

Total No. of Questions : 09

B.Tech.(AE) (2012 to 2017) (Sem.-4)
AUTOMOTIVE CHASSIS SYSTEMS
 Subject Code : BTAE-401/302
 M.Code : 72487

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS 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. Answer briefly :

- a. How we can stop skidding of wheels?
- b. What is power assisted braking?
- c. How the wheel balancing performed on wheels?
- d. What are all season tires?
- e. What is the difference between radial and bias ply tyres?
- f. What are torsion bar springs?
- g. How do you define dead axles?
- h. What is limited slip differential?
- i. Draw diagram for spiral bevel gear.
- j. Define Multi axle steering systems.

SECTION-B

2. What is different type of Chassis layout? How the load acting on vehicle affect the designing?
3. How the front axle designed? Provide the construction details along with material used.
4. What is Hotch kiss drive? How it is different from torque tube drive?
5. Explain different type of derive and differential in details.
6. Why we need suspension system? Provide construction details of leaf spring, how it is different from torsion bar spring?

SECTION-C

7. What is the different type of wheels used in automobiles? Enlist the benefits of using alloy wheels.
8. What is the difference between the drum and disc brakes? Provide customer details and its working.
9. Explain the following :
 - a. Power brakes
 - b. Anti-lock braking systems
 - c. Servo brakes

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.