

Reg. No:

--	--	--	--	--	--	--	--	--	--

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

B.Tech II Year II Semester Regular Examinations October-2022

FARM MACHINERY & EQUIPMENT-I

(Agricultural Engineering)

Time: 3 hours

Max. Marks: 60

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

UNIT-I

- 1 a Define farm mechanization and what are the objectives of it. **L1 6M**
b What are the constraints or limiting factors of farm mechanization? **L1 6M**

OR

- 2 a List out and explain different sources of farm power. **L1 8M**
b Give the classification of farm machines. **L2 4M**

UNIT-II

- 3 a Explain about indigenous plough and mould board plough with neat sketch. **L2 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. **L4 6M**

OR

- 4 a Illustrate the forces acting on tillage tool. **L2 8M**
b What are the different parts of disc harrow? **L1 4M**

UNIT-III

- 5 The following results were obtained while calibrating a seed drill. i) Number of furrows =10; ii) Spacing between furrows=20 cm; iii) Diameter of drive wheel = 1.5 m; iv) Speed = 500 rev/min; v) Seed collected = 20 kg. Calculate the seed rate per hectare. **L3 12M**

OR

- 6 a Discuss about Hitching System. **L2 4M**
b Explain briefly about crawler and wheel type bulldozers. **L2 8M**

UNIT-IV

- 7 a What is broad casting ? Define Seed cum fertilizer drill. **L1 6M**
b Explain in briefly about fluted feed type seed metering mechanism with neat sketch. **L2 6M**

OR

- 8 a Define calibration of seed drill. Explain procedure involved. **L1 8M**
b Define functions of planter and Seed cut-off mechanism in planter. **L1 4M**

UNIT-V

- 9 a Define sprayer? List out the different types of sprayers. **L1 6M**
b Explain briefly about knapsack sprayer with neat sketch. **L2 6M**

OR

- 10 a Discuss about various spray nozzles. And its special features. **L2 4M**
b Explain about tractor mounted boom sprayer with constructional details. **L2 8M**

*** END ***