Q.27 State different adjustments of disc plough (disc angle and tilt angle).

Q.28 Describe the working of zero tillage machinery.

Q.29 Differentiate between mould board plough and disc plough.

Q.30 What are different types of bearing in farm machines?

Q.31 Classify farm machinery according to field operations.

Q.32 What are the harmful effects of vibrations in machines and their remedies?

Q.33 Differentiate static and dynamic balancing.

Q.34 Describe the routine maintenance of farm machinery.

Q.35 What are the limitations of mechanization?

Section-D

Note: Long answer questions. Attempt any two question out of three Questions. (2x10=20)

Q.36 Describe the constructional detail and working principle of potato planter. Also explain preventive maintenance of planters.

Q.37 Explain the constructional detail and working principle of Disc. Harrow.

Q.38 Describe the constructional details and working principle of Seed-Cum-Fertilizer drill. Also describe different types of furrow openers used on seed drill.

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4th Sem. Branch: AGRI Engg.
Sub : Farm Machinery & Implements - I

Time : 3 Hrs. M.M. : 100

SECTION-A

Note: Multiple type Questions. All Questions are compulsory. (10x1=10)

Q.1 An assembly of a number of resistant links connected in such a way that they have relative motion between them.

a) Machine b) Mechanism
c) Kinematic pair d) Kinematic link

Q.2 For small distances which drive is used for power transmission

a) Belt drive b) Rope drive
c) Chain drive d) Gear drive

Q.3 To and fro motion of a particle about a fixed point is called

a) Vibration b) Balancing
c) Tension d) Centrifugal force

Q.4 The maximum clearance under the landside and the horizontal surface in the working position

a) Horizontal clearance b) Vertical suction
c) Horizontal suction d) Vertical clearance

Q.5 The plough used to cut through hard soils by means of a No. of narrow tynes.

a) Chisel plough b) Disc Plough

c) Subsoiler d) M.B. Plough

Q.6 The method of planting paddy seeds in field

a) Transplanting b) Seeding

c) Broadcasting d) Drilling

Q.7 Disc angle varies from

a) 20 to 25^0 b) 25 to 30^0

c) 30 to 35^0 d) 40 to 45^0

Q.8 The mechanical manipulation of soil to provide favorable conditions for crop

a) Ploughing b) Tillage

c) Inter culturing d) Harrowing

Q.9 An implement used for churning the soil in standing water.

a) Seed drill b) Planter

c) Puddler d) Digger

Q.10 The machine/implement used for sowing larger seeds.

a) Seed drill b) Planter

c) Ridger seeder d) Digger

Section-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

Q.11 State classification of machinery according to hitching.

Q.12 State two types of couplings used in machinery.

Q.13 What is the function of bund former?

Q.14 Define vertical suction.

Q.15 What is the use of drawbar?

Q.16 Give the function of chisel plough.

Q.17 Define Centrifugal tension.

Q.18 Give the function of furrow opener.

Q.19 What is the need of balancing a machine?

Q.20 Name two types of ploughs.

Section-C

Note: Short answer type Question. Attempt any twelve questions out of fifteen Questions. (12x5=60)

Q.21 What are the conditions for maximum power transmission?

Q.22 What are different types of kinematic pair?

Q.23 State the objectives of tillage.

Q.24 What are different types of seed metering mechanisms?

Q25 What are different modes of power transmission in machinery?

Q.26 Describe the working principle of hydraulic system.