

Question Paper

Exam Date & Time: 03-Jan-2023 (02:30 PM - 05:30 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

SEVENTH SEMESTER B.TECH END SEMESTER MAKE UP EXAMINATIONS, JAN 2023
ICE DEPT.

Farm Automation [ICE 4307]

Marks: 50

Duration: 180 mins.

A

Answer all the questions.

Instructions to Candidates: Missing data may be suitably assumed

- 1) What are the objectives of tillage? Discuss the advantages and disadvantages of tillage. (CO 1, PO 1,2,3, BL 2) (5)
 - A)
 - B) What is the scope of farm mechanization in India? (CO 1, PO 1,2,3, BL 2) (3)
 - C) Explain the following primary post-harvest operations; 1. Hulling 2. Paraboiling. (CO 3, PO 1, 3, 4, BL 2) (2)
- 2) Describe the water conveyance system with the help of a neat diagram. (CO 2, PO 1,5,6,7, BL 2) (5)
 - A)
 - B) Describe the different methods of irrigation scheduling. (CO 2, PO 1,5,6,7, BL 2) (3)
 - C) Draw the flow chart of post-harvest treatment for storage of cereals. (CO 3, PO 1,3,4, BL 1) (2)
- 3) Illustrate the working of Laser land levelling machine with necessary diagrams. (CO 4, PO 1,2,3,5, BL 3) (5)
 - A)
 - B) Describe the working of a rotary drum grain cleaner with the help of a diagram. (CO 3, PO 1,3,4, BL 2) (3)
 - C) Illustrate how remote sensing can play an important role in precision farming. (CO 4, PO 1,2,3,5, BL 3) (2)
- 4) What is MOSAICC? Analyse the components of MOSAICC with the help of a block diagram. (CO 5, PO 1,4,6,7,8, BL 4) (5)
 - A)
 - B) Explain the following secondary post-harvest operations; 1. Fermentation 2. Extrusion. (CO 3, PO 1,3,4, BL 2) (2)
 - C) Analyse the advantages of conservation agriculture in comparison with conventional method of agriculture. (CO 4, PO 1,2,3,5, BL 4) (3)
- 5) What are the tools and equipment used in precision farming? Explain. (CO 4, PO 1,2,3,5, BL 2) (5)
 - A)
 - B) Discuss about the different water filtering stages in an aquaponics system? (CO 5, PO 1, 4, 6, 7, 8, BL 2) (2)
 - C) Describe the working of Ebb and Flow hydroponics systems with the help of a neat diagram. (CO 5, PO 1,4,6,7,8, BL 2) (3)

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