

A

Reg. No. :

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

Question Paper Code: 55A02

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2018

Fifth Semester

Agriculture Engineering

15UAG502 TILLAGE AND SOWING IMPLEMENTS

(Regulation 2015)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. Mechanization possibility is strongly influenced by CO1- R
(a) Farm size (b) Cost of Farm power
(c) Availability of suitable machines (d) All of the above
2. When ploughing one hectare of land once by bullocks having 15 cm. furrow width, has to walk about (km) CO1- R
(a) 66 (b) 55 (c) 50 (d) 60
3. The field capacity (ha/day) of traditional implements is about CO2- R
(a) 0.5-0.6 (b) 0.3-0.4 (c) 0.4-0.5 (d) 0.9-1
4. Farmers depends upon the animal drawn implements (%) about CO2- R
(a) 60 (b) 70 (c) 80 (d) 90
5. If the speed of travel of an animal operated seed drill is double, the seed rate is CO3- R
(a) Double (b) Same (c) Decrease (d) Triple
6. Planter differs from a seed drill in respect of CO3- R
(a) Ground wheel (b) Metering mechanism
(c) Gauge wheel (d) None of the above

7. Internal double run type metering mechanism is not usually used in a CO4- R
 (a) Seed drill (b) Seed cum fertilizer drill (c) Puddler (d) Planter
8. Subsoilers can be operated at a maximum depth up to CO4- R
 (a) 10 cm (b) 20 cm (c) 100 cm (d) 50 cm
9. For greater degree of pulverization _____ type mould board is used on CO5- R
 M B Plough.
 (a) Stubble (b) Wing (c) Stay bar (d) Paddle
10. A standard disc plough uses _____ bearing for supporting the discs. CO5- R
 (a) Stepped roller (b) Gang roller (c) Pivot roller (d) Tapered roller

PART – B (5 x 2= 10Marks)

11. Recall the types of farm power sources CO1- R
12. Define tillage CO2- R
13. List the objectives of secondary tillage CO3- R
14. Recognise the different seeding methods employed in seeding crops. CO4- R
15. State about a duck foot cultivator CO5- R

PART – C (5 x 16= 80Marks)

16. (a) Differentiate between fixed type mould board plough and turn CO1- App (16)
 wrest type plough.
- Or
- (b) Assess the following: CO1- App (16)
 (i) Theoretical field capacity
 (ii) Effective field capacity
17. (a) Demonstrate the process of calibration of seed drill. CO2- App (16)
- Or
- (b) Outline about a planter. What are the different seed metering CO2- Ana (16)
 devices in a planter?

18. (a) Describe about the chisel plough, subsoiler and rotary plough. CO3- Ana (16)
Or
(b) Difference between disc angle and tilt angle. Explain with the help of a diagram. CO3- Ana (16)
19. (a) Discuss the merits and demerits of different sources of farm power. CO4- U (16)
Or
(b) Classify the limiting factors in farm mechanization in India CO4- Ana (16)
20. (a) Interpret the following: CO5- U (16)
(i) Zero tillage
(ii) Strip tillage
(iii) Paddy seeder
Or
(b) Illustrate the following: CO5- U (16)
(i) Pneumatic planter
(ii) Sugarcane-cutter-planter
(iii) Rice transplanter (Manual type)

