



Winter – 15 EXAMINATION

Subject Code: 17616

Model Answer

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Important Instructions to examiners:

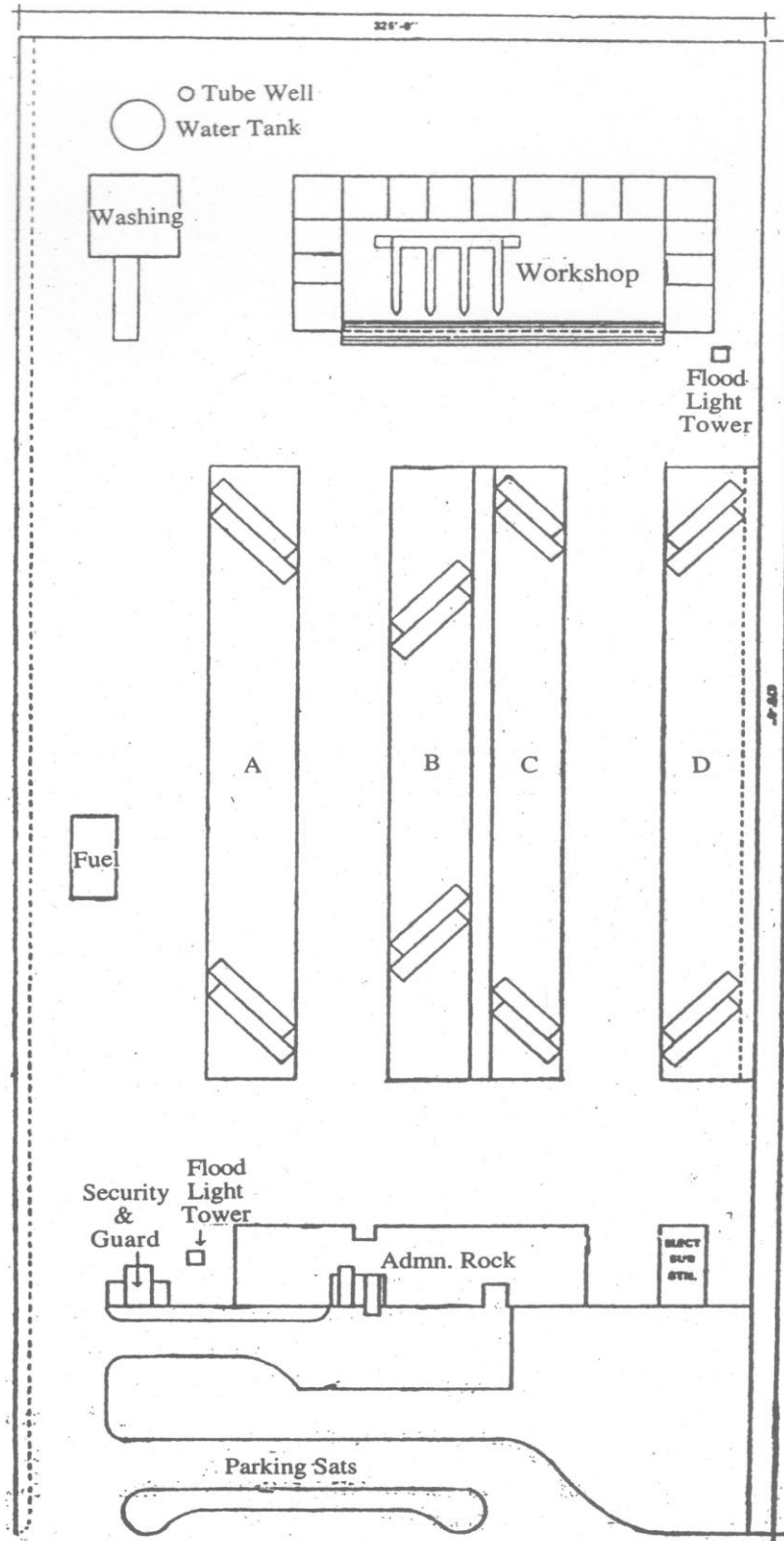
- 1) The answers should be examined by key words and not as word-to-word as given in the model answer scheme.
- 2) The model answer and the answer written by candidate may vary but the examiner may try to assess the understanding level of the candidate.
- 3) The language errors such as grammatical, spelling errors should not be given more importance. (Not applicable for subject English and Communication Skills).
- 4) While assessing figures, examiner may give credit for principal components indicated in the figure. The figures drawn by candidate and model answer may vary. The examiner may give credit for any equivalent figure drawn.
- 5) Credits may be given step wise for numerical problems. In some cases, the assumed constant values may vary and there may be some difference in the candidate's answers and model answer.
- 6) In case of some questions credit may be given by judgment on part of examiner of relevant answer based on candidate's understanding.
- 7) For programming language papers, credit may be given to any other program based on equivalent concept.

Marks

1. a) Attempt any THREE of the following	12
(i) What is Driving License? State documents required to obtain it.	4
<p>Answer: Driving Licence:</p> <p>It means the licence issued by a competent authority authorizing the person specified therein to drive, otherwise than as learner, a motor vehicle or a motor vehicle of any specified class or description.</p> <p>No person shall drive a motor vehicle in any public place unless he hold an effective driving licence issued to him authorizing him to drive the vehicle.</p> <p>It is issued in form no. 6 or Form No.7 (Smart Card)</p> <p>Documents required to obtain driving license - (Any 4 documents, each document carry ½ mark)</p> <ol style="list-style-type: none"> i) Application in form no 4 ii) Effective learner's license. iii) Proof of age and address. iv) Medical certificate in form no. 1. v) Three copies of recent passport size photographs. vi) Driving school's certificate in form no.5 for all transport vehicles. vii) Appropriate fees. viii) All valid documents of the vehicle on which the test to be conducted. 	2
(ii) Define the following terms according to MVA	4
<ol style="list-style-type: none"> (i) Un-laden weight (ii) Permit (iii) Goods vehicle (iv) Tax 	
<p>Answer:</p> <p>(i) Un-laden weight: The weight of a vehicle or trailer including all equipment ordinarily used with the vehicle or trailer when working, but excluding the weight of a driver or attendant; and where alternative parts or bodies are used, the un-laden weight of the vehicle means the weight of the vehicle with the heaviest such alternative part or body.</p> <p>(ii) Permit: It means a permit issued by a State or Regional Transport Authority or an authority prescribed in behalf under MVA authorizing the use of a motor vehicle as a transport vehicle.</p>	1
	1



