


**Government of Karnataka  
Department of Technical Education  
Board of Technical Examinations, Bangalore**

	<b>Course Title: TRANSPORT AND INDUSTRIAL MANAGEMENT</b>		
	Scheme (L:T:P) : <b>4:0:0</b>	Total Contact Hours: <b>52</b>	Course Code: <b>15AT51T</b>
	Type of Course: <b>Lectures, Self Study &amp; Quiz</b>	Credit : <b>04</b>	Core/ Elective: <b>Core</b>
CIE- 25 Marks		SEE- 100 Marks	

**Prerequisites:** Knowledge of English Communication and Discipline Courses

**Course Objectives:**

Appreciate organizational structure, management skills, safety and environmental aspects involved in industries, STUs and service stations.

**COURSE OUT COMES**

*On successful completion of the course, the students will be able to:*

Course Outcome		CL	Linked PO	Teaching Hrs
<b>CO1</b>	Explain organization structure, management skills, different leadership styles and communication skills in industries.	<i>R/U/A</i>	2,7,8,9	08
<b>CO2</b>	Describe the structure of fleet organization in STUs.	<i>R/U/A</i>	2	08
<b>CO3</b>	Explain material requirement planning, store keeping procedure, inventory control and working of different types of service stations.	<i>R/U/A</i>	2,3,4	09
<b>CO4</b>	Explain the procedure to issue and cancellation of driver & conductor license, registration of vehicles, insurance, traffic signs and road markings.	<i>R/U/A</i>	2,5,7	10
<b>CO5</b>	Explain the industry standards, safety measures and procedures practiced in industries.	<i>R/U/A</i>	2,5,6,7	08
<b>CO6</b>	Appreciate the social responsibilities of engineer and ways to protect our environment.	<i>R/U/A</i>	2,5,6,7	09
<b>Total Sessions</b>				<b>52</b>

**Legend: R; Remember, U: Understand A: Application**

**COURSE-PO ATTAINMENT MATRIX**

Course	Programme									
	1	2	3	4	5	6	7	8	9	10
Transport And Industrial Management	<b>0</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>0</b>
<i>Level 3- Highly Addressed, Level 2-Moderately Addressed, Level 1-Low Addressed.</i>										
Method is to relate the level of PO with the number of hours devoted to the COs which address the given PO.										
If >40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 3										
If 25 to 40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 2										
If 5 to 25% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 1										
<b>If &lt; 5% of classroom sessions addressing a particular PO, it is considered that PO is not-addressed.</b>										

**COURSE CONTENT AND BLUE PRINT OF MARKS FOR SEE**

Unit No	Unit Name	Hour	Questions to be set for SEE/MARKS			Marks Weightage	Weightage (%)
			R	U	A		
1	Basics Of Management	08	05	05	10	20	13.79
2	Fleet Management	08	05	05	10	20	13.79
3	Service Stations And Stores	09	05	10	20	35	17.30
4	Motor Vehicle Acts	10	05	05	20	30	19.23
5	Industrial Standards & Safety	08	05	05	10	20	13.79
6	Social Issues And Environment	09	05	05	10	20	17.30
	<b>Total</b>	<b>52</b>	<b>30</b>	<b>35</b>	<b>80</b>	<b>145</b>	<b>100</b>

**Legend: R; Remember, U: Understand A: Application**

**UNIT I: BASICS OF MANAGEMENT 08Hrs**

Management - Definition – Administration- Definition – Henry-Fayol’s principles of management- Business Organization-Types- Proprietorship-Partnership- Joint stock- Co-operative Society-Advantages and disadvantages -Functions of Management – Planning-Definition-Functions-Organization-Definition- types of organization –Line-Functional-Line &staff-advantages and disadvantages- Leadership -Types –Quality of good leader- Motivation - Maslow’s Theory of Motivation -Hierarchy of needs- Communication – Process of Communication – Barriers for effective communication.

**UNIT II: FLEET MANAGEMENT 08Hrs**

Introduction – structure of fleet organization –organization structure of state transport undertaking at state level-divisional level-depot level – administrative setup of state transport undertaking – corporate objectives-corporate structure- -requirements of facilities at Depot – Depot layout-selection of site for depot-cost of operation- EPKM- CPKM – route –basic factors in bus scheduling – trip – dead kilometer-spare vehicle

**UNIT III: SERVICE STATIONS AND STORES 09Hrs**

Service station-Types – factors to start new service station – service station layout – Tool and equipments required -service station records-job card, Material Requirement Planning (MRP)-concept- applications, Just in Time (JIT)-concept and benefits, Supply chain management-concept and benefits.

