

GUJARAT TECHNOLOGICAL UNIVERSITY

BE-6 SEMESTER – OLD PAPER – S22 TO W25 – QUESTION BANK

Subject Name & Code:

VEHICLE MAINTENANCE AND GARAGE PRACTICE (3160210)

Unit 1: Maintenance Basics

Repeated Questions:

1. What is maintenance? List down different types of maintenance. (S25 - Q1b, 04 marks)
(Also appears in: W23 - Q1a, 03 marks; S22 - Q1a, 03 marks)
2. Explain in brief daily, weekly and monthly maintenance schedule. (S22 - Q1c, 07 marks)
(Also appears in: W23 - Q2 OR, 07 marks; W22 - Q1c, 07 marks)
3. What is preventive maintenance? Explain with advantages. (S23 - Q1a, 03 marks)
(Also appears in: S24 - Q1a, 03 marks)
4. What are the safety precautions taken care during doing vehicle maintenance? (W22 - Q1b, 04 marks)
(Also appears in: S22 - Q1b, 04 marks)

Other Important Questions:

1. Discuss very briefly about daily and weekly periodic checks required for a car. (S25 - Q1a, 03 marks)
 2. What is vehicle breakdown? Discuss causes and disadvantages of vehicle breakdown. (S25 - Q1c, 07 marks)
 3. Differentiate: Preventive & Breakdown maintenance. (W23 - Q1a, 03 marks)
 4. Discuss causes and disadvantages of vehicle breakdown. (W23 - Q1b, 04 marks)
 5. Which kind of maintenance is more important? Why? (W24 - Q1a, 03 marks)
 6. What is the purpose of maintenance? (W22 - Q1a, 03 marks)
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Unit 2: Tools, Equipment and Instruments

Repeated Questions:

1. List out different type of measuring instruments used in automobile workshop. (S25 - Q2a, 03 marks)
(Also appears in: W23 - Q2a, 03 marks)
2. Explain two measuring and gauging instruments with diagrams. (S23 - Q1b, 04 marks)
(Also appears in: S24 - Q1b, 04 marks)
3. List of different measuring instruments for wear. Explain any one of them. (S22 - Q2a, 03 marks)
(Also appears in: W22 - Q2a, 03 marks)
4. What would be the possible differences between EV and Conventional vehicle service station? (S25 - Q2b, 04 marks)
(Also appears in: W24 - Q2b, 04 marks; S23 - Q2b, 04 marks; S24 - Q2b, 04 marks)

Other Important Questions:

1. List the measuring instruments and explain any one with a neat diagram. (W23 - Q2a, 03 marks)
 2. What are the special tools and basic instruments required for maintenance? (W22 - Q5 OR, 07 marks)
 3. Explain volumetric methods for fuel measurement. (S22 - Q2b, 04 marks)
 4. Explain gravitational method (weight method) for fuel measurement. (W22 - Q2b, 04 marks)
 5. List down different servicing tools and equipment used in automobile garage. Explain any two in detail with suitable sketches. (W24 - Q3 OR, 07 marks)
 6. List different service equipment used in service stations. Explain to anyone. (W23 - Q3 OR, 07 marks)
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Unit 3: Workshop Management Practices

Repeated Questions:

1. What is Job Card? What is the importance of it? Prepare job card for servicing of [Vehicle Model]. (S22 - Q2 OR, 07 marks)
(Also appears in: S25 - Q2 OR, 07 marks; W24 - Q5 OR, 07 marks; W22 - Q2 OR, 07 marks)
2. Prepare a layout of modern service station. (S22 - Q2c, 07 marks)
(Also appears in: W24 - Q2c, 07 marks; S23 - Q2c, 07 marks; S24 - Q2c, 07 marks)
3. Discuss about different types of vehicle documents and information available in them. (W24 - Q5b, 04 marks)
(Also appears in: S23 - Q2 OR, 07 marks; S24 - Q2 OR, 07 marks)
4. Give comparison between different types of service stations. (S22 - Q3a, 03 marks)
(Also appears in: W22 - Q3a, 03 marks)

Other Important Questions:

1. Explain the layout of a modern automobile service station with its activities. (W23 - Q1c, 07 marks)
 2. Draw the Job card for Four Wheeler used in Modern Workshop. (W23 - Q2b, 04 marks)
 3. Discuss criteria and requirements of a doorstep service station. (W24 - Q2a, 03 marks)
 4. Discuss criteria and requirements of an automotive service station. (S23 - Q2a, 03 marks)
(Also appears in: S24 - Q2a, 03 marks)
 5. Explain the workflow in service station also give the responsibility of each department. (W22 - Q3 OR, 07 marks)
 6. Discuss advantages and disadvantages of an authorized service station and a private service station. (S25 - Q2c, 07 marks)
 7. Draw a complete layout of a modern automotive service station for Hybrid vehicles. (W24 - Q2c, 07 marks)
 8. Prepare a Layout of modern service station. Mention activity of each work base. (S22 - Q2c, 07 marks)
 9. Prepare a Layout of modern service station. Enlist the criteria for the selection of location of service station. (W22 - Q2c, 07 marks)
 10. Discuss the role of service advisor for automobile workshop. (S22 - Q4 OR, 04 marks)
(Also appears in: S25 - Q4 OR, 04 marks; W22 - Q4 OR, 04 marks)
 11. What are the differences in Garage & Service Station? (W24 - Q1b, 04 marks)
 12. Explain benefits of auto extended warranty for a vehicle. (W23 - Q5b, 04 marks)
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Unit 4: Maintenance & Overhauling of Engine

