

- Q.31 What are the functions of front axle?
- Q.32 What are the various components of hydraulic system and their functions?
- Q.33 Describe the working principle of multi plate clutch.
- Q.34 Write a short note on hydraulic braking system in tractor.
- Q.35 Write a short note on differential system.

Section-D

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

- Q.36 What is the procedure for estimating the cost of operation of a tractor?
- Q.37 What are the functions and components of steering system? Also write name of different types of steering gearbox.
- Q.38 Describe briefly function and working of constant mesh gear box system of tractor with neat sketch.

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180153/120153/030153

Roll No.

**5th Sem., Branch : Agri
Subject : Farm Tractor**

Time : 3 Hrs.

M.M. : 100

SECTION-A

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

- Q.1 Bull gear in the tractor is associated with
- a) Front wheel b) Final drive
- c) Steering wheel d) Gear Box
- Q.2 In tractor, water pump gets drive from _____ by means of belt pulley.
- a) Crank Shaft b) Cam Shaft
- c) Radiator Shaft d) PTO Shaft
- Q.3 The gear train which provides the different speeds to drive the wheels, while moving on turning is called as
- a) Differential b) Bull Gear
- c) Differential lock d) Main Gear Box
- Q.4 Drawbar pull is measured by the
- a) Brake dynamometer
- b) Prony brake dynamometer
- c) Hydraulic dynamometer
- d) All are correct

- Q.5 The standard RPM for 21 splines PTO shaft is
 a) 540 ± 10 b) 840 ± 10
 c) 1000 ± 10 d) 1200 ± 10
- Q.6 A device is used to control the engine speed within specific limit is called :
 a) Differential b) Governor
 c) Radiator d) Carburetor
- Q.7 What are the traction aids
 a) Cage wheel b) Chain
 c) Dual wheel d) All of these
- Q.8 Angle between centre line of kingpin of tractor and vertical lines is called :
 a) Camber angle b) Kingpin angle
 c) Caster angle d) Tilt angle
- Q.9 _____ is an index of the tyre strength.
 a) Tire rating b) Ply rating
 c) Ballasting d) All of these
- Q.10 When brake is applied the kinetic energy of body is converted into :
 a) Chemical energy b) Heat energy
 c) Electrical energy d) Mechanical energy

Section-B

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

- Q.11 Depreciation.

- Q.12 Inflation pressure of front tyre of tractor _____.
- Q.13 Tractive efficiency.
- Q.14 Dynamo.
- Q.15 Differential lock.
- Q.16 BIS stands for _____.
- Q.17 Cage wheel.
- Q.18 Mechanical efficiency.
- Q.19 Farm power resources.
- Q.20 Drawbar.

Section-C

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

- Q.21 What is the basic principle of hydraulic system?
- Q.22 What are the factors to be considered for right selection of a tractor?
- Q.23 What are the various controls and gauges on tractors?
- Q.24 What should be the test conditions for testing a tractor?
- Q.25 Enlist sources of farm power. Also write any three scope of farm mechanization.
- Q.26 Write a short note on final drive.
- Q.27 Describe the sliding mesh gearbox system of tractor.
- Q.28 What are the basic criteria for changing the rear wheel spacing?
- Q.29 What are the factors that affect the traction in a tractor?
- Q.30 Explain the working principle of power steering system?