

PG
M.SC. SEMESTER-I EXAMINATION, 2023
(AGRICULTURE) IN AGRONOMY
PAPER: AGRON 504
(PRINCIPLES AND PRACTICES OF WATER MANAGEMENT)

Full Marks: 50

Time: 2 Hours

The figures in the right-hand margin indicate full marks.
 Candidates are required to give their answers in their own words as far as practicable.

GROUP-A

1. Answer any FIVE questions from the following: 2 X 5 = 10

- a. What are the roles of water in plant life?
- b. What do you understand by water management?
- c. What is readily available water?
- d. What is reference evapotranspiration?
- e. Describe the factors affecting water holding capacity of the soil.
- f. Explain scheduling of irrigation.
- g. What is infiltration?
- h. Define WUE.

GROUP-B

2. Answer any FOUR questions from the following: 5 X 4 = 20

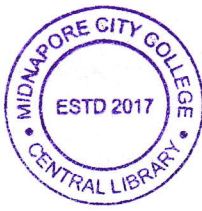
- a. Discuss on the impact of excess water in plant growth.
- b. Discuss the theories of water availability.
- c. Briefly describe different methods for ET estimation.
- d. Describe the water movement in SPAC.
- e. Mention the various types of drainage.
- f. Briefly discuss on water resources of the world as well as India.
- g. How to increase the WUE of crops?
- h. Suggest different strategies for rice water management.

GROUP-C

3. Answer any TWO questions from the following: 10 X 2 = 20

- a. Define irrigation. Discuss the different roles of irrigation in agriculture production system. Discuss the causes and impact of steep increase in groundwater irrigation in this region. 2+4+2+2
- b. What do you mean by Conjunctive use of water? What are the objectives of conjunctive use practice? What are the advantages of puddling. 2+4+4
- c. What is irrigation scheduling? Write down the various approaches in irrigation scheduling briefly. 2+8

(P.T.O.)



(2)

d. Discuss the effect of submergence in rice soil. Differentiate between water requirement and irrigation requirement. Briefly describe the factors affecting water requirement of crops. 4+2+4