<p>(iii) Goods Vehicle: It means any motor vehicle constructed or adopted for use solely for the carriage of goods, or any motor vehicle not so constructed or adapted when used for the carriage of goods.</p>	1
<p>(iv) Tax: The tax is the amount which is levied on vehicle for the use of roads, maintenance of roads and to build up bridges, plantation at side of roads.</p>	1
<p>(iii) In relation to motor vehicle, what is certificate of fitness? State its validity.</p>	4
<p>Answer: Certificate of fitness: It is the document in the prescribed form, showing that vehicle is mechanically fit and comply with all the specifications and requirements of motor vehicle act. If the vehicle to be used for commercial operation the vehicle is inspected physically by Transport Authority on regular basis for its road worthiness. The Certificate of Fitness is issued in Form 38. This certificate while remains effective, be valid throughout India</p> <p>Validity of fitness certificate: Every transport vehicle must possess a valid fitness certificate, newly registered transport vehicles certificate is valid for first two years and then it has to be renewed every year after inspection of vehicle by the concerned RTO. The fitness certificate for motor cars and motorcycles is valid for 15 years and then renewed for next 5 years.</p>	2 2
<p>(iv) Describe necessity and procedure to register a newly purchased car.</p>	4
<p>Answer: Necessity to register a newly purchased car: No person shall drive any motor vehicle and no owner of motor vehicle shall cause or permit the vehicle to be driven in any public place or in any other place unless the vehicle is registered in accordance with chapter IV of MVA. After registration, the vehicle gets registration mark to be displayed on motor vehicle which is useful for control of traffic and prevents illegal use of vehicle.</p> <p>Procedure to register a newly purchased car.</p> <ol style="list-style-type: none">1) To obtain the registration certificate for motor vehicle, the applicant is required to apply in Form-20 to registering authority within 7 days from the date of purchase of vehicle. The owner of vehicle is required to fill up all the information and submit the same to the authority in whose region the applicant resides.2) The application must be accompanied with following documents –<ol style="list-style-type: none">a) Sale certificate in Form No. 21 given by dealer.b) Roadworthiness certificate in Form No.22, 22 – A form the manufacturer.c) Purchase invoice (for vehicle attracting life time tax).d) Temporary registration if any.e) Valid insurance certificate.f) Address proof.g) Octroi receipt if registering in municipal limits.h) PAN number or Form No. 60 in two copies.i) Customs clearance certificate in case of imported vehicles along with licence and bond if any.j) Bill of entry for imported vehicle.k) Appropriate feesAfter fulfillment of above document the owner of vehicle is required to produce the vehicle before	1 3



A layout for depot of MSRTC



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Q2. Attempt any <u>FOUR</u> of the following.	16
a) State and describe types of motor vehicle insurance.	4
Answer: Types of vehicle insurance: 1. Comprehensive insurance 2. Third Party insurance 1) Comprehensive insurance - It covers the risk of vehicle and its owner or driver as well as third party which involves in accident. Fire and theft cover is also provided against damage to the insured's vehicle. It does not include mechanical breakdown. The extent of comprehensive insurance may vary in detail from company to company. It is required to renew the policy annually, and it can be renewed two months in advance. 2) Third Party insurance – It means the person or property other than the vehicle and vehicle owner are safeguarded under this insurance. It is compulsory to all vehicles to safeguard the interest of pedestrians. Personal injuries and personal vehicle damages will not be covered by this policy. For two wheelers, we can take this policy for life time. For other vehicles this policy has to be renewed annually.	1 $1\frac{1}{2}$ $1\frac{1}{2}$
b) Which vehicles are exempted from tax? Why?	4
Answer: Vehicles exempted from Tax Payment: (Any Six - each point carry 1/2 Mark) 1) Vehicles belong to state government, local self-government, Municipal Corporation etc. 2) Ambulance working on no loss no profit basis. 3) Invalid carriage. 4) Vehicles solely used for transportation of school children and owned by school or private person. 5) Vehicles belong to Orchestra, Tamasha Mandal, Drama Theatre, etc. 6) Vehicles under non use. 7) Tractors and trailers used for agriculture purpose. The above mentioned vehicles are exempted from tax being used for state Government, Central Government, Municipal Corporation, as well as work for social, cultural, educational, agricultural activities.	3 1
c) In relation to transportation, write the meaning of following terms- (i) Public service vehicle (ii) Trip (iii) Fare (iv) Vehicle schedule	4
Answer: The meaning of - (i) Public service vehicle: It means any motor vehicle use or adopted to be used for the carriage of passengers for hire or reward, and includes a maxi-cab, a motor cab, contract carriage and stage carriage. (ii) Trip: Journey between two stations i.e. from start of travel to the final destination for carrying passengers or goods on hire or reward is known as trip. (iii) Fare: It means the sum payable for a daily or seasonal ticket in respect of the hire of a Contract or Stage carriage. Fare is charged on the trip base or distance to be travelled. (iv) Vehicle schedule: The detailed plan of arrival and departure of buses to be operated by the depot is known as vehicle schedule.	1 1 1 1



