

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII (OLD) EXAMINATION – SUMMER 2019****Subject Code: 171902****Date: 14/05/2019****Subject Name: Automobile Engineering****Time: 02:30 PM TO 05:00 PM****Total Marks: 70****Instructions:**

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

- Q.1 (a)** Explain effect of resistance to the motion of the vehicle **07**
- (b)** Explain Types of frames, its function and loads on the frame. **07**
- Q.2 (a)** Why a clutch is necessary in vehicle? How clutches are classified? **07**
- (b)** Explain automotive body and details of passenger car body. **07**
- OR**
- (b)** Draw the sketch of a single plate clutch and explain its working. **07**
- Q.3 (a)** What is a dog clutch? How does it work? **07**
- (b)** Describe with neat sketch torque converter. **07**
- OR**
- Q.3 (a)** Describe with neat sketch sliding mesh gear box. **07**
- (b)** Discuss trouble shooting in clutch systems. **07**
- Q.4 (a)** Explain continuously variable transmission (CVT) system. **07**
- (b)** State the functions of propeller shafts and their types. **07**
- OR**
- Q.4 (a)** Differentiate front drive and rear drive system in vehicle. **07**
- (b)** Explain suspensions and requirements of suspension system in automotive. **07**
- Q.5 (a)** What is toe-in and toe-out? What are its various effects on vehicle? **07**
- (b)** Explain anti-lock brake systems (ABS) for vehicle. **07**
- OR**
- Q.5 (a)** Write wheel and tyre trouble shooting in auto vehicles. **07**
- (b)** Discuss charging methods and various test on battery. **07**
