FEDERAL PUBLIC SERVICE COMMISSION

COMPETITIVE EXAMINATION-2024 FOR RECRUITMENT

TO POSTS IN BS-17 UNDER THE FEDERAL GOVERNMENT

Roll Number

AGRICULTURE AND FORESTRY

TIME ALLOWED: THREE HOURS **PART-I(MCQS): MAXIMUM 30 MINUTES**	**PART-I (MCQS) MAXIMUM MARKS = 20** **PART-II MAXIMUM MARKS = 80**

NOTE: (i) **Part-II** is to be attempted on the separate **Answer Book.**

(ii) Attempt **ONLY FOUR** questions from **PART-II. ALL** questions carry **EQUAL** marks.

(iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.

(iv) Candidate must write Q. No. in the Answer Book in accordance with Q. No. in the Q. Paper.

(v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.

(vi) Extra attempt of any question or any part of the attempted question will not be considered.

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AGRICULTURE & FORESTRY

Roll Number

TIME ALLOWED: THREE HOURS	(PART-I MCQs) MAXIMUM MARKS: 20
PART-I (MCQs) : MAXIMUM 30 MINUTES	(PART-II) MAXIMUM MARKS: 80

NOTE: (i) First attempt **PART-I (MCQs)** on separate **OMR Answer Sheet** which shall be taken back after **30 minutes.**
(ii) **Overwriting/cutting of the options/answers will not be given credit.**
(iii) There is **no negative** marking. All MCQs must be attempted.

PART-I (MCQs)(COMPULSORY)

Q.1. (i) Select the best option/answer and fill in the appropriate Box ■ on the **OMR Answer Sheet.(20x1=20)**
(ii) Answers given anywhere else, other than OMR Answer Sheet, will not be considered.

1. **Which soil type has the smallest particle size?**
(A) Sand (B) Silt (C) Clay (D) None of these
2. **Optimal pH range for most crops is:**
(A) 3-5 (B) 6-7 (C) 8-10 (D) None of these
3. **The process of breaking down organic matter into simpler compounds by microorganisms is:**
(A) Photosynthesis (B) Respiration (C) Decomposition (D) None of these
4. **The practice of growing two or more crops in proximity to enhance pest control and nutrient utilization is:** (A) Crop rotation (B) Monoculture (C) Agroforestry (D) None of these
5. **The cultivation of crops without the use of soil is known as:**
(A) Hydroponics (B) Aeroponics (C) Precision farming (D) None of these
6. **The hormone, responsible for promoting cell elongation and bending in response to light, is:**
(A) Auxin (B) Gibberellin (C) Cytokinin (D) None of these
7. **The process of exposing seeds to moisture and temperature to initiate germination is known as:**
(A) Stratification (B) Scarification (C) Vernalization (D) None of these
8. **The primary role of pheromones in pest management is:**
(A) Killing pests directly (B) Repelling pests (C) Attracting pests for monitoring (D) None of these
9. **Which insect order includes pests such as grasshoppers and locusts?**
(A) Orthoptera (B) Coleoptera (C) Lepidoptera (D) None of these
10. **The primary purpose of backcrossing in plant breeding is:**
(A) Creating hybrids with increased heterozygosity (B) Introducing resistance to diseases
(C) Fixing desirable traits in a new genetic background (D) None of these
11. **The primary purpose of sustainable forestry is:**
(A) Timber extraction only (B) Maximizing short-term profits
(C) Clear-cutting for quick land regeneration (D) None of these
12. **The term "silviculture" refers to:**
(A) Rearing of silkworm (B) Forest disease management
(C) Cultivation of trees and forests (D) None of these
13. **Which of the following is a common invasive species affecting forests?**
(A) Oak tree (B) Eucalyptus tree (C) Kudzu vine (D) None of these
14. **In forestry, the term "coppicing" refers to:**
(A) Planting new trees (B) Pruning branches (C) Thinning the forest canopy (D) None of these
15. **Which type of forest management aims to mimic natural disturbances, such as wildfires?**
(A) Even-aged management (B) Shelterwood cutting (C) Uneven-aged management (D) None of these
16. **The practice of removing dead or diseased trees from a forest is known as:**
(A) Salvage logging (B) Pruning (C) Clear-cutting (D) None of these
17. **Regeneration of a forest without direct human intervention is referred to as:**
(A) Reforestation (B) Afforestation (C) Rehabilitation (D) None of these
18. **The primary purpose of riparian forest buffers is:**
(A) Soil erosion prevention (B) Wildlife habitat conservation (C) Carbon sequestration (D) None of these
19. **Which international agreement focuses on combating illegal logging and promoting trade in legally harvested timber?**
(A) Kyoto Protocol (B) Forest Law Enforcement, Governance, and Trade (FLEGT)
(C) Nagoya Protocol (D) None of these
20. **In the context of biodiversity the term "keystone species" refers to:**
(A) Species that are abundant in number
(B) Species that play a crucial role in maintaining ecosystem structure
(C) Species that are endemic to a specific region (D) None of these

AGRICULTURE & FORESTRY

PART-II

NOTE: (i) **Part-II** is to be attempted on the separate **Answer Book.**
(ii) Attempt **ONLY FOUR** questions from **PART-II** by selecting **TWO** questions from **EACH SECTION. ALL** questions carry **EQUAL** marks.
(iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
(iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
(v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
(vi) Extra attempt of any question or any part of the question will not be considered.

SECTION-A

Q. No. 2. Explore the present situation of oilseed crops in Pakistan and identify potential factors contributing to the insufficient production of edible oil. Propose remedial measures aimed at enhancing this situation. **(20)**

Q. No. 3. Examine the distinctions between organic farming and conventional farming practices. Analyze the merits and drawbacks of each method. Evaluate factors such as environmental impact, yield, and soil health to provide a comprehensive understanding of the advantages and disadvantages associated with both approaches. Which would you recommend in Pakistan's perspective? **(20)**

Q. No. 4. Assess the impact of climate change on Pakistan's agriculture, particularly its effects on crop patterns and yields. Provide an analytical overview of current practices and propose strategies to make crop management more resilient to climate change, considering adaptation and mitigation measures. **(20)**

① impact
② current practices
③ strategies
↓ (20)
(i) adaptation
(ii) mitigation)

Q. No. 5. Write short notes on the following: **(10 each)**

(a) Conservation and utilization of plant genetic resources

(b) Integrated nutrient management

SECTION-B

Q. No. 6. How can integrated watershed management address the competing demands for water in agriculture, industry, and domestic use? Analyze the impact of deforestation on watershed health and water availability. How can we integrate science and community engagement in watershed management? **(20)**

Q. No. 7. How effectively does the Pakistan Forest Policy integrate with the provisions outlined in the Pakistan Forest Act? Provide specific examples that how the policy's strategic goals are translated into actionable legal measures within the act. Discuss any areas where alignment may be strengthened or improved for more coherent forest governance. **(20)**

Q. No. 8. Write short notes on the following: **(10 each)** **(20)**

(a) Potential of Ecotourism in Pakistan

(b) Biodiversity

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