Q.27 Write down the harmful effects of vibrations in machines.

Q.28 Explain the working principle of potato planter.

Q.29 Explain the routine maintenance of farm machinery.

Q.30 Explain the construction detail and working principle of Rotavator.

Q.31 What is the scope of mechanization?

Q.32 What are the different types of kinematic pair?

Q.33 What are different methods of sowing?

Q.34 Give two differences between mould board plough and disc plough.

Q.35 Write a short note on transplanting.

SECTION-D

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

Q.36 What is Harrowing? Describe the constructional details and working principle of Disc harrow.

Q.37 Describe the constructional details and working principle of Seed -cum-fertilizer drill.

Q.38 Explain the working principle and constructional detail of hydraulic system. Also explain its different types in brief.

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4th Sem / Agri Engg.

Subject:- Farm Machinery & Implements - I

Time : 3Hrs. M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

Q.1 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.2 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.3 A machine used for sowing wheat in the freshly harvested rice fields without any extra tillage operation.

a) Seed drill b) Strip till drill

c) No till drill d) Zero till drill

Q.4 When two kinematic links are connected in such a way that their relative motion is constrained, they form.

a) kinematic pair b) Link
c) Joint d) Element

Q.5 A method of correcting or eliminating unwanted forces
a) Vibration b) Balancing
c) Tension d) Centrifugal force

Q.6 The power available at farm for different farming operations
a) Electric Power b) Human power
c) Farm Power d) Mechanical Power

Q.7 The process of placing the seeds in holes made in seed bed
a) Dibbling b) Drilling
c) Broadcasting d) Seeding

Q.8 The implement used for intercultivation
a) Wheel hand hoe b) Plough
c) Ridger Seeder d) Digger

Q.9 An implement that cuts the soil to a shallow depth for smoothening and pulverizing the soil and control weeds.
a) Plough b) Harrow
c) Cultivator d) Ridger

Q.10 The method of planting in which row to row and plant to plant distance is uniform.
a) Check row planting b) Dibbling
c) Hill dropping d) Drilling

SECTION-B

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

Q.11 Give the function of furrow opener.

Q.12 What is the function of subsoiler?

Q.13 Name two plough accessories.

Q.14 What is the use of three point linkage.

Q.15 Define centrifugal tension.

Q.16 Give the function of chisel plough.

Q.17 What is the use of drawbar?

Q.18 List two types of joints used in agriculture machinery.

Q.19 List two types of couplings used in Agricultural machinery.

Q.20 Define horizontal suction.

SECTION-C

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

Q.21 Describe tilt angle and disc angle to disc plough.

Q.22 What is the use of zero tillage machinery?

Q.23 Describe different types of hitching systems.

Q.24 Write a short note on balancing a farm machinery?

Q.25 What is the function of bearing in farm machines?

Q.26 What are the conditions for maximum power transmission?