

FACULTY OF ENGINEERING**B.E. 3/4 (Auto. Engg.) I-Semester (Main) Examination, November/December 2012****Subject : Automotive Transmission****Time : 3 Hours****Max. Marks: 75****Note: Answer all questions of Part - A and answer any five questions from Part-B.****PART – A (25 Marks)**

1. What is a synchronizing device? (2)
2. What are the usual gear ratios for second gear and lower gear? (2)
3. Explain the function of a transmission in an automobile. (3)
4. Under what conditions should over drive be locked? (3)
5. What are the limitations of fluid coupling? (3)
6. Give any two advantages of automatic transmission. (2)
7. What are the three major rotating elements in a torque converter? (2)
8. Explain the methods used to reduce the drag torque in fluid coupling. (3)
9. Explain the function served by gear box. (3)
10. What is the main advantages of liquid coupling? (2)

PART – B (5x10=50 Marks)

- 11.(a) Explain the difference a two wheel and four wheel drive. (3)
(b) Which component in the transmission system makes a difference between the two wheel drive and the four wheel drive. Discuss the working of same. (7)
- 12.(a) What are the limitations of fluid coupling? (3)
(b) Explain the operation of fluid coupling with the help of a neat sketch. (7)
- 13.(a) Discuss about Janney hydrostatic drive. (3)
(b) Explain the working of multi-stage Torque converter with a neat sketch. (7)
- 14.(a) Explain the principles of Ward Leonard system of control. (3)
(b) How does a planetary gear system provide different speeds ? Explain it with a suitable example. (7)
- 15.(a) What are the disadvantages automatic transmission? (3)
(b) Explain the principle of gear selection in 2-speed automatic transmission. (7)
16. Write short notes on : (5+5)
(a) Advantages and disadvantages of hydrostatic drive.
(b) Modern electric device for buses.
17. Write short notes on : (5+5)
(a) Need of using a gear box in auto vehicles.
(b) Principles of hydrostatic drive system.
