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Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(AE) (2011 Onwards) (Sem.–5)

VEHICLE BODY ENGINEERING

Subject Code : BTAE-501

Paper ID : [A2061]

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 have to attempt any **FOUR** questions.
3. SECTION-C contains **THREE** questions carrying **TEN** marks each and students have to attempt any **TWO** questions.
4. Draw neat and clean diagram where required and assume any missing data suitably.

SECTION – A**Q1 Write briefly :**

- i) Compare a *Double Decker* bus body with articulated type bus body.
- ii) What do you mean by cowl or dash panel? How it is different from firewall?
- iii) Define the terms 'tone, value and intensity' with respect to selection of paint.
- iv) What are different types of safety equipments used in vehicles?
- v) Differentiate between fixed-side structure and drop-side type structure.
- vi) What are the factors to be considered in tanker body design?
- vii) What is integral body construction?
- viii) What do you understand by displays in vehicles?
- ix) What do you understand by double skin construction?
- x) What is the influence of floor height in the bus body layout?

SECTION - B

- Q2 Write short note on 'Cushion Material'.
- Q3 Describe the advantage of using different type of metal cross sections members in bus body construction.
- Q4 What are the methods of improving internal cabin space in cars?
- Q5 Anti submarine seats are used in cars and not in buses, explain why?
- Q6 Explain the constructional and operational features of wind tunnel.

SECTION - C

- Q7 i) What are visibility regulations? 4
- ii) Describe the different types of commercial vehicle body. 6
- Q8 i) Write short note on anti- jamming door locks. 3
- ii) What are the advantages of using carbon fiber as construction material for vehicles? 7
- Q9 i) What are the important design aspects required to design : 6
- a) Ambulance
- b) Concrete mixer
- ii) What are the ergonomics of driver seat design? 4