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KHYBER PAKHTUNKHWA, PUBLIC SERVICE COMMISSION

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

2016

BOTANY PAPER-II

TIME ALLOWED: 03 HOURS

MAX. MARKS: 100

Note: Attempt any **FIVE** questions.

I.	What are the respiratory substrates? What are various steps of aerobic respiration? Elucidate the mechanism of Krebs cycle by giving structural formulae of all compounds involved in it. Also elaborate the energetics of Krebs cycle.	20
II.	Plant growth is affected by various environmental factors. How do various climatic and biotic factors affect plant growth? Describe your answer with suitable examples.	20
III.	Write a detailed note on structure, biosynthesis, mode of action and physiological functions of gibberellins.	20
IV.	Pollution is a big threat for natural population on the globe. Which types of pollutants are dangerous for plant populations and how they can be conserved? Elaborate your answer with appropriate example.	20
V.	Differentiate between meiosis and mitosis. Succinctly describe the mechanisms of both. What is the significance of meiosis in plants?	20
VI.	List various theories of evolution. Which of the theories is more acceptable? Justify your answer with suitable examples.	20
VII.	What is genetic code? Write in detail the nature of hereditary material. How do genes express in prokaryotes?	20
VIII.	What are the ecosystems and their productivity? What type of ecosystem is more productive and how?	20