

- 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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**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?