



KERALA AGRICULTURAL UNIVERSITY
B.Tech.(Agri. Engg.) 2022 & Previous Admissions
VI Semester Final Examination - June 2025

Fpme.3213

Farm Machinery and Equipment-II (2+1)

Marks: 50
Time: 2 hours

I Fill in the blanks

(10x1=10)

1. Discharge rate of centrifugal pump in sprayer varies as square of
2. A machine used to cut herbage crops and leave them in swath is called
3. The ratio of reel peripheral speed to forwards speed of combine is termed as
4. The average speed of flywheel of a manually operated chaff cutter with 2 knives will berpm.
5. Measurement of human body dimensions is called as

State True or False

6. The material that is left by the harvesting machine in row is called Swath.
7. In flail mower, knives operating are in horizontal plane and around cylinder.
8. Commercial tests are for evaluating/establishing performance characteristics of machines that are in or ready for commercial production.
9. RNAM stands for Regional Network for Agricultural Machine.
10. The Olpad thresher is mostly used for threshing paddy crop.

II Write short on ANY FIVE of the following

(5x2=10)

1. Enlist the factors affecting on sprayer drift.
2. Draw the diagram of hammer mill type threshing cylinder and which crop it's suitable for threshing?
3. Write the functions of combine harvester.
4. Explain the term alignment of mower and give optimum cutter bar angle for proper cutting of crop.
5. Classify the maize harvester.
6. Define the term Ergonomics and writes its application.
7. How many hectares per day of 10 h can be cut a combine with 4 m cutter bar when it is running at 4 km/h.

III Answer ANY FIVE of the following

(5x4=20)

1. Define the term sprayer. Explain the different types of sprayer based on spraying volume.
2. What are different types of power thresher based on threshing cylinder used? Explain the construction and working of spike tooth type threshing cylinder with neat diagram.
3. Explain the construction and working of tractor operated Flail type forage harvester cum chopper.
4. Give the comparative difference between cotton picker and stripper.
5. A chaff cutter having two knives cut dry hay at 60 rpm giving 480 kg/h. If the throat size is 18 cm × 6 cm, find the effective density of dry hay for a theoretical length of cut of 2.5 cm. If the number of knives is changed to four, what is the capacity of the chaff cutter?
6. Explain the different types and nature of machinery test.
7. Explain the anthropometric criteria considered during the workplace design.

IV Write an essay on ANY ONE of the following

(1x10=10)

1. Combine harvester losses.
2. Sprayer nozzles
