

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)

B.Tech II Year II Semester Regular & Supplementary Examinations August-2023
FARM MACHINERY & EQUIPMENT-I
(Agricultural Engineering)

Time: 3 Hours**Max. Marks: 60**

(Answer all Five Units 5 x 12 = 60 Marks)

UNIT-I

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|---|--|-----|----|----|
| 1 | a Describe the selection criteria of a Tractor. | CO1 | L2 | 6M |
| | b Define farm mechanization and what are the objectives of it? | CO1 | L1 | 6M |

OR

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|---|---|-----|----|----|
| 2 | a Describe the selection criteria for the machines. | CO1 | L2 | 6M |
| | b What are the benefits of farm mechanization? | CO1 | L1 | 6M |

UNIT-II

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|---|---|-----|----|----|
| 3 | a Listout and discuss about different types of mouldboard with neat sketch. | CO2 | L1 | 6M |
| | b A 4 bottom 40 cm mould board plough is operating at 5.5 km/h speed with 75 % field efficiency. Calculate the rate of doing work in hectares per hour. | CO2 | L5 | 6M |

OR

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|---|--|-----|----|----|
| 4 | a Listout and explain the different types of tillage. | CO2 | L1 | 6M |
| | b A three bottom 40 cm MB plough has a working depth of 15 cm and draft is 1600 kg. field efficiency is 70% and working speed is 4 km/h. Find i) Unit draft ii) Power required iii) Actual field capacity. | CO2 | L4 | 6M |

UNIT-III

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|---|--|-----|----|----|
| 5 | a Discuss about Hitching System. | CO3 | L3 | 6M |
| | b Explain about any four types of blades used in bulldozers. | CO3 | L2 | 6M |

OR

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|---|--|-----|----|----|
| 6 | a Explain Horizontal and vertical hitching of pull type Implement. | CO3 | L2 | 6M |
| | b Define earth moving operation and list out the machines commonly used for earthmoving job. | CO3 | L1 | 6M |

UNIT-IV

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|---|--|-----|----|----|
| 7 | a Explain in briefly about different types of furrow openers. | CO4 | L2 | 6M |
| | b Explain in briefly about different types of seed metering mechanism. | CO4 | L2 | 6M |

OR

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|---|--|-----|----|----|
| 8 | a Illustrate about different intercultural equipment's. | CO4 | L3 | 6M |
| | b Define Transplanter. Give the classification of paddy transplanters. Explain Manual Rice Transplanter. | CO4 | L1 | 6M |

UNIT-V

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|---|--|-----|----|----|
| 9 | a Discuss about various spray nozzles. | CO5 | L6 | 6M |
| | b Explain briefly about components of power sprayer. | CO5 | L2 | 6M |

OR

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|----|---|-----|----|----|
| 10 | a What are the functions and applications of sprayer? | CO5 | L1 | 6M |
| | b Define sprayer? List out the different types of sprayers. | CO5 | L1 | 6M |

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