

TED (15)-5052
(Revision- 2015)

A20-00754

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Signature.

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/
COMMERCIAL PRACTICE – APRIL -2020.

AUTOMOBILE TRANSMISSION

(Maximum Marks : 75)

[Time : 2.15 hours]

PART–A

Marks

I. Answer **any three** questions in one or two sentences. Each question carries 2 marks.

1. Write any two advantages of diaphragm clutch over coil spring clutch.
2. Write the combination (driving member, driven member and braking member) to get reverse reduction, in a simple planetary gear set.
3. What is meant by differential lock out?
4. What are various types of final drives?
5. What is mean by aspect ratio of a tyre? (3x2=6)

PART - B

II Answer any **four** of the following questions . Each question carries 6 marks.

1. Explain vacuum clutch with a neat sketch.
2. Explain fluid flywheel with a neat sketch.
3. Draw the layout of a two-wheeler transmission system and name the components.
4. Explain interlock mechanism with suitable line diagram.
5. Explain full floating type rear axle with neat sketch.
6. Brief zero set, inset and outset wheels with sketches.
7. How wheels are specified, explain with line diagram. Give example.

[4x6 =24]

PART - C

(Answer **any of the three units** from the following. Each full question carries 15 marks)

UNIT I

- III** (a) Explain construction and operation of diaphragm clutch with a neat sketch. (8)
- (b) Draw complete lay out of FR type (front engine rear wheel drive) transmission system and write names of components. (7)

OR

- IV** (a) Explain ball type over running clutch with a neat sketch. (8)
(b) Explain construction and operation of hydraulic clutch operating mechanism with sketch. (7)

UNIT- II

- V** (a) Explain case mounted gear shift mechanism with suitable sketches. (8)
(b) Explain simple planetary gear set with neat sketch. (7)

OR

- VI** (a) Explain construction and operation of synchromesh gear box with neat sketch. (8)
(b) Explain VDP (variable diameter pulley) type CVT with sketches. (7)

UNIT- III

- VII** (a) Discuss torque tube and Hotchkiss type of propeller shaft drives with sketches. (8)
(b) With a simple diagram, discuss operation of LSD (limited slip differential). (7)

OR

- VIII** (a) Briefly explain Hooke's type and ring type universal joints. (8)
(b) Explain tripod joint with sketch. (7)

UNIT – IV

- IX** (a) Discuss the construction of tubeless tyre using cross sectional views. (8)
(b) Explain construction of radial ply tyre with sketch. (7)

OR

- X** (a) Compare Rib type and lug type tyre tread patterns with sketches. (8)
(b) List the advantages and disadvantages of tubeless tyre over tubed tyre. (7)
