

**PARUL UNIVERSITY**  
**FACULTY OF ENGINEERING & TECHNOLOGY**  
**B.Tech. Summer 2018 - 19 Examinations**

**Semester: 4**  
**Subject Code: 03110252**  
**Subject Name: Farm Machinery and Equipment - II**

**Date: 01/05/2019**  
**Time: 2:00pm to 4:30pm**  
**Total Marks: 60**

**Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

**Q.1 Objective Type Questions - ( Fill in the blanks, one word answer, MCQ-not more than Five in case (15)**  
of MCQ) (All are compulsory) (Each of one mark)

1. The traditional method of threshing using manual labours requires \_\_\_\_\_man-h/ha.  
(a) 150-230 (b) 50 (c) 100 (d) 300
2. Mower is cut ..... Crops.  
(a) Forage (b) Grain (c) Both (d) None of above
3. Forage crop containing \_\_\_\_\_water when first harvested.  
(a) 70-80% (b) 50 % (c) 10 % (d) None of above
4. The simplest machine snaps the ears from stalks and does not remove husk called\_\_\_\_\_  
(a) Snapper (b) Picker-husker (c) Picker-sheller (D) None
5. In Chaff cutter/Syndicator type thresher, chopping knives need to be sharpened every \_\_\_\_\_hours of operation.  
(a) 0.5 (b) 10 (c) 3-5 (d) 1
6. What is harvesting?
7. Write down any two name of digger.
8. Shape of hand operated maize sheller is.....
9. One hp =..... Watt.
10. One ha =.....m<sup>2</sup>.
11. Write down any two harvesting action.
12. The mower cutter bar is capable of cutting the stems at ..... cm above the ground.
13. Write down any two field operations of combine harvester.
14. Write down any four component of combine harvester.
15. What is Threshing?

**Q.2 Answer the following questions. (Attempt any three) (15)**

- A) What is harvesting? Enlist the harvesting machines.
- B) Enlist different types of threshing drum/cylinder and Draw neat sketch.
- C) Write down Components of Thresher.
- D) How many hectares per day of 8 hours can be cut by a combine with 3 m cutter bar with 4 km/hr speed?

**Q.3 (07)**

- A) Explain octagonal hand maize sheller. (07)
- B) Classify the balers and enlist the functional components of baler. (08)

**OR**

- B) Calculate the total time required to harvest 3 ha of grass by means of a 3 m wide mower being operated at 4 km/hr. Field efficiency of mower as 80 %. (08)

**Q.4 (07)**

- A) Classify the mower according to source of power, mode of hitching and drive used.

**OR**

- A) What are the care and adjustments required for hand operated chaff cutter. (07)
- B) Calculate the capacity of a field chopper with throat size of 25 x 5 cm operating at 50 rpm. The number of knives on cutter head is two and bulk density of material is 500 kg/m<sup>3</sup>. Length of cut is 2 cm and field efficiency of chopper 70%. (08)