



KHYBER PAKHTOON KHWA, PUBLIC SERVICE COMMISSION, PESHAWAR.

**SUBJECT:- COPETTIVE EXAMINATION FOR THE POSTS OF PROVINCIAL 2010
MANAGEMENT SERVICE(BPS-17).**

BOTANY PAPER-II

Time Allowed: 03 hours.

Max: Marks: 100

Note: Attempt any **FIVE** questions.

- I. Enlist **macro** and **micronutrients** required by the plant. Also describe the role played by them in plant growth and development. **20**
- II. Differentiate between **soil texture** and **soil structure**. Give the role of soil structure in plant growth. **20**
- III. (a) Give ultra structure of **Nucleus**, with suitable diagrams. **10**
(b) **DNA** study is becoming very important in day-to-day life. Comment. **10**
- IV. How many kinds of **pollution** exist in world? Describe the measures taken by Govt of Pakistan to reduce air and water pollution. **20**
- V. Differentiate between **transduction** and **transformation** with suitable examples. **20**
- VI. What is **Phosphorylation**? Differentiate between photophosphorylation and oxidative phosphorylation. Describe in detail **Melvin Calvin's cycle**. **20**
- VII. **Water logging** and **Salinity** are the twin problems in Pakistan. Comment. **20**
- VIII. What is the bio-chemical nature of **proteins**? Describe in detail its structural configurations. **20**