Reg. No.																

Question Paper Code	14658

M.E. / M.Tech. - DEGREE EXAMINATIONS, APRIL / MAY 2026

Second Semester

M.E. - Industrial Safety Engineering

24PISEL201 - TRANSPORT SAFETY

Regulations - 2024

Duration: 3 Hours | Max. Marks: 100

PART – A (i) (MCQ)
(16 × 1 = 16 Marks)
Answer ALL Questions

		Marks	K – Level	CO
1.	The main purpose of a Transport Emergency Card (TREM) is to a) Calculate fuel consumption b) Provide emergency information during accidents c) Record driver salary d) Measure vehicle speed	1	K1	CO1
2.	Warning symbols used in hazardous goods transportation are meant to a) Improve vehicle appearance b) Indicate the nature of danger c) Reduce fuel consumption d) Increase loading capacity	1	K2	CO1
3.	Communication systems in hazardous goods transportation are mainly required for a) Entertainment b) Emergency coordination and information transfer c) Music transmission d) Advertising purposes	1	K3	CO1
4.	The primary aim of road transport safety is to a) Increase vehicle speed b) Reduce transportation cost only c) Prevent road accidents and ensure safe movement d) Increase traffic congestion	1	K1	CO2
5.	Road accidents involving pedestrians are commonly caused by a) Proper road crossing b) Following traffic signals c) Carelessness and violation of traffic rules d) Use of footpaths	1	K2	CO2
6.	Proper operation and maintenance of motor trucks can a) Increase accident frequency b) Reduce vehicle efficiency c) Improve transport safety and performance d) Eliminate the need for drivers	1	K3	CO2
7.	Driver training is essential to a) Increase accidents b) Improve driving skills and safety awareness c) Reduce vehicle maintenance d) Eliminate traffic rules	1	K1	CO3
8.	Fleet accident frequency refers to a) Number of fuel stations b) Number of vehicles purchased c) Rate of accidents occurring in a fleet of vehicles d) Number of traffic signals crossed	1	K2	CO3
9.	The Motor Vehicle Transport Workers Act mainly focuses on a) Railway operations b) Welfare and working conditions of transport workers c) Air transport regulations d) Ship maintenance	1	K3	CO3
10.	Skidding of vehicles mainly occurs due to a) Proper braking b) Good road conditions c) Loss of tyre grip on the road surface d) Reduced vehicle speed	1	K1	CO4
11.	Traffic control lines and guide posts help drivers in a) Entertainment during driving b) Safe navigation and lane discipline c) Increasing overloading d) Reducing vehicle maintenance	1	K2	CO4

12.	Tractive resistance is the resistance that opposes the a) Painting of vehicles b) Motion of a vehicle c) Width of the road d) Height of barriers	1	K3	CO4
13.	Transport precautions in workshops are mainly intended to a) Increase production speed only b) Prevent accidents and ensure safe operations c) Reduce worker responsibility d) Increase fuel usage	1	K1	CO5
14.	Transport precautions in workshops are mainly intended to a) Increase production speed only b) Prevent accidents and ensure safe operations c) Reduce worker responsibility d) Increase fuel usage	1	K3	CO5
15.	Wash rack operations mainly involve a) Vehicle cleaning activities b) Road alignment c) Traffic control d) Railway signaling	1	K2	CO6
16.	Manual handling safety practices are important to prevent a) Improved productivity b) Musculoskeletal injuries and accidents c) Fuel wastage d) Traffic congestion	1	K3	CO6

PART – A (ii) (Short Answer Questions)
(6 × 3 = 18 Marks)
Answer ALL Questions

17.	Apply checklist procedures before dispatching hazardous goods vehicles.	3	K3	CO1
18.	Examine the importance of preventive maintenance in road transport safety.	3	K4	CO2
19.	Illustrate the use of a tacho-graph in monitoring driver performance.	3	K3	CO3
20.	Analyze the causes and effects of vehicle skidding on roads.	3	K4	CO4
21.	Illustrate safe driving practices followed inside industrial shop floors.	3	K3	CO5
22.	Examine the role of warning symbols and safety communication systems in accident prevention.	3	K4	CO6

PART - B (Descriptive Answer Questions)
(6 × 11 = 66 Marks)
Answer ALL Questions

23.	a)	Illustrate the methods used to control static electricity in tanker lorries carrying hazardous materials.	11	K3	CO1
		OR			
	b)	Perform safe loading and decanting procedures followed in hazardous chemical transportation.	11	K3	CO1
24.	a)	Use vehicle inspection checklists to improve safety and operational efficiency in road transport.	11	K3	CO2
		OR			
	b)	Solve the road safety issues arising from driver negligence and pedestrian carelessness.	11	K3	CO2
25.	a)	Execute emergency planning procedures and Hazmat codes during hazardous transport situations.	11	K3	CO3
		OR			
	b)	Demonstrate effective driver training methods followed for safe transportation operations.	11	K3	CO3

26.	a)	Apply suitable road alignment and gradient principles for improving road safety and vehicle movement.	*11*	*K3*	*CO4*
		OR			
	b)	Practice suitable measures to control overloading and improve driver concentration during transportation.	*11*	*K3*	*CO4*
27.	a)	Distinguish between manual handling equipment operations and mechanical handling equipment operations in terms of safety.	*11*	*K4*	*CO5*
		OR			
	b)	Interpret the safety practices required for operation of off-the-road motorized equipment in industries.	*11*	*K4*	*CO5*
28.	a)	Interpret the importance of motor vehicle insurance in risk management.	*11*	*K4*	*CO6*
		OR			
	b)	Discuss the importance of the Motor Vehicles Act in ensuring safe road transportation.	*11*	*K4*	*CO6*