

Reg. No: 

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

**B.Tech III Year II Semester Regular Examinations July-2021**

**FARM MACHINERY & EQUIPMENT - II**

(Agricultural Engineering)

Time: 3 hours

Max. Marks: 60

**PART-A**

(Answer all the Questions 5 x 2 = 10 Marks)

- |   |   |  |    |    |
|---|---|--|----|----|
| 1 | a | Define reaper & reaper binder.   | L1 | 2M |
|   | b | Classify the combine losses  | L2 | 2M |
|   | c | List out the different types of root harvesting equipment based on source of power | L1 | 2M |
|   | d | List out the different types of cotton strippers                                   | L1 | 2M |
|   | e | Define threshing efficiency and cleaning efficiency.                               | L1 | 2M |

**PART-B**

(Answer all Five Units 5 x 10 = 50 Marks)

**UNIT-I**

- |   |   |   |    |    |
|---|---|---|----|----|
| 2 | a | What is harvesting? Explain principle of cutting of a crop. | L1 | 4M |
|   | b | Illustrate about self-propelled reaper binder.              | L2 | 6M |

OR

- |   |   |  |    |    |
|---|---|--|----|----|
| 3 | a | Explain about different components of reciprocating mower. | L1 | 5M |
|   | b | Discuss about different methods of windrowing.             | L1 | 5M |

**UNIT-II**

- |   |   |  |    |    |
|---|---|--|----|----|
| 4 | a | i) How many hectares per day of 10 h can be cut by a combine with 4 m cutter bar, when it is running at 4 km/h.<br>ii) Calculate the total time required to harvest 2.5 ha of grass by means of a 2 m mower being operated at 4 km/h. Take field efficiency of mower as 80%. | L6 | 6M |
|   | b | What are the advantage and disadvantage of combine?  | L1 | 4M |

OR

- |   |   |  |    |    |
|---|---|--|----|----|
| 5 | a | Explain working principle of self-propelled type combine with neat sketch. | L1 | 5M |
|   | b | Discuss about functional components of corn harvester.                     | L6 | 5M |

**UNIT-III**

- |   |   |  |    |    |
|---|---|--|----|----|
| 6 | a | Explain in briefly about snappers & picker-sheller.        | L6 | 5M |
|   | b | Explain the factors affecting performance of corn pickers. | L1 | 5M |

OR

- |   |   |  |    |    |
|---|---|--|----|----|
| 7 | a | What are fruit harvesters? Explain about different method of fruit harvesting. | L1 | 6M |
|   | b | Explain briefly about any two fruit harvesters.                                | L1 | 4M |

**UNIT-IV**

- |   |   |  |    |    |
|---|---|--|----|----|
| 8 | a | Explain cotton picker with chain belt spindle arrangement. | L2 | 6M |
|   | b | What are the advantages of strippers over pickers.         | L5 | 4M |

OR

- |   |   |   |    |    |
|---|---|---|----|----|
| 9 | a | Distinguish between brush type and finger type strippers.         | L4 | 5M |
|   | b | What are the factors affecting the performance of cotton pickers. | L1 | 5M |

**UNIT-V**

- |    |   |  |    |    |
|----|---|--|----|----|
| 10 | a | Distinguish between olpad thresher and power thresher. | L4 | 5M |
|    | b | Explain about multi crop thresher.                     | L1 | 5M |

OR

- |    |  |   |    |     |
|----|--|---|----|-----|
| 11 |  | What are the different types of threshing cylinders? Explain them with neat sketch. | L4 | 10M |
|----|--|---|----|-----|