

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER- V (New) EXAMINATION – WINTER 2019****Subject Code: 2150207****Date: 29/11/2019****Subject Name: Automobile Transmission****Time: 10:30 AM TO 01:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

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| Q.1 | (a) Write classification of transmission systems. | 03 |
| | (b) Differentiate : hydrostatic and hydrodynamic drive. | 04 |
| | (c) With neat sketch explain torque convertor. | 07 |
| Q.2 | (a) Explain principle of operation of clutch. | 03 |
| | (b) Write brief note on single and two wheel drive systems. | 04 |
| | (c) Explain in detail: Why different types of location of transmission system are used in the different four wheeler? | 07 |
| OR | | |
| | (c) List gear shifting mechanism and explain any one in detail. | 07 |
| Q.3 | (a) Define: tractive effort, double declutching and synchronizing | 03 |
| | (b) Explain different resistances to motion of a vehicle with neat sketch. | 04 |
| | (c) Explain hydraulic mode of operating a clutch in detail with sketch. | 07 |
| OR | | |
| Q.3 | (a) Write brief note on freewheel clutch. | 03 |
| | (b) With neat sketch write construction of fluid coupling. | 04 |
| | (c) Define Clutch and explain centrifugal clutch in detail with neat sketch. | 07 |
| Q.4 | (a) Compare electric and hybrid drive system. | 03 |
| | (b) Explain any four points of gear maintenance. | 04 |
| | (c) With neat sketch explain construction and working of constant-mesh gear box. | 07 |
| OR | | |
| Q.4 | (a) Compare dry clutch and wet type clutch. | 03 |
| | (b) Explain performance characteristics of electric drive. | 04 |
| | (c) Explain clutch maintenance in detail. | 07 |
| Q.5 | (a) Write note on types of clutch lining materials. | 03 |
| | (b) Discuss the principle of early Ward Leonard Control system. | 04 |
| | (c) Explain automatic transmission with intelligent Electronic control systems. | 07 |
| OR | | |
| Q.5 | (a) Write brief note on hybrid drive system. | 03 |
| | (b) Explain types of hydrostatic drive. | 04 |
| | (c) Explain construction and working of Janny hydrostatic drive neat sketch. | 07 |