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d) Differentiate between STA and RTA.	4																											
Answer: Difference between STA and RTA. (Each point carry ½ Mark)																												
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;"></th> <th style="width: 45%;">STA</th> <th style="width: 50%;">RTA</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td>It is the State Transport Authority</td> <td>It is the Regional Transport Authority</td> </tr> <tr> <td style="text-align: center;">2</td> <td>STA give effect to the directives issued under section 67 to control road transport by state government throughout the state.</td> <td>RTA decides the policies to control road transport as per the directives of STA throughout the region.</td> </tr> <tr> <td style="text-align: center;">3</td> <td>To co-ordinate and regulate the activities and policies of the Regional Transport Authorities</td> <td>To fix the fares for the auto-rickshaws, taxis etc. from time to time throughout the region</td> </tr> <tr> <td style="text-align: center;">4</td> <td>To conduct not less than two meetings in a year</td> <td>To conduct not less than six meetings in a year and do the business regarding control of road transport</td> </tr> <tr> <td style="text-align: center;">5</td> <td>Chairman- Transport secretary</td> <td>Chairman- Divisional/Revenue Commissioner</td> </tr> <tr> <td style="text-align: center;">6</td> <td>Members- I.G.(Police), Chief Engineer of PWD, Few MLA's and Two non-government Representatives</td> <td>Members- Deputy I.G.(Police), Superintending Engineer of PWD, Few MLA's and One non-government representative</td> </tr> <tr> <td style="text-align: center;">7</td> <td>Secretary – Transport commissioner or Joint transport commissioner</td> <td>Secretary – Regional transport officer</td> </tr> <tr> <td style="text-align: center;">8</td> <td>To consider applications for grant, renewal, and transfer of permit on interstate routes</td> <td>To consider applications for grant and renewal of license and permit within the region</td> </tr> </tbody> </table>		STA	RTA	1	It is the State Transport Authority	It is the Regional Transport Authority	2	STA give effect to the directives issued under section 67 to control road transport by state government throughout the state.	RTA decides the policies to control road transport as per the directives of STA throughout the region.	3	To co-ordinate and regulate the activities and policies of the Regional Transport Authorities	To fix the fares for the auto-rickshaws, taxis etc. from time to time throughout the region	4	To conduct not less than two meetings in a year	To conduct not less than six meetings in a year and do the business regarding control of road transport	5	Chairman- Transport secretary	Chairman- Divisional/Revenue Commissioner	6	Members- I.G.(Police), Chief Engineer of PWD, Few MLA's and Two non-government Representatives	Members- Deputy I.G.(Police), Superintending Engineer of PWD, Few MLA's and One non-government representative	7	Secretary – Transport commissioner or Joint transport commissioner	Secretary – Regional transport officer	8	To consider applications for grant, renewal, and transfer of permit on interstate routes	To consider applications for grant and renewal of license and permit within the region	4
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e) State four general provisions regarding construction and maintenance of motor vehicle according to CMVA	4																											
Answer: General provisions regarding construction and maintenance of motor vehicle according to CMVA: (Any 4 points, each point carry 1 mark)																												
<p>The Central government may make rules regulating the construction, equipment and maintenance of motor vehicles and trailers to all or any of the following matters namely,</p> <ul style="list-style-type: none"> i) The width, height, length and overhang of vehicles and of the load carried, ii) The size, nature and condition of tyres, iii) Brakes and steering gear, iv) Signaling appliances, lamps and reflectors v) Speed governors vi) The emission of smoke, visible vapours, sparks, ashes, girt or oil, vii) The reduction of noise caused by vehicles, <p>The embossment of chassis number and engine number and the date of manufacturing.</p>		4																										
f) State four basic elements in transport management.	4																											
Answer: Basic elements of transport Management: (Any four elements -1 mark for each element)																												
<ol style="list-style-type: none"> 1. Market potential: Type of goods/ passengers, Period of use, Probable competition. 2. Selection of vehicle: Type of load, Class of passenger, Type of service. 3. Organization setup: Govt., Semi Govt., Private. 4. Legal compliance: Documents required as per MVA, Registration. 5. Policies of transport organization: Policies towards passengers and employees. 		4																										



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Q3) Attempt any <u>FOUR</u> of the following:	16
a) State the factors to be considered for valuation of vehicle.	4
Answer: Factors to be considered for valuation of Vehicle: (1 mark for each point) 1) Know the current market value of vehicle 2) Calculate the depreciation of vehicle based on market value. for this consider – i) Make, Model and Variant e.g. Maruti Swift VDi ii) Month and Year of Manufacture e.g. July 2009 iii) The city in which the car was registered. 3) Calculate the depreciation of vehicle based on usage and aging. 4) Analyze the mechanical condition and damage occurred with respect to Body, Chassis, and Aesthetics, Engine condition, vibrations, noise etc. 5) Consider the tyre condition and decide tyre cost. 6) Kilometers driven (you can find this on the odometer on the dashboard)	4
b) Write the procedure to hire a truck for transport operation.	4
Answer: Procedure to hire a truck for transport operation: 1. From booking office obtain the stock of goods to be lifted to various destinations. 2. Analysis the crossing / transshipment points through which consignments are to be dispatched. 3. Analysis the possibilities of adjustments in loading calculate the number of vehicle required for hire etc. 4. Contact approved truck suppliers for each destination for the availability of truck and rates contact at least five suppliers. 5. Record their name and rates in register. 6. Obtain from other transport companies the rates at which they hire out the trucks and cross checks the rates of the suppliers. 7. Choose that truck supplier whose services are prompt and whose rates are competitive and economical. 8. Decide about the terms and conditions for transport of goods- i. Speed: The goods should be transported within the shortest possible time. ii. Safety: The Physical damage to goods must be prevented by careful handling. The safety of the goods gives the customer faith in the organization. iii. Capacity: An efficient transport system must have an adequate capacity for all sorts of demands. iv. Frequency: The frequency of a service is related to speed and capacity. v. Regularity: Regularity of operation is obtained when the frequency of operation is evenly spread. vi. Responsibility: The transport operator must take the responsibility of safe transport of consignment, should compensate for the loss or damage to the goods, if any when the goods are in his custody.	4
c) What are the costs to be taken into account for calculating freight charges in goods transport operation?	4
Answer: The freight charges are calculated after considering all the expenses incurred with the transportation of goods. Mostly operating cost and fixed costs are taken into account while calculating the freight charges. a) Operating cost. i) Diesel cost = $\frac{\text{Number of kilometer} \times \text{Cost of 1 litre diesel}}{\text{Kilometer per liter of vehicle}}$ ii) Trip and garage expenses. iii) Contract charges. iv) Tyre wear cost can be calculated per Kilometer. v) Road toll tax	4



b) Fixed costs

- i) Tax per trip.
- ii) Insurance
- iii) Administrative charges.
- iv) Wages of drivers and cleaners.
- v) Depreciation per trip.

c) Additional costs

- i) Hamali charges
- ii) Stationary charges

Total operating cost = Operating costs + Fixed costs + Additional costs

d) Calculate number of buses required for transport operation between terminals A and B and prepare a bus schedule for data given below-

- (i) Distance between A and B is 100 km
- (ii) Buses are operated through the day between 6.00 a.m. to 8.00 p.m. with frequency of 1 Hr.
- (iii) Running time is 3 Hrs. and standing time is 1 Hr.

