



## **Syllabus for First Year B.A. (Road Transportation)OR Diploma in Road Transportation Programme.**

### **Semester-1**

#### **Book-1: Overview of Road Transportation.**

- 1.1. Importance of Road Transportation in day to day life.
- 2.1. Importance of a Driver in Road Transportation
- 3.1. Qualities of a Good Driver.
- 4.1. Conduct & duties of a driver
- 5.1. Vehicle documents to be maintained
- 6.1. Importance & use of fare meter & logbook
- 7.1. Rules of Road Regulation
- 8.1. Fuel saving tips, Effects of noise & Air pollution
- 9.1. Interpersonal skills & public Relations
- 10.1. Defensive Driving
- 11.1. Effect of overloading over speeding over taking
- 12.1. Healthy life styles & social Responsibilities
- 13.1. Offenses & Penalties
- 14.1. Opportunities ahead

#### **Book-2: Introduction to Vehicles**

##### **Unit 1 Classification of Vehicles**

- 1.0.Objectives
- 1.1.Introduction
- 1.2.Criteria for Classification
- 1.3.Summary
- 1.4.Glossary
- 1.5.Answers to 'Check Your Progress'
- 1.6.Questions for Practice

##### **Unit 2 Identification of Vehicles**

- 2.0.Objectives
- 2.1.Introduction
- 2.2.Criteria for Identification
- 2.3.Summary
- 2.4.Glossary
- 2.5.Answers to 'Check Your Progress'
- 2.6.Questions for Practice



### **Unit 3 Introduction to Vehicle Systems**

- 3.0.Objectives
- 3.1.Introduction
- 3.2.Types of Vehicle Systems
  - 3.2.1 Chassis/Body system
  - 3.2.2 Power system (engine)
  - 3.2.3 Fuel system
  - 3.2.4 Steering System
  - 3.2.5 Lubrication system
  - 3.2.6 Cooling system
  - 3.2.7 Suspension system
  - 3.2.8 Transmission System
  - 3.2.9 Brake system
  - 3.2.10 Electrical system
  - 3.2.11 Exhaust system
- 3.3.Summary
- 3.4.Glossary
- 3.5.Answers to 'Check Your Progress'
- 3.6.Questions for Practice
- 3.7.Suggested Reading

### **Unit-4 Components & Accessories of Vehicles and their functions**

- 4.0. Objectives
- 4.1. Introduction
- 4.2. Important Components and Accessories with functions
  - 4.2.1 Dashboard instruments
  - 4.2.2 Seats
  - 4.2.3 Luggage compartment
- 4.3. Summary
- 4.4. Glossary
- 4.5. Answers to 'Check Your Progress'
- 4.6. Questions for Practice

### **Unit-5 Dimensions of Vehicles**

- 5.0. Objectives
- 5.1. Introduction
- 5.2. Dimension parameters and their limits
  - 5.2.1 Various Dimension parameters
  - 5.2.2 Limits
  - 5.2.3 Representative examples



- 5.3. Summary
- 5.4. Glossary
- 5.5. Answers to 'Check Your Progress'
- 5.6. Questions for Practice

#### **Unit-6 Safety measures**

- 6.0. Objectives
- 6.1. Introduction
- 6.2. Safety systems
- 6.3. Display of class labels and emergency panels
- 6.4. Unauthorised equipment
- 6.5. Summary
- 6.6. Glossary
- 6.7. Answers to 'Check Your Progress'
- 6.8. Questions for Practice

#### **Unit-7 Vehicle Maintenance**

- 7.0. Objectives
- 7.1. Introduction
- 7.2. Maintenance Schedules
  - 7.2.1 Daily maintenance
  - 7.2.2 Preventive maintenance
  - 7.2.3 Breakdown
- 7.3. Summary
- 7.4. Glossary
- 7.5. Answers to 'Check Your Progress'
- 7.6. Questions for Practice

#### **Unit-8 Common problems & trouble shooting**

- 8.0. Objectives
- 8.1. Introduction
- 8.2. Types of common problems
- 8.3. Effective trouble shooting methods
- 8.4. Summary
- 8.5. Glossary
- 8.6. Answers to 'Check Your Progress'
- 8.7. Questions for Practice



### **Unit-9 Fuel conservation**

- 9.0. Objectives
- 9.1. Introduction
- 9.2. Methods for conserving fuel
- 9.3. Emission norms
- 9.4. Fuel saving tips
- 9.5. Summary
- 9.6. Glossary
- 9.7. Answers to 'Check Your Progress'
- 9.8. Questions for Practice

### **Unit-10 Other Road Users**

- 10.0. Objectives
- 10.1. Introduction
- 10.2. Responding to different types of Road Users
- 10.3. Summary
- 10.4. Glossary
- 10.5. Answers to 'Check Your Progress'
- 10.6. Questions for Practice

