

AEC 603 VBE&S
Supplementary Examination

Date - 20/07/2022

Marking Scheme

Q.1

Ans a.

- 1) Conventional - 1.5M
 - 2) Integral - 1.5M
 - 3) Semi-Integral - 1.5M
- Line Diagrams for each 0.5M

Ans b.

Minimum 5 points each carrying 1 mark

Ans c.

Name of feature 1M
Working, Construction & Importance - 3M
Diagram - 1M

Ans d.

Minimum 5 points each carrying 1 mark

2

Ans a

- Name 3 types of structure
Open integral
Closed
Hut/Punt type
] 1M
- Explain any one in detail - 4M
- Behaviours of structure in
Bending & Torsion - 3M
- Neat labelled diagrams - 2M

Ans b.

- 3 Forces F_x, F_y, F_z
- 3 Moments M_x, M_y, M_z] 2M
- Body optimization technique - 3M
- Frontal area (Reducing aerodynamic drag) - 5M
- Importance of frontal area for reducing drag

Q.3

Ans a.

Neat diagram of chassis indicating loads - 3M
Types of Body Loads - 7M

Ans b.

3 types of Universal Design - 8M (3+3+2)
What is Universal Design? - 2M

Q.4

Ans a.

Enlist minimum 5 types of crash test methods
[Frontal, Side, Rear, Overlap, Drop etc] - 3M
Explaining any 1 with its effect - 3+4M

Ans b.

Need of Anti lock braking system - 3M
Construction of ABS - 2M
Working of " - 4M
Neat labelled diagram - 1M

Q.5

Ans a.

Design considerations for chassis design - 5M
[Minimum 5 points]
Components of chassis - 5M

Ans b.

What is visibility - 2M
Importance of visibility - 2M
Methods of Improving visibility - 6M