

**COURSE TITLE** : **TRANSPORT MANAGEMENT**  
**COURSE CODE** : **4030**  
**COURSE CATEGORY** : **A**  
**PERIODS/WEEK** : **4**  
**PERIODS/SEMESTER** : **72**  
**CREDITS** : **4**

**TIME SCHEDULE**

<b>MODULE</b>	<b>TOPICS</b>	<b>PERIODS</b>
1	Introduction to M. V Act 1989 Licensing, Permit and Registration Traffic signs and signals Motor transport organization	17
	Test I	1
2	Fundamentals of operation Bus scheduling Crew scheduling Co-ordination	17
	Test II	1
3	Fare collection Automobile marketing	17
	Test III	1
4	Road design Insurance surveying	17
	Test IV	1
	<b>Total</b>	<b>72</b>

**OBJECTIVES**

Upon the completion of the course the student must be able to

- 1.1.0. Understand the legal aspects involved with motor transportation types of fleet vehicles and organization employed in transport management
- 1.1.1. Outline the legal aspects of motor transport
- 1.1.2. Outline the importance of M. V. Act
- 1.1.3. State the duties of drivers and conductors
- 1.1.4. Explain the method of obtaining driving license for two wheeler / light passenger vehicle / heavy goods transport vehicles
- 1.1.5. State the testing procedure and reasons for disqualification for driving
- 1.1.6. Explain the various traffic signs and signals
- 1.1.7. Explain the registration procedure for the vehicle
- 1.1.8. State the necessity of permit
- 1.1.9. Identify the pollutant emitted by a motor car
- 1.1.10. List the specific type of operations such as passenger transport, goods transport, municipal transport, ambulance etc and to know the requirements of these transports

- 1.1.10 Prepare the organizational structure of motor transport organization
- 1.1.11 Outline the importance of motor transport organization
- 1.1.12 Classify the motor transport organization
- 1.1.13 Differentiate between passenger transport and goods transport, public transport and private transport
- 1.1.14 Classify the transport carriers
- 1.1.15 Explain the different types of owners types of motor transport organization
- 1.1.16 Describe the functional wings of transport system
- 1.1.17 Draw the organizational charts for the transport organization its regional and district
- 1.1.18 Explain the criteria and mode of staffing
- 1.1.19 Fix up the chain of responsibilities
- 1.1.20 Outline the need and type of training programmer to be given to the staff
- 1.1.21 State the facts to be considered for deciding the fleet strength, selecting the site for depot
- 1.1.22 State the facilities required at a depot

- 2.1.0. Recognize operation of goods vehicles / buses
- 2.1.1 Outline the fundamentals of operations
- 2.1.2. Identify the type of operation
- 2.1.3 .Distinguish – city; city – suburban and inter – city operations
- 2.1.4 State the operating characteristics
- 2.1.5 .State the factors such as utility, capacity dependability, safety, distance, speed, road Condition fuel economy, traffic interference
- 2.1.6. State the function to be considered for fuel economy and traffic interference
- 2.1.7. Define the terms flexibility, trip generation, factors to be considered for trip generation
- 2.1.8. Understand the different types of para transit in Indian cities
- 2.1.9. State the characteristics of para transit
- 2.1.10 .Explain other modes of transportation such as LRT, MAGLEV,ETB, and TOFC
- 2.1.11. Explain traffic data – published data and field surveying
- 2.1.12. Prepare time – table for the vehicles and for operational staff
- 2.1.13 .Defend the inter-carrier co-ordination, correlation of schedules and inter change of equipment
- 2.1.14. Explain the methods of correlations in the operations of transport
- 2.1.15. Explain the procedure in Bus and Crew scheduling
- 2.1.16. State the factors to be considered in Bus scheduling
- 2.1.17. Explain the calculation of number of buses required for different frequencies
- 2.1.18. Explain how to make a bus schedule
- 2.1.19. State the factors to be considered in crew schedule
- 2.1.20 .Explain how to make crew scheduling
- 2.1.21. Explain the uses of computer in scheduling
- 2.1.22. Explain how the productivity can be increased in scheduling
- 2.1.23. Explain motor transport workers

- 3.1.0. Design fare collection system
- 3.1.1 Explain the term demand – identify the peak hour demand slack hour demand for various types of transport

- 3.1.2. Explain the term route survey and significance of it
- 3.1.3. Describe the following terms duty roasters – trip sheet, way bill
- 3.1.4. Relate route planning, stages and fare structure
- 3.1.5. Explain the need for trip sheet or way bill
- 3.1.6. State the meaning of trip generation and explain the factors, to be considered for trip generation
  