### **Unit-11 Preservation and Storing of Vehicle**

- 11.0. Objectives
- 11.1. Introduction
- 11.2. Care to be taken during vehicle non-use.
- 11.3. Summary
- 11.4. Glossary
- 11.5. Answers to 'Check Your Progress'
- 11.6. Questions for Practice

## **Book-3: Introduction to Roads.**

### **Unit-1 Types of Roads**

- 1.0. Objectives
- 1.1. Introduction
- 1.2. Types of Roads
- 1.3. Railway Crossing
- 1.4. Subways, Flyover, Underpass and Tunnels
- 1.5. Summary
- 1.6. Glossary
- 1.7. Answers to 'Check Your Progress'



1.8. Questions for Practice

**Unit-2 Map reading & GPS**

- 2.0. Objectives
- 2.1. Introduction
- 2.2. How to read Maps
- 2.3. Use of GPS for navigation
- 2.4. Summary
- 2.5. Glossary
- 2.6. Answers to 'Check Your Progress'
- 2.7. Questions for Practice

**Unit-3 Driving techniques & Driving skills under special conditions:**

- 3.0. Objectives
- 3.1. Introduction
- 3.2. Special conditions
  - 3.0.1. Hilly areas
  - 3.0.2. Railway crossing
  - 3.0.3. Road work sites
  - 3.0.4. Dusty conditions
  - 3.0.5. Adverse weather conditions
  - 3.0.6. City Driving
  - 3.0.7. Night Driving
  - 3.0.8. Bridges and Tunnels
- 3.3. Overtaking & Overtaking prohibitions
- 3.4. Parking
- 3.5. Glossary
- 3.6. Answers to 'Check Your Progress'
- 3.7. Questions for Practice

**Unit 4 Vehicle Dynamics:**

- 4.0. Objectives
- 4.1. Introduction
- 4.2. Factors in Vehicle dynamics
  - 4.2.1. Road Grip
  - 4.2.2. Weight transfer
  - 4.2.3. Speeding
  - 4.2.4. Forces acting on Vehicle
- 4.3. Summary
- 4.4. Glossary
- 4.5. Answers to 'Check Your Progress'



4.6. Questions for Practice

**Unit 5 Different Authorities on the Road**

- 5.0. Objectives
- 5.1. Introduction
- 5.2. Responding to different Authorities
- 5.3. Summary
- 5.4. Glossary
- 5.5. Answers to 'Check Your Progress'
- 5.6. Questions for Practice

**Unit-6 Highway Amenities**

- 6.0. Objectives
- 6.1. Introduction
- 6.2. Types of Amenities and their Utility
- 6.3. Summary
- 6.4. Glossary
- 6.5. Answers to 'Check Your Progress'
- 6.6. Questions for Practice
- 6.7. Suggested Reading

• **Semester-2**

**Book: 4 Rules & Responsibilities**

**Unit-1 Rules regarding License**

- 1.0. Objectives
- 1.1. Introduction
- 1.2. Requirements
- 1.3. Driving test and validity
- 1.4. Summary
- 1.5. Glossary
- 1.6. Answers to 'Check Your Progress'
- 1.7. Questions for Practice
- 1.8. Suggested Reading

**Unit-2 Road signs**

- 2.0. Objectives
- 2.1. Introduction
- 2.2. Types of Road Signs and their meanings



- 2.3. Summary
- 2.4. Glossary
- 2.5. Answers to 'Check Your Progress'
- 2.6. Questions for Practice
- 2.7. Suggested Reading

### **Unit-3 Road Markings**

- 3.0. Objectives
- 3.1. Introduction
- 3.2. Types of Road Markings and their meanings
- 3.3. Summary
- 3.4. Glossary
- 3.5. Answers to 'Check Your Progress'
- 3.6. Questions for Practice
- 3.7. Suggested Reading

### **Unit-4 Signaling and signaling devices**

- 4.0. Objectives
- 4.1. Introduction
- 4.2. Signals
  - 4.2.1. Hand Signals
  - 4.2.2. Light Signals
  - 4.2.3. Police Signals
- 4.3. Summary
- 4.4. Glossary
- 4.5. Answers to 'Check Your Progress'
- 4.6. Questions for Practice
- 4.7. Suggested Reading

### **Unit-5 Vehicle related Documents**

- 5.0. Objectives
- 5.1. Introduction
- 5.2. Types of documents
- 5.3. Summary
- 5.4. Glossary
- 5.5. Answers to 'Check Your Progress'
- 5.6. Questions for Practice
- 5.7. Suggested Reading

### **Unit-6 Driver's Responsibilities**

- 6.0. Objectives
- 6.1. Introduction
- 6.2. Typical situations
  - 6.2.1 Accident