Stores -classification - Functions of store keeper- Store management- Bin Card - Material Issue Requisition- Material Returned Note- Store ledgers -Codification of stores-Inventory Management- Definition - functions of Inventory Control- Advantages of Inventory Control

**UNIT IV: MOTOR VEHICLE ACTS 10 Hrs**

Introduction – necessity of vehicle registration –types- registration procedure – transfer of ownership – fitness certificate – permit- types – issuing of driving license & conductor license –

international driving license – cancellation of driver & conductor license – need of traffic signs – Informative-cautionary-mandatory signs - road markings – necessity of vehicle insurance – types- accident claims- scrapping of vehicle-list of forms & applications with their numbers used in RTO, Need of emission norms-present Euro & BS Norms.

#### **UNIT V: INDUSTRIAL STANDARDS & SAFETY**

**08 Hrs**

Quality Certification Systems- ISO 9000 series quality standards, QS14000– ISO 9000, ISO 9001, ISO9002, ISO9003 & ISO 9004- ISO9000 quality certification procedure. Industrial safety – Meaning - Accident- causes for accident- Direct and indirect losses due to an accident-Personal protective devices for preventions of accidents-Safety department- role of safety officer – safety supervisor -safety committee – Fire prevention and Protection- Fire triangle-principles of fire extinguishing- various classes of fire- A, B,C, D types of fire extinguishers

#### **UNIT VI: SOCIAL ISSUES AND ENVIRONMENT**

**09 Hrs**

Definition and scope-Solid waste management: causes, effects and control measures of municipal solid wastes (hospital wastes, hazardous wastes and e-wastes) - Water conservation and rain water harvesting. Climate change: global warming, acid rain, ozone layer depletion.-effect on environment and human health - role of information technology in environment and human health,

#### **TEXT BOOKS AND REFERENCES**

<b>Sl.No</b>	<b>Title of Books</b>	<b>Author</b>	<b>Publication</b>
1.	Industrial Organization and Engineering Economics	T.R.Banga & S C Sharma	Khanna.Publishers
2.	Industrial Management and Engineering Economics	O.P.Khanna	Khanna publishers
3.	Safety Management in Industry	Krishnan's V	Jaico Publishing House, Bombay, 1997
4.	Vehicle Transport Management	S.L.Bhandarkar	Dhanapath Rai & Co
5.	The central Motor Vehicles Rules 1989 (2001 Edition)	Edited By: Sathpal Puliani	Karnataka Law Journal Publications Bangalore
6.	The central Motor Vehicles Rules 1989 (2005 Edition)	Edited By: Sathpal Puliani	Karnataka Law Journal Publications Bangalore

#### **LIST OF SOFTWARES/ LEARNING WEBSITES:**

1. [www.youtube.com/watch?v=SF53ZZsP4ik](http://www.youtube.com/watch?v=SF53ZZsP4ik)
2. [www.youtube.com/watch?v=iPZlQ3Zx5zc](http://www.youtube.com/watch?v=iPZlQ3Zx5zc)

## **SPECIAL INSTRUCTIONAL STRATEGIES**

UNIT NO	UNIT NAME	STARATEGIES
1	Basics Of Management	Showing charts, presentations, Video movies
2	Fleet Management	Presentations, charts, Video movies, Expose to real life transport organizations,
3	Service Stations and Stores	Presentations, charts. Expose to practiced procedures
4	Motor Vehicle Acts	Teaching, Presentations & Seminar
5	Industrial Standards & Safety	Industrial visits, movies
6	Social Issues and Environment	Discussions, real life industries situation, industrial visits

## **SUGGESTED LIST OF STUDENT ACTIVITIES**

*Note: the following activities or similar activities for assessing CIE (IA) for 5 marks (Any one)*

Each student should do any one of the following type activity or similar activity related to the course and before take up, get it approved from concerned Teacher and HOD.

Each student should conduct different activity and no repeating should occur.

1	Each student will be given an activity to prepare layouts for different service stations and state transport undertaking.
2	Each student will be given an activity to prepare the wall chart for traffic signs/road markings according to the standard size and colour.
3	Each student will be given an activity to visit local municipality garbage plant, how the garbage has been segregated. List the harmful effects of your local garbage dump yard on the nearby environment
4	Identify any one product, being manufactured in local industry, Study the process they are following for manufacturing the product, submit hand written report
5	Visit a nearby service station/dealer point/state transport depot make a report on layout, type of vehicle and service & quality of service is put in practice and quality tools they are using in work place
6	Motivate student to take case study on particular service station/STU to observe what type of service & maintenance they undertake.
7	Each student should prepare a detailed project report on selected concept.

