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220363A

Roll No.

6th Sem.

Branch : Automobile Engineering

Sub. : Tractor & Special Purpose Vehicles

Time : 3 Hrs.

M.M. : 60

SECTION-A

Note: Multiple type Questions. All Questions are compulsory. (6x1=6)

- Q.1 What is wheel's force?
- a) Force = Wheel torque * wheel radius
 - b) Force = wheel torque + wheel radius
 - c) Force = Wheel torque / Wheel radius
 - d) Force = Wheel torque - wheel radius
- Q.2 How many splines are there on a standards PTO shaft?
- a) 6
 - b) 12
 - c) 24
 - d) 36
- Q.3 Wheel base of tractor is
- a) Distance between the centers of the front tyres
 - b) Distance between the centers of the front and rear wheels
 - c) Distance between the centers of the rear tyres
 - d) all of the above

- Q.4 The device for engaging and disengaging the power shaft from the gearbox is known as
- Shaft
 - Gear
 - Clutch
 - Circuit
- Q.5 Where is the dynamometer inserted?
- Hitch between tractor and the pulling load
 - Hitch between wheel and steering
 - Hitch between tractor and steering
 - Hitch between pulling load and wheel
- Q.6 A _____ is very useful equipment and it can be used for construction work like to clear the site of work, to make the land level, etc.
- Scraper
 - Grader
 - Excavator
 - Bulldozer

SECTION-B

Note: Objective/Completion type questions. All questions are compulsory. (6x1=6)

- Q.7 Define the tractor chassis.
- Q.8 Write full form of PTO.
- Q.9 Write the name of hydraulic that is most widely used in tractor.
- Q.10 Hydraulic oil is the life of hydraulic system in tractor. (True/False)
- Q.11 Write on Indian tractor manufacturing company full name.
- Q.12 Write one function of crane.

SECTION-C

Note: Short answer type Questions. Attempt any eight questions out of ten Questions. (8x4=32)

- Q.13 Enlist five basic trends in tractor design.
- Q.14 What is the purpose of draw bar in a tractor? Explain its working?
- Q.15 Describe the working of power take off shaft with figure.
- Q.16 Write the function of clutch.
- Q.17 Explain the procedure of operator seat design
- Q.18 Describe tractor tyre tread design terms along with sketch.
- Q.19 Classify the tractor on different basis.
- Q.20 Describe the depth control, position control, draft control.
- Q.21 Describe any five selection criteria for tractor.
- Q.22 Write the application of Excavator.

SECTION-D

Note: Long answer questions. Attempt any two questions out of three Questions. (2x8=16)

- Q.23 Enumerate ten applications of tractor.
- Q.24 Draw the layout of tractor hydraulic system and explain its working.
- Q.25 Explain layout working and application of Tripper and crane.