

PAU5I102 VEHICLE BODY ENGINEERING

MODULE I

CAR BODY DETAILS 9 Hours

Types: Saloon, convertibles, Limousine, Estate Van, racing and sports car. Visibility: regulations, driver's visibility, tests for visibility – Methods of improving visibility. Safety: safety design, safety equipments for car. Various body panels and Construction of Car body.

MODULE II

BUS BODY DETAILS 9 Hours

Types: Mini bus, single decker, double decker, two level, split level and articulated bus. Bus body lay out – Floor height – Engine location – Entrance and exit location. Constructional details: Types of metal sections used – Regulations – Conventional and Integral type construction.

MODULE III

VEHICLE AERODYNAMICS 9 Hours

Objectives – Vehicle drag and types – various types of forces and moments – Effects of forces and moments – Side wind effects on forces and moments – Various body optimization techniques for minimum drag

MODULE IV

COMMERCIAL VEHICLE DETAILS 9 Hours

Types of body – Flat platform, drop side, fixed side, tipper body, tanker body. Light commercial vehicle body types. Dimensions of driver's seat in relation to controls – Drivers cab design.

MODULE V

BODY MATERIALS, TRIM AND MECHANISMS 6 Hours

Steel sheet, timber, plastics, GRP, properties of materials. Corrosion – Anticorrosion methods – Selection of paint and painting process. Body trim items – Body mechanisms.

TEXT BOOK

1. Powloski.J.Vehicle Body Engineering, Business Books Ltd., 1989.

REFERENCE BOOKS:

1. Giles J.C. Body construction and design, Life books Butterworth & Co., 1971.
2. John Fenton, Vehicle Body layout and analysis, Mechanical Engg. Publication Ltd., London, 1982.
3. Braithwaite. J.B., Vehicle Body building and drawing, Heinemann Educational Books Ltd., London, 1977.