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Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(AE) (2012 to 2017) (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**1. Write briefly :**

- (a) Brief about resistance to motion of a vehicle.
- (b) What do you understand by Multi axis drivers?
- (c) Give examples for wet type of clutch usage.
- (d) Write short note on overdrives.
- (e) Where a transfer box is used in transmission system?
- (f) What is effect of over running clutches?
- (g) Define principle of fluid coupling.
- (h) What is the roll of torque converter in hydrodynamic drive?
- (i) Illustrate power-glide transmission system.
- (j) What is principle of early ward Leonard control system?

SECTION-B

2. Discuss different transmissions units for different vehicles of Indian Make.
3. What are the performance characteristics of Fluid coupling?
4. With the help of neat sketch briefly explain Automatic clutch.
5. Write about hydraulic actuation system.
6. Explain Working of synchronizing units.

SECTION-C

7. Illustrate all modes of operating clutch in detail.
8. Describe the transmission system for four-wheel drive system.
9. Write in detail about :
 - (a) Automatic transmission with Intelligent Electronic control system.
 - (b) Electric drive.

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.