary growth. List various types of secondary growth. How does differentiation occur in tissues? Briefly describe the process of megasporogenesis.	20
VI.	What is pollination? How does this process occur in plants? Elucidate the mechanism of development of embryo and endosperm in plants.	20
VII.	Plant systematics is an important branch of botany. List the rules of botanical nomenclature. Also describe the concept of speciation in plants.	20
VIII.	Differentiate between chemotaxonomy and numerical taxonomy. How are they important for the classification of plants? Justify your answer with suitable examples.	20