

C U SHAH UNIVERSITY

MAY EXAMINATION – 2015 (B.Tech- Auto)

Branch: Automobile Engineering

Semester: IV

Subject Code:4TE04ASY1

Subject Name: Automobile Systems

SECTION – I

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|-------|---|----|
| Q – 1 | (a) Define following terms: (i)Chassis (ii)Frame | 02 |
| | (b) What is double declutching? | 02 |
| | (c) Draw the diagram of centrifugal clutch. | 02 |
| | (d) Name the different types of CV Joints. | 01 |
| Q – 2 | (a) Write short note on development of automobile. | 05 |
| | (b) Explain types of chassis with reference to power plant location. | 05 |
| | (c) Explain requirement of good clutch. | 04 |
| Q – 2 | (a) Explain with neat sketch working and construction of fluid flywheel with its advantages disadvantages. | 05 |
| | (b) Discuss the various factors affecting the torque transmission in a clutch. | 05 |
| | (c) What are the advantages and disadvantages of a passenger car with engine mounted at front and drive to the front wheel? | 04 |
| Q -3 | (a) Explain with neat sketch working of sliding mesh type gear box. | 05 |
| | (b) Described clearly the construction and working of transfer box. | 05 |
| | (c) Explain rear axle shaft of semi floating. | 04 |
| Q -3 | (a) Explain with neat sketch construction and working of differential. | 05 |
| | (b) Explain different types of rear axle drives. | 05 |
| | (c) Explain merits and demerits of synchromesh gear box over sliding mesh gear box. | 04 |
| Q – 4 | (a) State the requirement of a steering system. | 02 |
| | (b) What is the function of suspension springs? | 02 |
| | (c) Classify auto vehicle brakes? | 02 |
| | (a) What is tyre carcass? | 01 |
| Q – 5 | (a) Draw and Explain steering linkages for the Conventional Suspension system. | 05 |
| | (b) Define under steering and Over steering. | 05 |
| | (c) Explain torsion bar with sketch. | 04 |
| Q – 5 | (a) Explain Mac Pherson strut type suspension | 05 |
| | (b) Explain with neat sketch hydraulic shock absorber. | 05 |
| | (c) Explain following terms. (1) Caster (2) Camber | 04 |
| Q -6 | (a) Compare drum brake and disk brake for automobile. | 05 |
| | (b) Explain with neat sketch working of master cylinder for hydraulic braking system. | 05 |
| | (c) Explain with neat sketch tyres trade patterns. | 04 |

- Q -6 (a) Draw the section of tube less automobile tyre and explain constructional features. 05
- (b) Explain the difference between Radial ply and Bias ply. 05
- (c) Explain with neat sketch the working of Internal expanding shoe brake. 04