



ROLL NO

PUNJAB PUBLIC SERVICE COMMISSION
COMBINED COMPETITIVE EXAMINATION
FOR RECRUITMENT TO THE POSTS OF
PROVINCIAL MANAGEMENT SERVICE, ETC -2023
CASE NO. 1C2024

SUBJECT: AGRICULTURE (PAPER-II)

TIME ALLOWED: THREE HOURS

MAXIMUM MARKS: 100

NOTE:

- i. All the parts (if any) of each Question must be attempted at one place instead of at different places.
- ii. Write Q. No. in the Answer Book in accordance with Q. No. in the Q. Paper.
- iii. No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
- iv. Extra attempt of any question or any part of the question will not be considered.

NOTE: Attempt FIVE Questions in All. Attempt in Urdu or English.

- Q.No.1** Describe the chemical composition of hereditary material in cell and explain three main differences in DNA and RNA. **(20 Marks)**
- Q.No.2** Define biotechnology and agro-biotechnology. Write in detail the scope of biotechnology for crop improvement. **(20 Marks)**
- Q.No.3** What is cottage industry? Can cottage industries boost the economic conditions of a common man? Write a brief note on apiculture, sericulture and lac culture. **(20 Marks)**
- Q.No.4** What are plant viruses, modes of transmission and describe different strategies to control the plant viruses? **(20 Marks)**
- Q.No.5** Write short notes on the followings: **(4x5=20 Marks)**
(i) Micropropagation
(ii) Anther culture
(iii) Somatic hybridization
(iv) Protoplast culture
- Q.No.6** Describe physical, chemical and biological properties of soil? **(20 Marks)**
- Q.No.7** Write short notes on the followings: **(4x5=20 Marks)**
(i) Agri-biotechnology in 21st century
(ii) Hybridization techniques and procedures
(iii) Gene cloning in plant breeding
(iv) Role of oilseed crops in agriculture
- Q.No.8** Explain the physiological requirements and problem for successful cultivation of mushrooms. Describe the nutritional value of mushrooms and explain the remedial measures for controlling mushroom poisoning. **(20 Marks)**