

24409

B. Tech. 5th Semester (F) Scheme (AUE) Examination,
December-2018

POWER UNITS AND TRANSMISSION

Paper-AUE-307-F

Time allowed : 3 hours]

[Maximum marks : 100

Note : *First question is compulsory. Attempt five questions in all selecting at least one question from each section.*

1. (a) What are different gear boxes used in automobile?
- (b) What is automatic overdrive and why it is used in automobile?
- (c) State the function of a torque converter.
- (d) What is the function of a clutch ? State the features of a good quality of a clutch. 5×4

Section-A

2. What are the requirements of a transmission system ? Define a clutch and mention its various types. Explain design aspect of a clutch. 20
3. What are different types of gear box ? Explain the function of a gear box in a vehicle. Draw the needed diagram to illustrate its functioning. 20

Section-B

4. What is a torque converter ? State its principle of operation, constructional details and performance characteristics. 20

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5. State the functions of a converter coupling in an automobile. Explain the multistage torque converters and polyphase torque converters in detail. 20

Section-C

6. What is the role of hydrostatic drive ? Compare hydrostatic drive with hydrodynamic drive. Use neat diagram to explain the same. 20
7. What is an automatic overdrive ? Describe a typical overdrive unit with the help of a neat sketch. 20

Section-D

8. Explain the principles of early and modified Ward Leonard control system with its relative advantages and limitations. 20
9. Write short notes : 10×2
- (i) Automatic Transmission
 - (ii) Clutch hydraulic actuation system.