Answer:

$$\text{Number of buses required} = \frac{\text{Running time(Twice)+ Stand Time (Twice)}}{\text{Frequency of Service}}$$

$$\text{Number of buses required} = \frac{(3 \times 2) + (1 \times 2)}{1} = 8$$

First bus			Second Bus		
	Station	Time		Station	Time
Departure	A	6 am	Departure	B	6 am
Arrival	B	9 am	Arrival	A	9 am
Departure	B	10 am	Departure	A	10 am
Arrival	A	1 pm	Arrival	B	1 pm
Departure	A	2 pm	Departure	B	2 pm
Arrival	B	5 pm	Arrival	A	5 pm

Third bus			Fourth Bus		
	Station	Time		Station	Time
Departure	A	7 am	Departure	B	7 am
Arrival	B	10 am	Arrival	A	10 am
Departure	B	11 am	Departure	A	11 am
Arrival	A	2 pm	Arrival	B	2 pm
Departure	A	3 pm	Departure	B	3 pm
Arrival	B	6 pm	Arrival	A	6 pm



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Fifth bus			Sixth Bus		
	Station	Time		Station	Time
Departure	A	8 am	Departure	B	8 am
Arrival	B	11 am	Arrival	A	11 am
Departure	B	12 pm	Departure	A	12 pm
Arrival	A	3 pm	Arrival	B	3 pm
Departure	A	4 pm	Departure	B	4 pm
Arrival	B	7 pm	Arrival	A	7 pm

Seventh bus			Eighth Bus		
	Station	Time		Station	Time
Departure	A	9 am	Departure	B	9 am
Arrival	B	12 am	Arrival	A	12 am
Departure	B	1 pm	Departure	A	1 pm
Arrival	A	4 pm	Arrival	B	4 pm
Departure	A	5pm	Departure	B	5pm
Arrival	B	8 pm	Arrival	A	8 pm

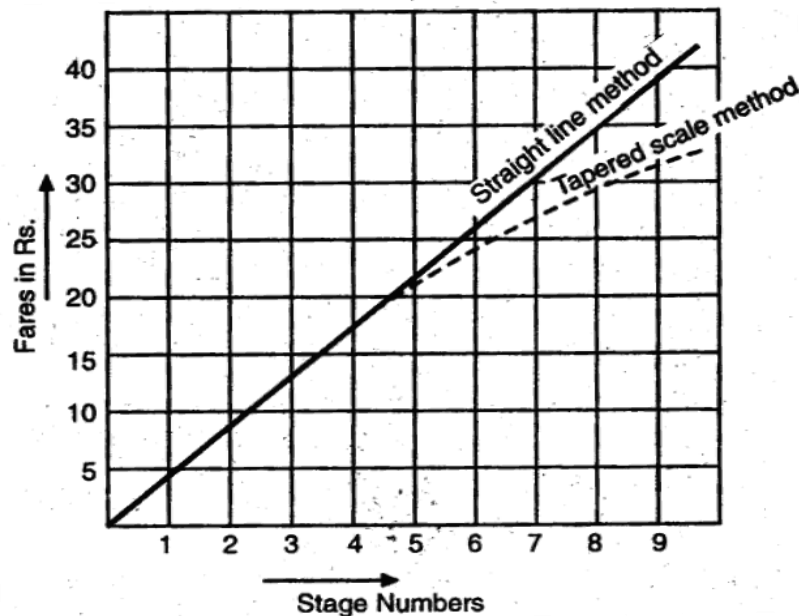
e) Describe tapered scale or telescopic method used in MSRTC to decide fare.

4

Answer: Telescopic or Tapered scale method:

Tapered scale of fare provides a decreasing rate of charge as the distance traveled increases. Normally in this fare method, the first few kilometers would have a straight line type of fare which would then progressively taper off. Suppose, the fare rate is Rs.1/- per kilometer then the fare for 5 kilometer may be Rupees 5/- and any journey within this 5 kilometers will be charged Rupees.5/- . This is known as minimum fare. After 5 kilometers the fare rate may decrease proportionately. For instance, the fare for 15 kilometers may be fixed as Rupees.13/- instead of Rupees.15/-.

2



2



4. a) Attempt any THREE of the following:	12
i) What factors should be considered for buying used vehicle?	4
Answer: Factors to be considered for buying a used vehicle: <i>(Any 8 points- each carry ½ mark)</i> 1) Tyres: the condition of tyres its life and nature of wear must be noted. 2) Body: The condition of the body and paint must be checked. 3) Battery: The condition of battery is also essential before valuation because its cost is also high. 4) Rattling noise: Check noise level and its origin or source. 5) Engine: Starting qualities, good pick up, low fuel combustion, power output must be checked on road test. Check also engine oil pressure. Exhaust smoke will also indicate the condition of cylinder and working parts. 6) Running Condition: On the road test it is possible to know drive the mechanism such as clutch, gear box, universal joint, differential. The wear and tear can be seen on road test. 7) Registration and Tax payment: The vehicle R.C. book must be checked. This will indicate the model and year of manufacture and number of owners; the tax paid to the insurance, expiry date can also be seen. 8) Make and Model, Year: This can be seen from R.C. book but with experience it is possible to indicate the number of years of service of vehicle. 9) Number of Owners: From R.C. book it is possible to know the number of owners and type of persons who owned. 10) Popularity of the make depending upon the public opinion market rates of the vehicles goes up and down.	4
ii) What is accident survey report? State its necessity.	4
Answer: Accident Survey Report: Whenever an accident occurs all particulars have to be collected for purpose of preparing a report known as accident survey report. While applying for insurance claim to insurance company when the vehicle is met to an accident or damaged due to any natural calamity, An Accident survey report is required to be attached with application form. It is prepared by the surveyor appointed by the insurance company. It consists following particulars- 1) General: Site, date and time of accident 2) Registration no. of vehicle involved in accident. 3) Nature of Accidents: Collision with or avoidance of overturning or any other kind of accident. 4) Primary Cause of accident: Fault of driver or pedestrian, defective road surface, other cause, unknown. 5) Light conditions: Daylight, dusk, dark with good street light, dark with no street light. 6) Road condition: Straight, bend, intersection, flat, dry, wet, hill, concrete, earth road. 7) Traffic condition: Dense/light/moderate traffic, controlled junction, uncontrolled junction. 8) Responsibility of driver: Sex, age, driving experience, intoxicated, asleep or inattentive, speeding. 9) Responsibility of Pedestrian: Age, deaf, blind or otherwise walking on road, crossing or running into road, intoxicated, confused by traffic, talking in roadways. 10) Particulars of motor vehicle: Age of vehicle, overload, defective brakes, defective steering, puncture or burst, other serious mechanical defects. 11) Casualties persons killed/ injured: Rider of motorcycle, passengers other than driver or rider, cyclist, pedestrian, not known. 12) Whether the motor vehicle involved in an accident is covered by insurance to the extent required by the MVA. 13) Result of investigation and court proceedings.	3