### Course Assessment and Evaluation Scheme:

What		To whom	When/Where (Frequency in the course)	Max Marks	Evidence collected	Course outcomes	
Direct Assessment	CIE	IA	Students	Three IA tests(Average of three tests will be computed)	20	Blue books	1,2,3,4,5,6
				Student Activities	05	Activity sheets	
	SEE	End Exam		End of the course	100	Answer scripts at BTE	1,2,3,4,5,6
Indirect Assessment	Student Feedback		Students	Middle of the course		Feedback forms	1 & 2,3 Delivery of course
	End of Course Survey			End of the course		Questionnaires	1,2,3,4,5,6 Effectiveness of Delivery of instructions & Assessment Methods

**Note:** I.A. test shall be conducted for 20 marks. Average marks of three tests shall be rounded off to the next higher digit.

**Note to IA verifier:** The following documents to be verified by CIE verifier at the end of semester

1. Blue books ( 20 marks)
2. Student suggested activities report for 5 marks evaluated through appropriate rubrics.
3. Student feedback on course regarding Effectiveness of Delivery of instructions & Assessment Methods

### MODEL OF RUBRICS /CRITERIA FOR ASSESSING STUDENT ACTIVITY

#### RUBRICS MODEL

Student Name:		Reg NO:				
RUBRICS FOR ACTIVITY( 5 Marks)						
Dimension	Unsatisfactory	Developing	Satisfactory	Good	Exemplary	Student Score
	1 Mark	2 Mark	3 Mark	4 Mark	5 Mark	
<b>Collection of data</b>	Does not collect any information relating to the topic	Collects very limited information; some relate to the topic	Collect much information; but very limited relate to the topic	Collects some basic information; most refer to the topic	Collects a great deal of information; all refer to the topic	Example: 4
<b>Fulfill team's roles &amp; duties</b>	Does not perform any duties assigned to the team role	Performs very little duties but unreliable.	Performs very little duties	Performs nearly all duties	Performs all duties of assigned team roles	5
<b>Shares work equally</b>	Always relies on others to do the work	Rarely does the assigned work; often needs reminding	Usually does the assigned work; rarely needs reminding	Normally does the assigned work	Always does the assigned work without having to be reminded.	3
<b>Listen to other Team mates</b>	Is always talking; never allows anyone else to speak	Usually does most of the talking; rarely allows others to speak	Talks good; but never show interest in listening others	Listens, but sometimes talk too much	Listens and speaks a fair amount	2
<b>Average / Total marks=(4+5+3+2)/4=14/4=3.5=4</b>						

**Note:** This is only an example for each student. Appropriate rubrics/criteria may be devised by the concerned faculty (Course Coordinator) for assessing the given activity.

**MODEL QUESTION PAPER (CIE)**

Test/Date and Time	Semester/year	Course/Course Code	Max Marks		
Ex: I test/6 <sup>th</sup> week of sem	V SEM	<b>TRANSPORT AND INDUSTRIAL MANAGEMENT</b>	20		
	Year: 2016-17	Course code:15AT51T			
Name of Course coordinator :		Topic: Units:1,2	<b>CO: 1,2</b>		
<b>Note: Answer all questions</b>					
Q. No	Question	MARKS	CL	CO	PO
1	Identify the barriers for effective communication OR List the advantages and limitations of planning	5	R	1	2,7,8,9
2	Explain with line diagram how Functional organization will suit for pharmaceutical industry	5	A	1	2,7,8,9
3	Explain job production and mention its advantages and disadvantages OR Explain routing procedure	5	U	2	2
4	Explain how the productivity of an organization can be increased	5	A	2	2

**MODEL QUESTION PAPER (SEE)**

V Semester Diploma Examination  
**TRANSPORT AND INDUSTRIAL MANAGEMENT**

Time: **3 Hours**]

[Max Marks: **100**

**Note:** Answer any **SIX** from Part A and any **SEVEN** from Part B

**Part A**

6x5=30 marks

1. Define planning and mention objectives of planning
2. Explain briefly the process of communication
3. Distinguish between EPKM & CPKM
4. Explain supply chain management
5. Mention the duties of safety officer
6. Explain the methods of storing
7. Explain the procedure of issue of driving license
8. List the effects and control measure for global warming
9. Discuss the necessity of vehicle insurance

