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M.Sc. Semester-I Examination, 2022

(AGRICULTURE) IN AGRONOMY

PAPER: AGRON 502 (PRACTICAL)

(PRINCIPLES AND PRACTICES OF SOIL FERTILITY AND NUTRIENT MANAGEMENT)

Full Marks: 30

Time: 3 Hours

Answer any TWO questions from the following:

10X2 = 20

1. Briefly explain the working principle the pH meter.

A student is conducting an experiment on maize crop in randomized block design with 8 treatments and 3 replications. The size of individual plot is  $4m \times 3m$ . The recommended doses of N,  $P_2O_5$  and  $K_2O$  are 140, 70 and 40 kg/ha. The one-third of N and full doses of  $P_2O_5$  and  $K_2O$  are to be applied as basal. Calculate the amount of urea, DAP and MOP requirement for each plot as well as for whole field. (5+5)

2. Write the basic principle of flame photometer. Explain the principles and procedures of estimation of available potassium from soil. (3+4+3)

3. Identification of the following samples: (10 x 1)

4. Laboratory note book. 5

5. Viva-voce. 5



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