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Necessity of accident survey report. To obtain motor vehicle claims of an accident, one has to make detailed claim to the concerned insurance company.	1
iii) Describe how will you prepare for selling your old vehicle?	4
Answer: Preparation for selling of old vehicle. 1. Give vehicle "Curb Appeal": When people come to buy car, they will probably make up their minds to buy it or not within the first few seconds. This is based on their first look at the car. So car should have "Curb Appeal". 2. Before you advertise your car for sale, make sure it looks clean and attractive: 1) Wash and vacuum the car. 2) Make sure that vehicle is free from abnormal sounds, dents, scratches. 3) If necessary, make low cost repair or replacement of parts. 4) Wipe the brake dust off the wheel covers and treat the tyres with a tyre gloss product. 5) Thoroughly clean the windows (inside and out) and all the mirrored surfaces. 6) Wipe down the dashboard and empty the ashtrays. 7) Keep all maintenance records ready to show prospective buyers. 8) If necessary, do the servicing. 3. Documentation: Following documents are required while selling the vehicle - i) Registration certificate ii) Tax certificate iii) Insurance certificate iv) PUC certificate v) NOC certificate 4. Set your vehicle price: Keep the written estimate of repair on damage if any before selling. Take a copy of service record from the dealer to assure that the vehicle is maintained properly. Set the price of vehicle that will be best negotiable.	4
iv) What is role of PCRA in automobile industry?	4
Answer: Role of PCRA in automobile industry: (Any four points, each carry 1 mark) 1) To formulate strategies and promote measures for accelerating conservation of petroleum products. 2) To create awareness among masses about the importance, benefits and methods of conserving petroleum products and clean environment by enhancing information and capacity building. 3) To promote research, development and deployment efforts aimed at petroleum adoption and dissemination of fuel efficient technologies and substitution of petroleum products with alternate fields and renewable. 4) To establish synergetic institutional linkages at the national and international levels in the areas of petroleum conservation and environment protection. 5) To provide training and technical advisory services, designed to achieve economy and efficiency in use of petroleum products for cleaner environment. 6) To function as a "Think Tank" to the Government of India for proposing policies and strategies on petroleum conservation and environment protection aimed at reducing excessive dependence on oil.	4



b) Attempt any ONE of the following	6
i) State the situations in which ownership of motor vehicle is transferred. Write the procedure for transfer of ownership in any one situation.	6
Answer: (<i>Situations – 2marks, Procedure of any one situation – 4marks</i>) Situations in which ownership of motor vehicle is transferred are – <ol style="list-style-type: none">1. On death of owner of the vehicle,2. On sell/purchase of the vehicle,3. Purchased in public auction,4. Registration in the name of financier on default of registered owner. 1. Procedure for the transfer of ownership on death of owner of the vehicle: <ol style="list-style-type: none">1. When the owner of a motor vehicle dies, the person succeeding to the possession of the vehicle may inform the registering authority about occurrence of the death of the owner and of his own intention to use the vehicle2. Time Limit -within thirty days of the death of the owner.3. Successor can use the vehicle for a period of three months4. Documents Required-<ol style="list-style-type: none">i. Form 31 - Application for the transfer of ownership in the name of person succeeding to the possession of the vehicle.ii. Form 30 TCA / TCR –iii. The death certificate in relation to the registered owner;iv. Succession certificatev. Affidavit from the successorvi. Address proofvii. All valid documents of the vehicle (PUC certificate, Insurance region/state certificate, Registration Certificate, Tax Certificate etc.)viii. The appropriate fee (<i>Half of the fee for Registration</i>) 2. Procedure for the transfer of ownership on Sell and delivered the vehicle to other person: <ol style="list-style-type: none">1. The purchaser of the vehicle may inform the registering authority about notice of Transfer of Ownership on purchase.2. Time Limit -<ul style="list-style-type: none">• Within the same office area - 14 days• In the jurisdiction of other authority - 30 days3. Documents Required<ol style="list-style-type: none">i. Form 29 - Declaration of seller.ii. Form 30 -Declaration of purchaser.iii. Form 28 -NOC in case vehicle coming from other region or from other stateiv. Address proofv. Income tax declaration from seller & purchaser in form 60 (except 2 wheelers)vi. All valid documents of the vehicle (PUC certificate, Insurance region/state certificate, Registration Certificate, Tax Certificate etc.)vii. Prescribed fees (<i>Half of the fee for Registration</i>) 3. Procedure for the transfer of ownership of vehicle purchased in public auction: <ol style="list-style-type: none">1. The person who has purchased a motor vehicle at a public auction conducted by the Central / State Government shall make an application in Form 32 of taking possession of the vehicle to the registering authority accompanied by necessary documents.	2



