

A

Reg. No. :

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

Question Paper Code: U5A02

B.E./B.Tech. DEGREE EXAMINATION, APRIL 2023

Fifth Semester

Agriculture Engineering

21UAG502 – **FARM MACHINERY AND EQUIPMENT**

(Regulations 2021)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. Area covered per day of 8 hours by 4 bottoms, 35 cm MB plough if the speed of ploughing is 6km/hr is _____ CO2- App
(a) 672 m³ (b) 6.72 ha (c) 67.2 m³ (d) 67.2 ha
2. How much percent of farm holding belong to small and marginal farmers? CO1- U
(a) 75% (b) 25% (c) 64% (d) 36%
3. What is the field capacity of a potato planter (semi-automatic)? CO1- U
(a) 0.15-0.25 ha/hr (b) 0.10-0.14 ha/hr (c) 0.40-0.55 ha/hr (d) 0.09-0.14 ha/hr
4. In which process of seeding, the seeds are placed in the holes made in seed bed and covering them? CO1- U
(a) Broadcasting (b) Transplanting (c) Dibbling (d) Drilling
5. Which part of power sprayer is used to break the liquid into desired spray and deliver to plants? CO1- U
(a) Boom (b) Nozzle (c) Strainer (d) Pressure gauge
6. By using a knapsack sprayer, a man can spray over the area of about _____ CO1- U
(a) 1 ha per day (b) 0.75 ha per day (c) 1.25 ha per day (d) 0.4 ha per day
7. A two-bladed flywheel type forge cutter rotates at 50 rev/min at a feed rate of 1.26 m/min. What will be the theoretical length of cut of forge? CO2- App
(a) 0.0126 m (b) 0.2598 m (c) 0.3232 m (d) 0.1234 m

8. A multi-crop thresher is used for threshing CO1- U
 (a) Wheat (b) Paddy (c) Soyabean (d) All are correct
9. The upper limit of heart rate allowed during an activity of field by a farmer should not be more than CO1- U
 (a) $HR_{max} = 220 - \text{age}$ (b) $HR_{max} = 250 - \text{age}$ (c) $HR_{max} = 230 - \text{age}$ (d) $HR_{max} = 200 - \text{age}$
10. How much weight is put on the seat of the driver to replace the driver to determine centre of gravity CO1- U
 (a) 100 kg (b) 75 kg (c) 25 kg (a) 55 kg

PART – B (5 x 2= 10Marks)

11. Describe Horizontal suction of a MB Plough. CO1 -U
12. List out the different types of sowing methods CO1- U
13. Sketch out Hand Operated Knapsack Sprayer CO1 -U
14. List out the types of harvesting machinery CO1- U
15. Explain Anthropometry. CO1 -U

PART – C (5 x 16= 80Marks)

16. (a) Explain plough and ploughing of land and types of mould board plough with neat sketch. CO1-U (16)
 Or
 (b) Write short notes on cultivator and explain briefly mounted type cultivator with neat sketch. CO1-U (16)
17. (a) What are the factors affecting perfect sowing? Explain the different types of sowing methods CO1-U (16)
 Or
 (b) With neat sketch explain the working of potato and sugarcane planter. CO1-U (16)
18. (a) Describe about the types of short hand weeding equipments with neat sketch. CO1-U (16)
 Or
 (b) Describe about the types of long handle weeding equipments with neat sketch. CO1-U (16)

19. (a) With the help of diagram explain about the components of power thresher and different types of threshing cylinder. CO1-U (16)
- Or
- (b) Explain the working of combine harvester thresher. CO1-U (16)
20. (a) Explain the term of anthropometry. CO1-U (16)
- Or
- (b) List the factors considered for the selection of farm machines? CO1-U (16)

