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**M.Sc. Semester-I Examination, 2022
(AGRICULTURE) IN AGRONOMY**

PAPER: AGRON 504

(PRINCIPLES AND PRACTICES OF WATER MANAGEMENT)

Full Marks: 50

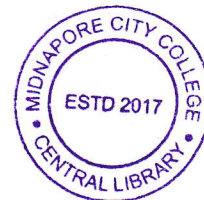
Time: 2 Hours

GROUP-A

1. Answer any FIVE questions from the following:

2 X 5 = 10

- Mention the role of water in plant?
- What is soil moisture potential?
- What is PET?
- Define hysteresis graph presentation.
- Define hygroscopic water.
- What is leaching requirement?
- In inter cropping why we use shallow rooted and deep-rooted crops.
- Mention critical growth stages of irrigation of wheat.



GROUP-B

2. Answer any FOUR questions from the following:

5 X 4 = 20

- 'Transpiration is a necessary evil'- explain briefly.
- Discuss fertigation along with merits and demerits of the system.
- Explain the thumb rule of soil moisture extraction pattern.
- What are the advantages of sprinkler method of irrigation?
- Mention the problems associated with poor drainage.
- What are the water management practices in saline soil.
- How to increase the WUE of crops?
- Discuss the Blaney-Criddle methods of ET estimation.

GROUP-C

3. Answer any TWO questions from the following:

10 X 2 = 20

- Explain the water budget of India with proper schematic diagram. Discuss the border strip irrigation methods. (4+6)
- What do you mean by quality of irrigation? What the criteria are for determine quality of irrigation? What is the advantages of puddling. (2+4+4)
- What is irrigation scheduling? Write down the various approaches in irrigation scheduling briefly. (2+8)
- Short note (Any four): (2.5 x 4 = 10)
I. Infiltration, II. Percolation, III. Seepage, IV. Osmotic potential, V. Drip irrigation.