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<p>2. Time Limit - within thirty days</p> <p>3. Documents Required -</p> <ul style="list-style-type: none">i. Form 32 - application of purchased a motor vehicle.ii. Form 30 - Declaration of purchaser.iii. Form 28 - NOC in case vehicle coming from other region or from other stateiv. The certified copy of the order of the Central or State Government authorizing the auction of the vehicle.v. Order / sale certificate of the vehicle in purchaser's favour duly signed by the person authorized to conduct the auction,vi. Address proofvii. All valid documents of the vehicle (PUC certificate, Insurance region/state certificate, Registration Certificate, Tax Certificate etc.)viii. Prescribed fees (<i>Half of the fee for Registration</i>) <p>4. Procedure for the transfer of ownership of vehicle in the name of financier:</p> <ul style="list-style-type: none">1. In case of hire-purchase, lease or hypothecation agreement; if the registered owner becomes defaulter, the financier can apply for the transfer of ownership in his own name. He should satisfy the registering authority that he has taken possession of vehicle from the defaulter owner.2. Documents to be submitted – Application in form no. 30 and 36, appropriate fees.3. The registering authority after receiving such application gives an opportunity to defaulter owner to make any representation by sending him a notice.4. After verifying the documents and particulars authority may cancel the previous RC and issue the new one in the name of financier.	
<p>ii) List types of records for goods transport operations. Describe any two of them.</p>	6
<p>Answer : (<i>Types of records -2marks, Description of any two – 2 marks each</i>)</p> <p>Following are the types of records maintained in goods transport organization:</p> <ul style="list-style-type: none">1. Log Book2. Trip operational sheet (TOS)3. Vehicle ledger4. Truck history card5. Monthly Operational Performance Statement (MOPS)6. Goods consignment note7. Trip sheet <p>1) Log Book:</p> <p>Each vehicle has a log book which contains the details about the running time for a trip and allied factors. The driver of motor vehicle fills or updates log book regularly. The data like the station, date, start time, stop time, idle time due to rest, maintenance, fuelling, loading and unloading of goods etc and total distance covered, are written in the log book by the driver. At the end of trip, the driver produces the log book along with other documents.</p> <p>The log book gives the clear picture about a trip. The log book records play an important role in deciding the routes, scheduling time-table and economy of goods transport. The format of log book is given below-</p>	2



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Truck No:				
Driver Name:				
Station	Date	Start Time	Stop Time	Running Time
Distance covered				
Total Time	Rest Time			
Ideal Time				
Drivers Signature				

2) Trip Operational sheet (TOS): Trip operation sheet gives detailed information about a trip like loading (Dispatching) and unloading (destination) points, distance between stations, number of days taken for journey, Number of idle days, Fuel consumption, lubrication consumption, Repairs and spares, miscellaneous accessories, Fines and expenses incurred in journey, Commissions and general expenses and Government and municipal charges etc.

2

3) Vehicle Ledger: The data obtained from Trip Operational Sheet (TOS) is posted in a ledger called a vehicle ledger. The trip is indicated by a trip number which is also known as T.O.S No. Additional columns are provided for gross profit before vehicle tax, depreciation and tyre cost. The balance of cash available is given in last column. Thus the vehicle ledger is collective record of the trips exposing the financial aspect of transportation.

4) Truck History Card: The performance of truck is evaluated from the truck history card this card gives detailed information about the mileage, tax paid, no. of repairs etc. Thus the truck history card helps in deciding whether scrap the truck or not.

5) Monthly Operational Performance Statement (MOPS): The Performance of vehicle during a month is revealed by the monthly operational performance statement. The actual working of the vehicle is tabulated in the M.O.P.S. and is compared with standard that have been laid down for its performance. The variations in performance are noted and the reasons for are given. The owner can give attention to those fields where the performance is very poor and immediate corrective action is taken. Thus M.O.P.S. gives the retrospective effect and point out the reasons inefficiency.

Note: Equivalent credit shall be given to any other suitable records.

5. Attempt any FOUR of the following:

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a) Explain importance of warranty system and protection of law.

4

Answer: Importance of warranty system:

A **warranty** is usually a written contract for a product and declares the maker's responsibility to repair or replace a defective product or its parts. When you make a major purchase, the manufacturer or seller makes an important promise to stand behind the product. Some warranties provide coverage only if you maintain or use the product as directed. For example, a warranty may cover only personal uses as opposed to business uses of the product. Make sure the warranty will meet your needs.

4

In warranty system defective parts are replaced or repaired in stipulated time. The cost is not charged from the customer. These expenses of repairs are born by the manufacturer. Sometimes with the understanding of parent company the warranty claims are offered to their customers even after expiry of warranty period.





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<p>If you have purchased any product under warranty and found any defect within warranty period, contact the retailer and try to resolve the problem. Otherwise Contact your state or local consumer protection office - if you can't resolve the situation with the seller or manufacturer. If all else fails, you may want to consider a lawsuit.</p>	
<p>b) Draw traffic signs for i) No parking ii) Overtaking prohibited</p>	4
<p>Answer: Traffic Signs: (Each sign carry 2 marks)</p> <p>i) No Parking</p>  <p>ii) Overtaking Prohibited</p> 	4
<p>c) Describe vehicle and traffic navigation system.</p>	4
<p>Answer: Importance of vehicle and traffic navigation system: (Any 4 points - 1 mark each)</p> <ol style="list-style-type: none"> To locate vehicle: A vehicle tracking system enables the fleet operator to find out the location of the vehicle throughout the journey of the vehicle, against time. Most transporters use GPS to locate their vehicles. Fleet Management: GPS vehicle tracking system also helps the fleet owners to see the vehicle's current data like its mileage, speed, engine capacity, direction of travel etc. for the fleet owners to manage their fleets and improve their business strategies Vehicle Security: Vehicle tracking system can be used to protect their vehicles from theft. The system shows the location of the vehicle and hence helps to recover your stolen vehicle. It is even possible to stop the vehicle's engine remotely Teens Safety: Vehicle Tracking System can also be used by the parents to ensure the safety of their teen-agers driving the vehicle. System gives you the report of where the vehicle went, its speed, how long it stopped and etc School Buses: Vehicle Tracking System proves beneficial for schools to track the bus locations. This system will be helpful to keep an eye on the movement of school buses. Apart from utilizing the data generated by the vehicle tracking system for enforcing the schedule of the bus, this data also provides important inputs for decision making. The system facilitates computation of exact distance travelled in a given time span, computation of the speed of the bus at a given location, analysis of the time taken by the bus to cover certain distance. It becomes a very powerful tool in case the Transport Corporations are hiring private buses, as computation of the distance travelled, based on which payments are made becomes totally objective. 	4



