

Roll No.

24409

B. Tech. 5th Semester (Automobile Engg.)

Examination – December, 2016

POWER UNITS AND TRANSMISSION

Paper : AUE-307-F

Time : Three Hours]

[Maximum Marks : 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Students have to attempt first common question, which is *compulsory* and *one* question from each Section.

1. (a) What is the role of gear ratio for the vehicle ? 5
- (b) What is the function of torque convertor ? 5
- (c) What is automatic overdrive ? 5
- (d) Define the clutch hydraulic actuation system. 5

SECTION – A

2. What is the requirement of transmission system ?
What are different types of clutch ? Also explain the
design aspect of clutch ? 20
3. What is the function of gearbox ? Explain the different
types of gearbox in detail. 20

SECTION – B

4. What is the fluid coupling ? Explain the principle of
operation, constructional detail of fluid coupling in
detail. 20
5. What is converter coupling ? Explain the multistage
torque converters and polyphase torque converters in
detail. 20

SECTION – C

6. Write short note on the following : 20
(i) Wilson gearbox
(ii) Electromagnetic transmission
7. What is the role of hydrostatic drive ? Explain the
various types of hydrostatic drive in detail. 20

SECTION – D

8. What is electric drive ? Explain the principles of early
and modified word Leonard centre system. What are
advantages and disadvantages ? 20
9. Write short note on the following : 20
(i) Power **gride** transmission. .
(ii) Toyota "ECI – I" automatic transmission with
intelligent electronic control system.
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