- 6.2.2 Crossing of animals
- 6.2.3 Signals given by police
  - 6.2.4 Special groups: Children / Handicapped / Senior Citizens / Pedestrians / Cyclists etc.
- 6.3 Summary
- 6.4 Glossary
- 6.5 Answers to 'Check Your Progress'
- 6.6 Questions for Practice
- 6.7 Suggested Reading

### **Unit-7 Speed Regulation and Stopping distances**

- 7.0. Objectives
- 7.1. Introduction
- 7.2. Speed Regulations
- 7.3. Stopping distances
- 7.4. Summary
- 7.5. Glossary
- 7.6. Answers to 'Check Your Progress'
- 7.7. Questions for Practice
- 7.6. Suggested Reading

### **Unit-8 Offenses, Penalties and Court Procedures**

- 8.0. Objectives
- 8.1. Introduction
- 8.2. Offenses and Penalties
- 8.3. Court Procedure and Department Actions
- 8.4. Summary
- 8.5. Glossary
- 8.6. Answers to 'Check Your Progress'
- 8.7. Questions for Practice
- 8.8. Suggested Reading

### **Unit-9 Defensive Driving Techniques:**

- 9.0. Objectives
- 9.1. Introduction
- 9.2. Driving techniques
  - 9.2.1. MSM, PSL techniques, & LAD
  - 9.2.2. Two second rule
  - 9.2.3. Various maneuvers like Give way or Driving preference
  - 9.2.4. Judgment, Anticipation and Escape route
  - 9.2.5. IPDE (Identification, Prediction, Decision, and Execution)
  - 9.2.6. Emergency maneuvers
  - 9.2.7. Mirror and Blind spot
  - 9.2.8. Parking





9.2.9. Night Driving

- 9.3. Summary
- 9.4. Glossary
- 9.5. Answers to 'Check Your Progress'
- 9.6. Questions for Practice
- 9.7. Suggested Reading

**Unit-10 Accidents**

- 10.0. Objectives
- 10.1. Introduction
- 10.2. Types
  - 10.2.1. Single vehicle
  - 10.2.2. Vehicle & Pedestrian
  - 10.2.3. Head on collision
  - 10.2.4. Multi – vehicle accident
  - 10.2.5. Tailgating
  - 10.2.6. Vehicle to animals
  - 10.2.7. Fire
- 10.3. Causes or Reasons
  - 10.3.1. Driver
  - 10.3.2. Vehicle
  - 10.3.3. Road conditions
  - 10.3.4. Other Road users
  - 10.3.5. Weather condition
  - 10.3.6. Un-planned land use
  - 10.3.7. Mixed traffic flow
  - 10.3.8. Poor Regulation
  - 10.3.9. Lack of knowledge of rules and regulations
- 10.4. Claims Procedures
- 10.5. Summary
- 10.6. Glossary
- 10.7. Answers to 'Check Your Progress'
- 10.8. Questions for Practice

**Unit-11 Handling emergencies**

- 11.0. Objectives
- 11.1. Introduction
- 11.2. Types of Emergencies
- 11.3. Authorities to be contacted
- 11.4. Summary



- 11.5. Glossary
- 11.6. Answers to 'Check Your Progress'
- 11.7. Questions for Practice

### **Unit-12 Know Your Load**

- 12.0. Objectives
- 12.1. Introduction
- 12.2. Types of permits
- 12.3. Different types of carriages
  - 12.3.1. Carriage of passengers
  - 12.3.2. Carriage of school children
  - 12.3.3. Carriage of Animals
  - 12.3.4. Carriage of Goods:
    - 12.3.4.1. Size
    - 12.3.4.2. Weight
    - 12.3.4.3. Physical condition
    - 12.3.4.4. Nature (hazardous)
    - 12.3.4.5. Car carrier and ODC
    - 12.3.4.6. Documents related to Goods
    - 12.3.4.7. Use of Fare meter and tariff
- 12.4. Summary
- 12.5. Glossary
- 12.6. Answers to 'Check Your Progress'
- 12.7. Questions for Practice

### **Unit-13 Precautions to Avoid Theft of Vehicle & Goods**

- 13.0. Objectives
- 13.1. Introduction
- 13.2. Preventive steps
- 13.3. Expected Action in case of Theft
- 13.4. Summary
- 13.5. Glossary
- 13.6. Answers to 'Check Your Progress'
- 13.7. Questions for Practice.
- 13.8. Suggested Reading

### **Book-5: ME & MY FUTURE**

#### **Unit-1 Qualities of a good driver**

- 1.1. Objectives
- 1.2. Introduction
- 1.3. Essential Qualities



- 1.3.1. Anticipation of actions of other Road users
- 1.3.2. Experience
- 1.3.3. Skill
- 1.3.4. Responsibility
- 1.3.5. Patience
- 1.3.6. Concentration
- 1.3.7. Reaction time
- 1.3.8. Expect the unexpected
- 1.3.9. Confidence
- 1.3.10. Technical knowledge
- 1.3.11. Courtesy and Consideration for the other users
- 1.3.12. Avoiding Aggressiveness & Road rage
- 1.4. Summary
- 1.5. Glossary
- 1.6. Answers to 'Check Your Progress'
- 1.7. Questions for Practice.
- 1.8. Suggested Reading