**Part B**

7x10=30 marks

1. Illustrate the business organization and explain Proprietorship organization.
2. a) Write the duties and responsibility of driver  
b) Explain the road markings and curb marking
3. Draw and label the service station layout for rectangular site
4. Write the applications of Material Requirement Planning (MRP)
5. Illustrate QS 9000 – ISO 14000 –Requirements and Benefits
6. List the requirements of facilities at state transport undertaking
7. a) Write the Direct and indirect losses due to an accident  
b) Explain ozone layer depletion
8. Explain the procedure for scrapping of vehicles
9. Write the causes and effects of environmental pollution
10. a) Illustrate state transport undertaking organization structure at state level  
b) Explain the steps in inventory control

# MODEL QUESTION BANK

## V- Semester Diploma Examination

### TRANSPORT AND INDUSTRIAL MANAGEMENT

**Note:** The paper setter is of liberty to set the questions on his/her discretion based on cognitive levels notified for that unit. They have to follow only blue print of SEE question paper format. The model question bank is only for reference to students/course coordinator to initiate the process of teaching-learning only.

#### **CO-1 Explain organization structure, management skills, different leadership styles and communication skills in industries..**

##### **Remember**

**05Marks**

1. State Henry Fayol's principles of management
2. List the types of Business Organization
3. Describe sole proprietorship and list advantages and disadvantages of proprietorship.
4. Identify the applications of proprietorship
5. Describe Partnership Organization and mention the applications of Partnership Organization
6. List the advantages and disadvantages of Partnership Organization
7. List the advantages and disadvantages of Joint Stock Company
8. List the advantages and disadvantages of Co-operative society
9. Define planning and mention objectives of planning
10. List the advantages and limitations of planning
11. Define organization and list the types of organization.
12. Define leadership and explain types of leaders
13. Identify the qualities of good leader
14. Define motivation and state Maslow's theory of motivation
15. Define communication and mention the elements of communication
16. Identify the barriers for effective communication

##### **Understanding**

**05Marks**

1. Explain management
2. Explain administration
3. Discuss the formation of partnership and List the types of partners for Partnership Organization
4. Discuss about Joint Stock company
5. Explain two types of Joint Stock Company:
  1. Private limited company and 2. Private limited company
6. Explain Co-operative society and state the objectives of Co-operative society
7. Explain line organization and mention its advantages and limitations.
8. Explain functional organization and mention its advantages and limitations.
9. Explain Line & staff organization and mention its advantages and limitations.
10. Explain briefly the process of communication.

##### **Application**

**10Marks**

1. Write functions of management
2. Illustrate the business organization and explain Proprietorship organization.
3. Illustrate the business organization and explain Partnership organization.
4. Illustrate the business organization and explain - Joint stock organization.



5. Illustrate the business organization and explain - Co-operative Society organization
6. Illustrate the Line organization with its advantages.
7. Illustrate the Line & staff organization with its advantages
8. Illustrate the Functional organization with its advantages

**CO-2:** Describe the structure of fleet organization in STUs.

**Remember**

**05Marks**

1. Describe fleet management.
2. Define EPKM, CPKM, Route, Trip & Dead kilometer
3. List the requirements of facilities at state transport undertaking.
4. List the objectives of corporate structure.
5. Describe the cost of operation in STU
6. Describe the bus scheduling
8. Define Route, Trip & Dead kilometer
9. Mention the need of spare vehicles.
10. State the points to be considered for selecting a site for depot.

**Understanding**

**05Marks**

1. Illustrate state transport undertaking organization structure at state level
2. Illustrate state transport undertaking organization structure at divisional level
3. Illustrate state transport undertaking organization structure at depot level
4. Illustrate fleet organization structure.
5. Explain EPKM and CPKM
6. Explain the Trip & Dead kilometer
7. Describe the design of route in STU

**Application**

**05Marks**

1. Draw the Ideal depot layout
2. List the requirements of facilities at state transport undertaking.
3. Write a note on corporate structure.

**CO-3:** Explain material requirement planning, store keeping procedure, inventory control and working of different types of service stations.