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d) List two advanced traffic control devices and state their importance.	4
<p>Answer: Advanced Traffic Control Devices: (Any two- 2 marks each with importance)</p> <ol style="list-style-type: none">1. Traffic camera: A traffic enforcement camera system, consisting of a camera and a vehicle-monitoring device, is used to detect and identify vehicles disobeying a speed limit or some other road legal requirement.2. Ramp meter: A ramp meter, ramp signal or metering light is a device, usually a basic traffic light or a two-section signal (red and green only, no yellow) light together with a signal controller that regulates the flow of traffic entering freeways according to current traffic conditions.3. Highway advisory radio: The Highway Advisory Radio System (HARS) is a low power radio station designed to provide current information to motorists about local road conditions, closures, and delays. Motorists could obtain HAR information by tuning their FM car radios to a predefined frequency.4. Roadside traffic sensors: These sensors send available traffic information to develop optimal traffic control strategies addressing traffic needs at a single intersection, along an arterial or freeway, along a given corridor, or throughout a given area to the advance traffic management system.5. Variable speed limits: Variable speed limits that change with road congestion and other factors6. Smart card: Smart cards can provide identity documentation, authentication, data storage, and application processing. Smart cards may provide strong security authentication for single sign-on (SSO) within large organizations.7. Bluetooth- Bluetooth is a wireless standard used to communicate between electronic devices like mobile phones, smart phones, headsets, navigation systems, computers etc. Bluetooth road sensors are able to detect Bluetooth MAC addresses from Bluetooth devices in passing vehicles. If these sensors are interconnected they are able to calculate travel time and provide data for origin and destination matrices8. Traffic signal: These signals are used to control traffic flow at temporary traffic control zones.9. Dynamic message sign: This is an electronic traffic sign often used on roadways to give travelers information about special events. Such signs warn of traffic congestion, accidents, incidents, roadwork zones, or speed limits on a specific highway segment. In urban areas, VMS are used within parking guidance and information systems to guide drivers to available car parking spaces. <p><i>Note: Credit shall be given to any other advance traffic devices</i></p>	4
e) Describe features and usefulness of smart card	4
<p>Answer: Features of smart card</p> <ol style="list-style-type: none">i) The Smart-card driving licence is electronically issued driving licence.ii) The Smart-card driving license is of a plastic card embedded with a microprocessor chip having 64KB memory.iii) One of the major benefits of Smart-card driving license is cutting down of time required in issuing a driving licence.iv) Smart card is durable.v) The Smart-card driving license is Tamper-proof. <p>Usefulness of smart card:</p> <p>All details about the driving licence holder (photograph, thumb impression, signature) are recorded on the computerized database and chip. The applicants visiting the RTO office with forms and documents may get the new driving licence on the same day. Driving licence database is created and different reports are available. It is small in size and easy to carry in pocket.</p>	2



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<p>d) Inspecting the vehicle: Before purchasing the vehicle inspect the vehicle for whether the features are as per your demands or not.</p> <p>e) Gather expert reviews: Read expert comments and reviews on the vehicle, you are buying. Do the comparative study with other same class of vehicles to checkout for added benefits. Enquire about extended warranty as well as regular service contract.</p> <p>f) Test drive the vehicle: Analyze and be sure that the vehicle has characteristics that you are looking for. Inspect and feel carefully all the interior and exterior such as bonnet, of vehicle. Checkout your vehicle thoroughly including braking, electrical, steering system etc before driving at home.</p> <p>g) When and where to buy: Vehicles prices hike up and down often, Ex- Showroom price & tax applicable can also varied as per location hence it's important to decide when and where to buy a vehicle.</p> <p>h) Closing the deal: Vehicles prices hike up and down often, so negotiate the price of the vehicle. Remember the Actual price of the car may be far less than the Advertised price so bargain as much as possible.</p>	
<p>b) Write four function of ARAI.</p>	4
<p>Answer: Functions of ARAI:</p> <p>1. The Automotive Research Association of India (ARAI) has been playing a crucial role in assuring safe, less polluting and more efficient vehicles. ARAI provides technical expertise in R & D, testing, certification, homologation and framing of vehicle regulations.</p> <p>2. The objectives of the Association are Research and Development in automotive engineering for industry, product design and development, evaluation of automotive equipment and ancillaries, standardization, technical information services, execution of advanced courses on the application of modern technology and conduct of specific tests.</p> <p>3. It also responsible for car mileage figure for every car sold in India. ARAI claims to be the first Indian institute to develop HCNG fuel engine.</p> <p>4. In order to meet the development requirements of Industry, several facility and competence build-up projects have been completed. Most notable amongst these are Engine Design/Simulation Software Installation, development of bi-fuel CNG kits, new techniques and software capabilities in Noise, Vibration, Harshness Analysis as well as Vehicle Crash Analysis and VDACS software for chassis dynamometer control. Amongst the new facilities added are the Particulate Measurement System and most modern Digitally Controlled Load Simulation</p>	4
<p>c) Explain the role of CIRT in transport management.</p>	4
<p>Answer: Role of CIRT in transport management:</p> <p>The central Institute of road transport (CIRT) was established in 1967 on the joint initiative of the association of State Road Transport Undertakings (ASRTU) and the ministry of shipping and Transport, Government of India. It plays an important role in transport management as follows-</p> <p>1. By promotion and provision for the study of the principles and practices of organization and management in various spheres of public transport.</p> <p>2. It conducts research on critical issues in transport development and to undertake consultancy assignments to improve organizational effectiveness and operational efficiency.</p> <p>3. It impart training and education to all categories of managers and professionals engaged in furthering the cause of public transport.</p> <p>4. It helps the government and its agencies in evolving integrating policies and legislative framework to enable a balanced growth of the transport sector.</p>	4



