

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- SEMESTER-V (NEW) EXAMINATION – WINTER 2020****Subject Code:2150207****Date:29/01/2021****Subject Name:Automobile Transmission****Time:10:30 AM TO 12:30 PM****Total Marks: 56****Instructions:**

1. Attempt any **FOUR** questions out of **EIGHT** questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Compare transmission system and power plant system of an automobile. **03**
(b) Draw layout of four wheel drive. **04**
(c) With the help of complete sketch locate and explain all the components of transmission system. **07**
- Q.2** (a) Explain good requirements of clutch. **03**
(b) Explain function of cushion spring and helical coil spring in clutch plate. **04**
(c) Derive the equation of torque for multi plate clutch with suitable figure. **07**
- Q.3** (a) Enlist friction materials used in clutch plate with their coefficient of friction. **03**
(b) Explain need of double declutching. **04**
(c) Explain diaphragm clutch with neat sketch. **07**
- Q.4** (a) Explain objective of gear box in an automobile. **03**
(b) Explain any two trouble shooting and remedies of gear box. **04**
(c) Explain fluid coupling with construction detail. **07**
- Q.5** (a) Explain the need of torque converter in transmission system of an automobile. **03**
(b) Compare hydrostatic drive with hydrodynamic drive. **04**
(c) Explain synchromesh gear box with neat sketch. **07**
- Q.6** (a) Write merit and demerit of electric drive. **03**
(b) Explain in brief working principle of torque converter. **04**
(c) Explain construction and working of typical Janny hydrostatic drive. **07**
- Q.7** (a) Write limitation of hydrostatic drive. **03**
(b) Explain in brief hydraulic actuation system. **04**
(c) Explain series hybrid system with layout. **07**
- Q.8** (a) Explain working principle of CVT drive. **03**
(b) Explain in brief Ward Leonard Control system. **04**
(c) Explain Chevrolet turbo glide transmission system. **07**
