A **Reg. No. :** | | | | | | | | | | |

Question Paper Code: 55A02

B.E. / B.Tech. DEGREE EXAMINATION, APRIL 2019

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. An average man can developed maximum energy for doing farm work CO1- R

   (a) 1 hp (b) 0.5 hp (c) 0.1 hp (d) 1.5 hp

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. Planting or sowing is made directly into an unprepared seedbed is known as CO2- R

   (a) Mulch tillage (b) Zero tillage (c) Surface tillage (d) Plough tillage

4. Farmers depends upon the animal drawn implements (%) about CO2- R

   (a) 60 (b) 70 (c) 80 (d) 90

5. Blade harrow is known as CO3- R

   (a) Bakhar harrow (b) Spike tooth (c) Patela (d) Acme Harrow

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. Random scattering of the seeds on the soil surface are known as CO4- R

   (a) Dibbling (b) Planter (c) Broad casting (d) Hill dropping

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 M B Plough. CO5- R

(a) Stubble (b) Wing (c) Stay bar (d) Paddle

10. Junior hoe is primarily used for ---------- CO5- R

(a) Breaking clods (b) Seed bed preparation

(c) Weeding (d) Spraying

PART – B (5 x 2= 10Marks)

11. List out four benefits of farm mechanization? CO1- R

12. Indicate four objectives of tillage CO2- R

13. Differentiate seed drill and seed planter 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) Define farm mechanization. Explain in detail about present scope, challenge, importance and limitation of farm mechanization.. CO1- App (16)

Or

(b) Assess the following: CO1- App (16)
(i) Theoretical field capacity
(ii) Effective field capacity

17. (a) Discuss about disc plough, its types, adjustment and maintenance of disc plough CO2- App (16)

Or

(b) Outline about a planter. What are the different seed metering devices in a planter? CO2- Ana (16)

18. (a) Discuss about harrow, its types and components of disc harrow with neat sketches 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) Discuss about the types of seed drills and explain method of calibration of a seed drill — CO4- Ana — (16)

20. (a) Interpret the following: — CO5- U — (16)
    (i) Zero tillage
    (ii) Strip tillage
    (iii) Paddy seeder

Or

(b) Draw a neat sketch and explain the types of weeders and their importance in weeding operations — CO5- U — (16)