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<p>5. It is the clearing house of ideas, information and data pertaining to transport industry with specific reference to satisfy, environment and productivity.</p> <p>6. Lay down standards, specifications and norms for various materials used in heavy vehicles through performance evaluation, material analysis and quality monitoring.</p> <p>7. It undertakes research for improvement and technological up gradation of vehicles used for passenger transportation together with their components and assemblies.</p>	
<p>d) Describe the working of BEST.</p>	4
<p>Answer: Working of BEST (Bombay Electric Supply and Transport):</p> <p>1) Organization setup: The Transport Division is headed by Assistant General Manager (Transport), and he is assisted by Chief Manager (Traffic). BEST's entire operation is divided into 25 depots, and all these depots are placed in zones. The Dy. Chief Managers (Traffic) are zonal in-charge, who are assisting the Chief Manager (Traffic). The Depot Managers are heading each Depot. Traffic Superintendents/ Asst Traffic Superintendents, Sr. Traffic Officers, Traffic Officers, Assistant Traffic Officers and Sr. Asst. /Office Asst. assist the Depot Managers. This team of officers directly controls the operational and administrative activities of the respective Depot. Apart from this team, the supervisory category viz. Bus Inspectors, for plugging the leakage in revenue, Starters for controlling the bus operation etc., are appointed at depots. Each depot is provided with a wireless vehicle, which is used to monitor the operation of buses in the jurisdiction of the depot.</p> <p>2) Traffic Control Room: It works round the clock. The section is provided with VHF sets connecting all the depots as also the Police Control, Traffic Police Control, and Railways etc. The officer regulates the entire operation smoothly with the help of the Divisional Officers, by being in touch with them through wireless sets.</p> <p>3) Bus Control Room: It functions round the clock, to attend to the vehicle breakdowns on field. The total operational area is divided into zones. Emergency breakdown vans are provided for each zone. These vehicles are provided with necessary spares/units so as to carry out emergency repairs on the field itself. For speedy communication these vehicles are equipped with VHF sets.</p> <p>4) Traffic Training Center: The BEST has established a Training Center, to provide training and refresher courses to the operating crew members. On line training to new bus drivers is also provided with the help of training vehicles. At the depots Accident Prevention Training Vehicle counseling the operating staff about safe driving habits.</p> <p>5) Ticket & Cash department: The Ticket and Cash Department collects the daily revenue earned at the depots. The same is counted, consolidated, and remitted in the banks. Inventory of ticket blocks to be issued to the conductors, is also maintained by the Ticket & Cash Department.</p> <p>6) Accident & Claims Section: The Accident and Claims Section, as the name suggests, is established for settling the claims of personal injury / death due to accident involving our buses. Also various programs on Road Safety / Passenger Safety, to create awareness amongst the operating staff, passengers, pedestrians, and school children, are organized by this section in co-ordination with Training Center.</p> <p>7) Traffic Planning Section: The Planning Section is established to prepare the schedules for different routes. The schedules are revised after every four months. Uneconomic routes are discontinued and the financial viability of the routes is appraised both at depot level as also at the Head Quarter level.</p>	4



e) Give any four diesel vehicle manufactures in India and mention any one model of each.	4
Answer: Diesel vehicle manufactures in India: <i>(Any four with one model – 1 mark each)</i>	
1. Maruti Udyog Ltd., Gurgaon (Manesar) Products/Model: Passenger Cars: Swift - VDi & DZire, Ritz, off-road Gypsy, SUV Grand Vitara, SX4, ERTIGA	4
2. Ashok Leyland Ltd., Chennai: Products/Model – Buses, Trucks, Defense vehicle, Light Commercial vehicle	
3. Mahindra & Mahindra Ltd., Nashik/Mumbai, Maharashtra. Products/Model – i) Passenger vehicles – Quanto, Bolero, Scropio, XUV 500 ii) Commercial vehicle – Maximo, Bolero Maxi Truck, Navistar Truck iii) Tractors: Arjun, Bhoomiputra, Sarpanch, Shaan, Yuvraj.	
4. Piaggio Vehicles Pvt. Ltd., Baramati Products/Models: i) Passenger Vehicle: ape Xtra DLS, ape city diesel. ii) Cargo: Porter 1000, Porter 600, ape Xtra LD	
5. TATA Motors Ltd., Pune, Maharashtra. Products/Models: i) Medium and heavy commercial vehicles: Prima, Rigid Trucks, Tractor Trailers, Tippers, construction mixer. ii) Intermediate & commercial vehicles: LPT 1109 Turbo, Truck LP 1109 Turbo. iii) Light commercial vehicles: Tata SFC 410 EX, Tata LPT 712 EX, Tata 207 DI - Single cab, Tata 207 DI - Crew cab, SFC 407 Turbo Truck, LPT 709 E Turbo Container truck , LPT 407 Turbo Truck. iv) Small commercial vehicles: Tata ACE HT, Tata ACE EX, SUPER ACE. v) Passenger Vehicles: Tata Nano BS IV, Tata Indica Vista, Tata Indica eV2, Indica DLE, Indica DLS, Indica XETA, Indigo Manza. vi) Defense Vehicles: 2 Stretcher Ambulance, 4 Stretcher Ambulance, Short Wheelbase Bus, Long Wheelbase Bus, Staff Car, SFC 407 - 1.5 ton 4x4, LPTA 715 - 2.5 ton 4x4, GS role vehicle SA 1212 - 6 ton 4x4, LPTA 1413 - 7 ton 4x4, SAK 1212 - 4.5 cubic meter 4x4 tipper.	
6. Bajaj Auto Ltd., Pune, Maharashtra Products/ Models: i) Goods Carriers: GC Max Diesel, GC Max CNG, RE 60 ii) Passenger Carriers: RE Diesel, RE GDI, Mega Max	
7. Volkswagen Group India Private Limited - Chakan, Maharashtra. Products/ Models: i) Passenger vehicles: Polo(TL/CL/HL), Vento 1.5 TDI), Jetta ii) Station wagon - Touareg, Phaeton	
8. Hindustan Motors Ltd., Uttarpara, West Bengal. Products/ Models: i) Passenger vehicles – Ambassador, Pajero, Lancer, Outlander.	