

- Q.25 What are the factors that affect traction in a tractor?
- Q.26 Enlist various controls and gauges on tractors.
- Q.27 What are various components of electrical system and their functions?
- Q.28 What are general requirements for testing a tractor?
- Q.29 Describe the maintenance of battery.
- Q.30 Explain the power steering system of tractor.
- Q.31 Describe the working of mechanical brakes.
- Q.32 What are the safety measures in the operation of a tractor?
- Q.33 What are the various factors that affect the right selection of a tractor.
- Q.34 Describe different types of clutches used in tractor.
- Q.35 Describe differential unit and final drive.

SECTION-D

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

- Q.36 Describe the principle and working of hydraulic system of a tractor.
- Q.37 What are various types of brakes used on tractors? Compare their working.
- Q.38 Write down the procedure for cost estimation of operation of a tractor.

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**5th Sem / Agri Engg.
Subject:- Farm Tractor**

Time : 3Hrs. M.M. : 100

SECTION-A

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

- Q.1 The angle between the centre line of the king pin of the tractor and the vertical line.
- a) Camber angle b) Caster angle
 - c) Toe-in d) Angle of inclination
- Q.2 The force required in the direction of travel to overcome the resistance of motion.
- a) Tractive efficiency b) Rolling resistance
 - c) Traction d) None of these
- Q.3 The tractive force between the rubber tyres of the driving wheel and the surface on which they travel.
- a) Wheel slip b) Rim pull
 - c) Hitch d) None of these
- Q.4 The application of brakes converts the kinetic energy into
- a) Mechanical energy b) Electrical energy

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- c) Heat energy d) Chemical energy
- Q.5** Wheel ballasting is done for
 a) Increasing stability b) Increasing traction
 c) Decreasing traction d) All of above
- Q.6** The useful life of tractor is
 a) 8000 Hours b) 10000 Hours
 c) 12000 Hours d) 15000 Hours
- Q.7** The decrease in value of a machine with passage of time is
 a) Internet b) Depreciation
 c) Hiring cost d) None of these
- Q.8** The distance between the two wheels of the tractor on the same axle is called
 a) Wheel base b) Track
 c) Ground clearance d) Turning space
- Q.9** A device to enable two wheels, driven from a single shaft to rotate at different speeds of tractor.
 a) Differential b) Drawbar
 c) Hydraulic d) None of above
- Q.10** Weight transfer of tractor is directly affected by
 a) Pull b) Hitch height
 c) Both (a) & (b) d) None of these

SECTION-B

- Note:** Objective type questions. All questions are compulsory. (10x1=10)
- Q.11 Define Mechanization.
- Q.12 Define Final Drive.
- Q.13 Define Drawbar.
- Q.14 What is the full form of PTO?
- Q.15 Name the device to connect and disconnect the tractor engine.
- Q.16 Write two methods of hitching.
- Q.17 List four components of hydraulic system.
- Q.18 Name the system governing the angular movements of front wheels of a tractor.
- Q.19 Write the functions of tyres.
- Q.20 Write four sources of farm power.

SECTION-C

- Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)
- Q.21 What are different methods of ballasting?
- Q.22 Describe the working of sliding mesh type gear box.
- Q.23 What are the causes of tyre wear and how these can be minimized?
- Q.24 Describe the working of hydraulic system of tractor.