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Reg. No. : ....

Name : ....

Fifth Semester B.Tech. Degree Examination, June 2009
(2003 Scheme)
Branch : Automobile
03-502: AUTOMOTIVE TRANSMISSION (U)

Time : 3 Hours

Max. Marks : 100

PART – A

Answer **all** questions :

(4×10=40 Marks)

1. What are the advantages of friction clutches over other type of clutches ?

2. What are the various fields the clutches are used ? What is the necessity of clutch ?

3. How do you calculate different gear ratios ?

4. Write short notes on : "Clutch adjustments".

5. How do you perform "clutch facing" ? Explain.

6. What are the limitations of a sliding mesh gear box ?

7. Draw the block diagram of a epicyclic gear box and mention it's parts.

8. What are the principles in which the hydrostatic drive is working ?

9. What are the elements comprise of a Electric drive ?

10. Hydro dynamic drive is the best transmission system in an automotive ? Yes or No. Justify your answer.

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PART – B

Answer **one full** questions from **each** Module of Part – **B**.

MODULE – I

11. a) Explain with a neat sketch the principle and operation of a centrifugal clutch.

   b) Explain the performance curves in different gears with a neat sketch.

12. a) Derive on expression for the torque transmitted in a single plate clutch taking into consideration
   1) Uniform pressure and
   2) Uniform wear.

   b) With a neat sketch describe the principle and working of a 4 speed transmission.

MODULE – II

13. a) What do you understand by pre-selective mechanisms ? Explain.

   b) Draw a torque converter and name its part.

14. a) With a neat sketch explain the principle of Ford T model.

   b) What are the advantages and disadvantages of Wilson Planetary transmission ?

MODULE – III

15. a) What are the elements of a Automatic Transmission ?

   b) Write brief notes on :
   1) Important properties of automatic transmission fluid.
   2) Advantages of Electric drive.

16. a) What are the various Modes of Electric drive ? Explain briefly.

   b) Explain with a neat sketch the "three speed" automatic transmission system.

(3×20=60 Marks)

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