Repeated Questions:

1. Explain the servicing procedure of cylinder block. (S22 - Q4b, 04 marks)
(Also appears in: W23 - Q4b, 04 marks; W22 - Q3 OR, 04 marks)
2. Explain various tests carried out on diesel injector in detail. (S22 - Q3 OR, 07 marks)
(Also appears in: W22 - Q3 OR, 07 marks)
3. Explain the procedure for dismantling of an engine? (W22 - Q4a, 03 marks)
(Related to: W23 - Q4a, 03 marks on engine disassembly)
4. Which are the different causes for engine does not start? (S22 - Q5 OR, 07 marks)
(Also appears in: S25 - Q5 OR, 07 marks; W23 - Q5c, 07 marks)

Other Important Questions:

1. Explain step by step procedure of crank shaft servicing. (W24 - Q3 OR, 07 marks)
(Also appears in: S23 - Q3c, 07 marks; S24 - Q3c, 07 marks)
 2. Describe maintenance and overhauling of cylinder head. (W24 - Q3 OR, 04 marks)
(Also appears in: S23 - Q3 OR, 04 marks; S24 - Q3 OR, 04 marks)
 3. Explain valve timing adjustment. (S23 - Q4a, 03 marks)
(Also appears in: S24 - Q4a, 03 marks)
 4. Explain cylinder honing process and why it is required? (S23 - Q4b, 04 marks)
(Also appears in: S24 - Q4b, 04 marks)
 5. What is valve tapping? (S25 - Q3 OR, 03 marks)
(Also appears in: W22 - Q3 OR, 03 marks)
 6. Explain procedure for Decarbonising of engine. (W22 - Q4 OR, 03 marks)
 7. Explain carburetor tuning process in brief. (W23 - Q5a, 03 marks)
(Also appears in: S25 - Q4a, 03 marks)
 8. Explain the process of denting for a vehicle. (W23 - Q4 OR, 03 marks)
(Also appears in: W24 - Q4 OR, 04 marks)
 9. Explain causes for Engine overheating. (W24 - Q4 OR, 07 marks)
 10. Prepare a periodic maintenance schedule of the Cooling System. (W23 - Q4 OR, 07 marks)
 11. Discuss possible causes and remedies for excessive fuel consumption in the vehicle. (W23 - Q3c, 07 marks)
(Also appears in: S23 - Q3b, 04 marks; S24 - Q3b, 04 marks)
 12. Discuss possible causes and remedies of fuel pump failure. (W24 - Q3b, 04 marks)
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Unit 5: Maintenance & Overhauling of Transmission Systems

Repeated Questions:

1. Explain the procedure of overhauling and diagnosis of clutch assembly. (S23 - Q4c, 07 marks)
(Also appears in: S24 - Q4c, 07 marks; S25 - Q3 OR, 07 marks; W24 - Q4 OR, 07 marks)
2. What do you mean by clutch juddering? Discuss its possible causes and remedies. (S22 - Q5b, 04 marks)
(Also appears in: S25 - Q5 OR, 04 marks; W24 - Q5b, 04 marks; W22 - Q5b, 04 marks)
3. Discuss the overhauling of differential in detail. (S22 - Q4a, 03 marks)
(Also appears in: S25 - Q4 OR, 03 marks; W24 - Q4b, 04 marks; W23 - Q4 OR, 04 marks)

Other Important Questions:

1. Enlist the possible causes and remedies for the clutch assembly maintenance. (W23 - Q3 OR, 03 marks)
 2. Discuss the possible causes for clutch slipping. (S22 - Q5 OR, 03 marks)
(Also appears in: W22 - Q5 OR, 03 marks)
 3. Explain maintenance process of propeller shaft. (W23 - Q5 OR, 03 marks)
(Also appears in: S23 - Q3 OR, 07 marks; S24 - Q3 OR, 07 marks)
 4. Discuss the overhauling of gear box in detail. (S22 - Q3c, 07 marks)
(Also appears in: S25 - Q3c, 07 marks)
 5. Enlist the possible causes and remedies for hard shifting of gear and Transmission stick in gear. (S25 - Q5b, 04 marks)
(Also appears in: S23 - Q5b, 04 marks; S24 - Q5b, 04 marks)
 6. What is back lash in gears? How it can be measured and how it can be adjusted? (W24 - Q3a, 03 marks)
 7. Prepare a periodic maintenance schedule for final drive. (W24 - Q3 OR, 03 marks)
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Unit 6: Maintenance & Overhauling of Steering, Suspension and Wheels and Tyre

