

PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
B.Tech. Summer 2018 - 19 Examination

Semester: 8
Subject Code: 03102451
Subject Name: Vehicle chassis and body engineering

Date: 29/04/2019
Time: 10.30am to 01:00pm
Total Marks: 60

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Draw neat and clean diagram.
4. Start new question on new page.

Q.1 Objective Type Questions**(15)**

1. Full form of MUV is _____
2. Full form of NACP is _____
3. Full form of ARAI is _____
4. Full form of SAE is _____
5. Full form of GVW is _____
6. In commercial vehicle layouts engine is located forward, rear or under floor mainly to better weight distribution.(True/False)
7. An upraised part on the hood which directs the air flow into the engine compartment is called Spoiler.(True/False)
8. The automobile chassis consists of the engine, frame, power train, wheels , steering and braking system.(True/False)
9. The frame provides support for the engine body, power train members and road.(True/False)
10. The power train includes the clutch, propeller shaft, differential and transmission.(True/False)
11. The engine is usually supported by the frame
 (A) Four or five (B) One or two (C) Three or four (D) Five or six
12. Which one of the following is not a part of the chassis
 (A) Wheels (B) Front axle (C) Steering system (D) Passenger seats (E) Rear axles
13. An automobile chassis does not include which one of the following parts
 (A) Shock absorbers (B) Steering system (C) Body (D) brakes
14. Seat belts used in cars are generally
 (A) Two point type (B) Three point type (C) Four point type (D) Six point type
15. The metal used for body building of automobiles is generally:
 (A) Cast iron (B) Steel (C) Copper (D) Aluminum

Q.2 Answer the following questions. (Attempt any three)**(15)**

- A) Explain types of chassis frames.
- B) Explain different materials used for vehicle body.
- C) Explain classification of bus bodies.
- D) Explain any one. (1) Tipper body (2) Tanker body

Q.3 A) Explain chassis frame layout components with line sketch.**(07)**

- B) Classify and explain different types of car bodies with neat sketch.

(08)**OR**

- B) Explain driver seat design and dimension parameters.

(08)**Q.4 A) Write short note on bus body layout.****(07)****OR**

- A) Describe aerodynamic aids for optimization of drag.

(07)

- B) Explain any one : (1) Water leakage test (2) Crash test

(08)