

C.U.SHAH UNIVERSITY

Summer Examination-2016

Subject Name : Automobile Chasis and Body Engineering

Subject Code : 4TE06ACB1

Branch : B.Tech (Auto)

Semester : 6 Date :09/05/2016

Time :2:30 To 5:30

Marks :70

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
 - (2) Instructions written on main answer book are strictly to be obeyed.
 - (3) Draw neat diagrams and figures (if necessary) at right places.
 - (4) Assume suitable data if needed.
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Q-1

Attempt the following questions:

(14)

- 1) Split level is a type of _____
(a) Commercial vehicle body (b) Bus body
(c) Car body (d) Truck body
- 2) ABS (Anti-lock braking system) falls under the category of _____
(a) Active safety (b) Passive safety
(c) Both (a) and (b) (d) None of the above
- 3) Rolling moment is generated by,
(a) Down force (b) Cross wind (c) Both (a) and (b) (d) None of the above
- 4) Vertical component of resultant of pressure distribution is called,
(a) Drag force (b) Side force (c) Lift force (d) None of the above
- 5) Glove box is a unit of,
(a) Hood (b) Dash board (c) Bonnet (d) None of the above
- 6) The lack of "B" pillars found in,
(a) Sedan type body shape (b) Hatch back type
(c) Hard top type (d) Limousine type
- 7) The glass which consists of two layer of glass bonded together is called,
(a) Toughened glass (b) Laminated glass
(c) Plain glass (d) None of the above
- 8) The example of a saloon is
(a) Maruti A star (b) Fiat Linea (c) Toyota innova (d) Tata safari



- 9) _____ Moment tends to turn the vehicle away from the direction of motion.
 (a) Pitching (b) Rolling (c) Yawing (d) None of Above
- 10) Energy absorbing parts of the car is made of
 (a) Less stiffed than central part (b) High stiffed than central part
 (c) Both (a) and (b) (d) None of the above
- 11) _____ is the body parts at the rear of the front section?
 (a) Cowl (b) Boot (c) Doors (d) Wind screen
- 12) What should be the angle between seat and back rest?
 (a) Acute angle (b) Obtuse angle (c) Reflect angle (d) None of above
- 13) Weight of the vehicle produces in the side members of the frame.
 (a) Vertical bending (b) Horizontal bending
 (c) Torsion (d) None of above
- 14) Structural safety of the body work falls under the category of,
 (a) Active safety (b) Passive safety
 (c) Both (a) and (b) (d) None of the above

Attempt any four questions from Q-2 to Q-8

- Q-2 Attempt all questions (14)**
 (a) Draw and explain typical car body construction. (07)
 (b) Discuss various types of drag force and its contribution towards the overall drag force. (07)
- Q-3 Attempt all questions (14)**
 (a) Explain various moments arise on vehicle due to aerodynamic forces. (07)
 (b) Define blind spot. Describe various methods to reduce blind spot in sedan car. (07)
- Q-4 Attempt all questions (14)**
 (a) What is vehicle safety? Discuss in brief passive safety. (07)
 (b) Give details about types of metal section used in bus body. (07)
- Q-5 Attempt all questions (14)**
 (a) Explain the influence of engine, entrance and exit location in bus body design with relevant sketches. (07)
 (b) Compare integral and conventional body construction. (07)
- Q-6 Attempt all questions (14)**
 (a) Discuss the compactness of driver's cab and segmental design of cab. (07)
 (b) Explain with sketch the tipper body design. (07)