## **Unit-2 Physical fitness, Ergonomics, Disqualification of Drivers**

- 2.1. Objectives
- 2.2. Introduction
- 2.3. Physical fitness
- 2.4. Dealing with fatigue
- 2.5. Ergonomics
- 2.6. Disqualifications
- 2.7. Summary
- 2.8. Glossary
- 2.9. Answers to 'Check Your Progress'
- 2.10. Questions for Practice.
- 2.11. Suggested Reading

## **Unit-3 Healthy lifestyle**

- 3.0. Objectives
- 3.1. Introduction
- 3.2. Factors leading to healthy life style
  - 3.2.1 Yoga
  - 3.2.2 Diet
  - 3.2.3 Exercise
  - 3.2.4 Recreation
- 3.3. Summary
- 3.4. Glossary
- 3.5. Answers to 'Check Your Progress'
- 3.6. Questions for Practice.



#### **Unit-4 Awareness of AIDS**

- 4.0. Objectives
- 4.1. Introduction
- 4.2. Precautions for prevention
- 4.3. Summary
- 4.4. Glossary
- 4.5. Answers to 'Check Your Progress'
- 4.6. Questions for Practice.

#### **Unit-5 Effects of Alcohol, Drugs, Smoking, and Ghutka**

- 5.0. Objectives
- 5.1. Introduction
- 5.2. Threats to driving
- 5.3. Tests for detection of alcohol consumption
- 5.4. Summary
- 5.5. Glossary
- 5.6. Answers to 'Check Your Progress'
- 5.7. Questions for Practice.

#### **Unit-6 Dealing with Occupational Hazards & Stress**

- 6.0. Objectives
- 6.1. Introduction
- 6.2. Types of Occupational hazards
- 6.3. Prevention and Treatment
- 6.4. Summary
- 6.5. Glossary
- 6.6. Answers to 'Check Your Progress'
- 6.7. Questions for Practice.

#### **Unit-7 Emergency related responsibilities and First Aid**

- 7.0. Objectives
- 7.1. Introduction
- 7.2. Types of Emergencies
- 7.3. Basics of First Aid
- 7.4. Natural calamities
- 7.5. Summary
- 7.6. Glossary
- 7.7. Answers to 'Check Your Progress'
- 7.8. Questions for Practice.



### **Unit-8 Interpersonal communication & Public relations**

- 8.0. Objectives
- 8.1. Introduction
- 8.2. Summary
- 8.3. Glossary
- 8.4. Answers to 'Check Your Progress'
- 8.5. Questions for Practice.

### **Unit-9 Importance of Education & Career Opportunities**

- 9.0. Objectives
- 9.1. Introduction
- 9.2. Career Opportunities
  - 9.2.1. Chauffeur
  - 9.2.2. Vendor
  - 9.2.3. Courier Service Provider
  - 9.2.4. Tourist Guide etc.
- 9.3. Summary
- 9.4. Glossary
- 9.5. Answers to 'Check Your Progress'
- 9.6. Questions for Practice.

### **Unit-10 Life – work balance**

- 10.0. Objectives
- 10.1. Introduction
- 10.2. Managing Work and Family responsibilities
- 10.3. Summary
- 10.4. Glossary
- 10.5. Answers to 'Check Your Progress'
- 10.6. Questions for Practice.

### **Unit-11 Basic finance**

- 11.0. Objectives
- 11.1. Introduction
- 11.2. Finance-related documents  
(PAN Card, Credit Card, Fuel Card)
- 11.3 Savings & Investment
- 11.4 Banking
- 11.3. Vehicle finance
- 11.4. Summary
- 11.5. Glossary



- 11.6. Answers to 'Check Your Progress'
- 11.7. Questions for Practice.

### **Unit-12 Insurance**

- 12.0. Objectives
- 12.1. Introduction
- 12.2. Types of Insurance
- 12.3. Insurance Claims and Procedures
- 12.4. Summary
- 12.5. Glossary
- 12.6. Answers to 'Check Your Progress'
- 12.7. Questions for Practice.

### **Unit-13 ICT Awareness – Basic Literacy**

- 13.0. Objectives
- 13.1. Introduction
- 13.2. Types of Communication Media
  - 13.2.1 Mobile
  - 13.2.2 Community Radio
  - 13.2.3 Internet
- 13.3. Summary
- 13.4. Glossary
- 13.5. Answers to 'Check Your Progress'
- 13.6. Questions for Practice.
- 13.7. Suggested Reading