- 3.1.7. Explain the trip distribution (Trip distribution mathematical models not necessary)
- 3.1.8. Explain the various incentive schemes for accident prevention and efficient operation
- 3.1.9. Distinguish the components of vehicle operational cost
- 3.1.10. Compute the total cost specific type of operation
- 3.1.11. State the requirements of a good fare system
- 3.1.12. Explain the method of drawing of fare tables with examples
- 3.1.13. Explain the traffic and fare system in transport organization
- 3.1.14. State the traffic investigation to improve services
- 3.1.15. Explain peak hours demand, express, limited stop service, relief service
- 3.1.16. Explain the fare structure
- 3.1.17. State the requirements for good fare system
- 3.1.18. Explain different services, fares relating to distances
- 3.1.19. State the different fare methods
- 3.1.20. Explain the term fare stage
- 3.1.21. Explain how to design a fare stage
- 3.1.22. Explain the fare collection system
- 3.1.23. Explain the documentation involved in consignment shipment.
- 3.2.0. Understand the features of automobile marketing
- 3.2.1. Explain the organization of automotive business in the world
- 3.2.2. Recognize a customer
- 3.2.3. Outline the background of marketing
- 3.2.4. Identify the functions of marketing activities
- 3.2.5. Describe workshop management
- 3.2.6. Suggest the responsibilities of dealer
- 3.2.7. Compile the duties and responsibilities of workshop manager, supervisor, cashier, mechanic etc
- 3.2.8. Defend warranty procedures
  
- 4.1.0. Recognize the various design considerations involved in road construction
- 4.1.1. Identify the different types of roads
- 4.1.2. Identify the specification for gradient of road
- 4.1.3. Explain road sections in Hilly tracks and Hair pin bends
- 4.1.4. Distinguish super elevation and sight distance
- 4.1.5. Describe road intersection and traffic lights
- 4.1.6. Recognize the methods of collecting traffic data
- 4.2.0. Appreciate the importance of insurance coverage
- 4.2.1. Describe the functions of insurance companies
- 4.2.2. Identify the types of Policies
- 4.2.3. Explain the factors involved in assessing

## CONTENT OUTLINE

### MODULE-I

Features of M. V. Act – definition of terms – test for drivers and conductors – registration of vehicles – duties of drivers and conductors – traffic signs – mode of staffing in a depot – site selection and facilities in a depot – M. T. O. and functional wings – organization chart – type of co-ordination and co-coordinating factors. .

### MODULE – II

Bus operation – Factors governing bus schedule – making a bus schedule – operating characteristics –trip generation and trip distribution – No. of bus required for operation – preparation of time table for bus and crew – factors governing crew scheduling – making a crew scheduling. Intermediate public transport in Indian cities(IPT)/Para transit, Characteristics of IPT modes, Light rail transit(LRT/Tram), electric trolley bus (ETB), Magnetic levitation (MAGLEV) system, container freight station, Trailer on flat car, Automatic Guided Vehicle(AGV)

### MODULE – III

Fare collection – Route planning – Fare structure and table – trip sheet and way bill – ticket system –accident prevention – operational cost – fare methods – fare stage – organization of automotive business – marketing back ground – functions of marketing activities – workshop management –responsibilities of dealer – duties of workshop staff – warranty. Consignment shipment.

### MODULE – IV

Importance of roads – traffic studies and high way planning – Road geometry – width of high way –gradient – cross section of road – super elevation and sight distance – road intersection – traffic lights – location of bus stop, bus bay, zebra crossing and parking positions – traffic census. Insurance surveying – companies – classification of policies – third party insurance – factors involved in assessing – MACT

### TEXT

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|-----------------------------------|-----------------|
| 1.Transportation Management       | -TTTI           |
| 2.Automobile Engineering Vol. III | - Anil Chhikara |

### REFERENCES

- |                                 |                   |
|---------------------------------|-------------------|
| 1. M. V. Act ( 1988 )           |                   |
| 2. Motor Transport organization | - P. R. K. Sharma |
| 3. Bus operation                | - L. D. Kitchen   |

4. Bus operation, Bus & crew scheduling
5. Transport Engg. , and Transport planning
6. Transportation Engineering
7. Automation & Production Systems

- C. I. R. T, Pune
- L. R. Kadiyali
- V.N. Vazirani & S. P. Chandola
- Mikell P. Groover

• [www.keralamvd.gov.in](http://www.keralamvd.gov.in).