**Remember**

**05Marks**

1. State the tools and equipments required for service station
2. List the factors to be considered for selecting the good site for service station
3. Define storekeeping and explain the purpose of store keeping
4. List the classifications of store
5. Define bin card and write the specimen copy of bin card
6. Define store ledgers and write the codification of stores
7. Mention the advantages of good store keeping
8. Mention the advantages and disadvantages of inventory control
9. Mention the benefits of Just in Time (JIT)
10. Mention the benefits of Supply chain management

**Understanding****05Marks**

1. List the factors to be considered for starting the new service station.
2. State the points to be considered for selecting the good site for service station
3. Explain centralized stores and mention its advantages & disadvantages
4. Explain decentralized stores and mention its advantages & disadvantages
5. Explain the methods of storing
6. Explain material return note and write the specimen copy of material return note
7. Explain stock or inventory control and mention the functions of inventory control
8. Explain the steps in inventory control
9. List the Tools and equipments required for service station
10. Discuss the concept of Material Requirement Planning (MRP)
11. Discuss the concept of Just in Time (JIT)
12. Discuss the concept of Supply chain management

**Application****10Marks**

1. Write the specimen copy job card.
2. Draw and label the service station layout for rectangular site.
3. Draw and label the service station layout for corner site.
4. Write a note on service station records.
5. Write the layout of stores organization and mention the duties of store keeper
6. Write the specimen copy of materials issue requisition form
7. Write the applications of Enterprise resource planning
8. Write the applications of Material Requirement Planning (MRP).

**CO-4: Explain the procedure to issue and cancellation of driver & conductor license, registration of vehicles, insurance, traffic signs and road markings.**

**Remember****05Marks**

1. List the informative traffic signs
2. List the cautionary traffic signs
3. List the mandatory traffic signs
4. List the forms with their number in RTO
5. State the difference between act and rule
6. Define Act & Rule
7. Define stage carriage and casual contract
8. Define transport & non transport vehicle
9. List the duties of the driver and conductor
10. State the Euro and BS norms

**Understanding****05Marks**

1. Describe the issue of fitness certificate for a motor vehicle.
2. Explain the need of vehicle registration
3. Discuss the necessity of vehicle insurance.
4. Explain the procedure of the change of ownership of motor vehicle.
5. Discuss the national permit.
6. Distinguish between state and interstate permit.
7. Distinguish between comprehensive and third party insurance.

8. Distinguish between transport and non transport vehicles.
9. Distinguish between stage carriage and casual contract
10. Explain the procedure for cancellation of driver license.
11. Explain the procedure for cancellation of conductor license..
12. Explain the road markings and curb marking.
13. Explain the motor vehicle taxation act
14. Explain the procedure for issue of international driving license.
15. Explain the procedure for issue of driving license
16. Explain the procedure for issue of conductor license
17. Explain the procedure for issue of learning license
18. Describe the need of emission norms

**Application** **10Marks**

1. Write the procedure of new vehicle registration
2. Write the procedure of scrapping the vehicle
3. Write the procedure of accidental claims.
4. Explain the Euro norms
5. Explain the BS norms

**CO-5: Explain the industry standards, safety measures and procedures practiced in industries.**

**Remember** **05Marks**

1. Mention the benefits of ISO 14000
2. Identify the causes for accident
3. Mention personal protective devices for preventions of accidents
4. Define safety department and mention the objectives of safety department

**Understanding** **05Marks**

1. Explain industrial safety and mention the needs and importance of safety
2. Explain industrial accidents and accident sequences
3. Write the Direct and indirect losses due to an accident
4. Describe the role of safety officer, safety supervisor and safety committee
5. Explain Fire prevention and Protection
6. Explain detection and prevention of fire, fire alarms and fire extinguishes
6. Explain the Need for ISO 9000- ISO 9000-2000 Quality System
7. Explain about ISO 9000 Family

**Application** **10Marks**

1. Write the Organization Structure for TPM Implementation
2. Classify the fire and explain fire triangle
3. Illustrate QS 9000 – ISO 14000 –Requirements and Benefits

**CO-6: Appreciate the social responsibilities of engineer and ways to protect our environment.**

**Remember** **05Marks**

1. Define environment and explain the scope of environment
2. Mention the effects of municipal solid wastes

3. Mention the advantages of rain water harvesting
4. Define climate change
5. List the effects and control measure for global warming
6. List the effects and control measure of acid rain
7. List the effects and control measure for ozone layer depletion
8. State the role of information technology in environment and human health

**Understanding****05Marks**

1. Explain Solid waste management
2. Explain the factors affecting for climate change
3. Explain global warming
4. Explain acid rain
5. Explain ozone layer depletion

**Application****10Marks**

1. Write the causes and effects of environmental pollution
2. Write the control measures of municipal solid wastes
3. Identify the causes of municipal solid wastes
4. Describe water conservation and rain water harvesting
5. Discuss about environment and human health.