Roll No.						Total No. of Pages: 0	2
						i otal itol ol i agoo i o	_

Total No. of Questions: 09

B.Tech.(AE) (2011 Onwards) (Sem.5) AUTOMOTIVE TRANSMISSIONS

Subject Code: BTAE-502 M.Code: 70485

Time: 3 Hrs. Max. Marks: 60

INSTRUCTION TO CANDIDATES:

- 1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
- 2. SECTION-B contains FIVE questions carrying FIVE marks each and students has to attempt any FOUR questions.
- 3. SECTION-C contains THREE questions carrying TEN marks each and students has to attempt any TWO questions.

SECTION-A

Q1. Write briefly:

- (a) What are the different possible locations of a transmission system?
- (b) Draw the diagram for multi plate clutch.
- (c) What are the different modes to operate the clutches?
- (d) What do you mean by gear ratio?
- (e) What is the use of fluid coupling also specify its location in the transmission system.
- (f) Where is the differential located?
- (g) Write any four limitation of electric drive.
- (h) Draw the labeled diagram for typical Janny hydrostatic drive.
- (i) What do you mean by "ECT-I"?
- (j) Name any three type of gear boxes.



SECTION-B

- 2. Write a short note on single, two and four wheel drive with suitable examples.
- 3. Explain the construction and working of single plate clutch with suitable diagram.
- 4. Write a short note on synchromesh type gear box with suitable diagram.
- 5. Explain the working torque converter in detail.
- 6. Compare the hydrostatic drive and hydrodynamic drive systems.

SECTION-C

- 7. Explain the following in detail:
 - (a) Need for double declutching
 - (b) Transfer box
- 8. Explain in detail, the different type of drives (Belt, chain, shaft, hydraulic and electric) with suitable diagram and examples.
- 9. Explain in detail, the principle of early and modified Ward Leonard Control system along with their advantages and limitations. Also, discuss the performance characteristics.

NOTE: Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.

2 M-70485 (S2)-157