Repeated Questions:

1. What do you mean by steering geometry? Discuss any two terms in detail. (S22 - Q4b, 04 marks)
(Also appears in: W23 - Q3b, 04 marks; S25 - Q3b, 04 marks; W24 - Q4a, 04 marks; W22 - Q4b, 04 marks)
2. Explain Camber angle, Caster angle and Toe in. (S25 - Q3a, 03 marks)
(Also appears in: S23 - Q3 OR, 03 marks; S24 - Q3 OR, 03 marks)
3. Explain tyre rotation. (S25 - Q5a, 03 marks)
(Also appears in: W24 - Q4 OR, 03 marks; S23 - Q5a, 03 marks; S24 - Q5a, 03 marks)
4. How one can improve the tyre life in four-wheeler? (W24 - Q5a, 03 marks)
(Also appears in: S23 - Q4 OR, 03 marks; S24 - Q4 OR, 03 marks)

Other Important Questions:

1. Explain wheel balancing and different tyre rotation patterns for Car. (W23 - Q2c, 07 marks)
 2. Explain wheel balancing and wheel alignment. (S23 - Q5c, 07 marks)
(Also appears in: S24 - Q5c, 07 marks)
 3. Explain the wheel balancing procedure in detail. (S22 - Q3 OR, 03 marks)
 4. What do you mean by balancing? Give their types. (S25 - Q4b, 04 marks)
 5. If your vehicle has troubles of hard steering and excessive tyre wear, what could be the causes and remedies of the problem. (W24 - Q1c, 07 marks)
 6. Explain understeer and oversteer effects in a vehicle. (W24 - Q4a, 03 marks)
 7. Prepare a periodic maintenance schedule for suspension system. (S23 - Q3a, 03 marks)
(Also appears in: S24 - Q3a, 03 marks)
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Unit 7: Maintenance of Electrical Systems

Other Important Questions:

1. Give detail maintenance & repair of electrical and ignition system. (S25 - Q5c, 07 marks)
(Note: This unit has significantly fewer direct questions across the papers. Most electrical system questions are combined with other systems or are part of troubleshooting.)

Unit 8: Maintenance & Repair of Vehicle Body

Repeated Questions:

1. Explain the painting process of vehicles. (W23 - Q5b, 04 marks)
(Also appears in: S22 - Q4 OR, 07 marks; S25 - Q4 OR, 07 marks; W24 - Q4 OR, 07 marks; S23 - Q5 OR, 03 marks; S24 - Q5 OR, 03 marks)
2. Discuss various stages of painting process for passenger car. (S22 - Q4 OR, 07 marks)
(Also appears in: S25 - Q4 OR, 07 marks; W24 - Q4 OR, 07 marks; W22 - Q4 OR, 07 marks)

Other Important Questions:

1. What are the different causes of corrosion on painted body? (W24 - Q5 OR, 03 marks)
2. Explain the process of denting for a vehicle. (W23 - Q4 OR, 03 marks)
(Also appears in: W24 - Q4 OR, 04 marks)

General & Cross-Unit Troubleshooting / Procedures

Repeated Questions:

1. Discuss the brake bleeding procedure in detail. (S22 - Q5c, 07 marks)
(Also appears in: S25 - Q3 OR, 04 marks; W22 - Q5c, 07 marks; S23 - Q4 OR, 07 marks; S24 - Q4 OR, 07 marks)
2. Which are the different tests carried out for testing brakes? (S22 - Q4c, 07 marks)
(Also appears in: S25 - Q4c, 07 marks; W22 - Q4c, 07 marks)
3. Draw the trouble shooting chart for any four wheelers. (S22 - Q5 OR, 04 marks)
(Also appears in: S23 - Q5 OR, 04 marks; S24 - Q5 OR, 04 marks; W22 - Q5 OR, 04 marks)
4. Explain Lubrication and Maintenance of suspension system. (W23 - Q4c, 07 marks)
(Also appears in: W24 - Q5 OR, 07 marks; S23 - Q5 OR, 07 marks; S24 - Q5 OR, 07 marks)
5. What do you mean by chassis lubrication? Discuss its importance. (W23 - Q4a, 03 marks)
(Also appears in: S22 - Q4a, 03 marks)

Other Important Questions:

1. Explain hydraulic car lift used in automotive service stations. (W23 - Q3a, 03 marks)
2. Explain the bleeding of the hydraulic brake process with a neat sketch. (W23 - Q3b, 04 marks)
3. Which are the different tests carried out for measuring brake efficiency of any vehicle? (S22 - Q5a, 03 marks)
(Also appears in: W22 - Q5a, 03 marks)
4. Explain function of lubrication system. (S23 - Q4 OR, 04 marks)
(Also appears in: S24 - Q4 OR, 04 marks)
