

Record No.: ADM/D/036B

DoI: 02/01/2023

Revision: 00

Internal Correspondence

Course:	B. Voc	Class: Third
Branch:	Automobile Servicing	Year
Subject:	Automobile Maintenance Service & Repairs -I	Semester: 5

Multiple Choice Questions

Unit 3: Lubrication and Maintenance Schedule

- 1. What is the primary function of lubrication in machinery?
- A) To clean the parts
- B) To reduce friction and wear
- C) To increase temperature
- D) To improve aesthetic appearance
- Answer: B) To reduce friction and wear

2. Which of the following is a common type of lubricant used in machinery?

- A) Water
- B) Oil
- C) Air
- D) Salt

Answer: B) Oil

- 3. What is the main purpose of a lubrication schedule?
- A) To monitor the machine's production
- B) To ensure the machine operates efficiently and prevents damage
- C) To track operating hours
- D) To clean the machine
- Answer: B) To ensure the machine operates efficiently and prevents damage



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- 4. Which factor influences the type of lubricant to be used in a machine?
- A) Ambient temperature
- B) Machine's load and speed
- C) Operating environment
- D) All of the above
- Answer: D) All of the above
- 5. Which is the best time to perform maintenance checks on a machine?
- A) After working hours
- B) When the machine is idle
- C) During peak load conditions
- D) At regular intervals as per the maintenance schedule
- Answer: D) At regular intervals as per the maintenance schedule
- 6. Which of the following is an example of preventative maintenance?
- A) Replacing a failed bearing
- B) Cleaning the machine components regularly
- C) Running diagnostics on the system after failure
- D) None of the above
- Answer: B) Cleaning the machine components regularly
- 7. What can happen if a machine is over-lubricated?
- A) The parts will run cooler
- B) Excess lubricant can lead to overheating and contamination
- C) The machine will work more efficiently
- D) The lubricant will evaporate
- Answer: B) Excess lubricant can lead to overheating and contamination



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- 8. What is the significance of viscosity in lubricants?
- A) It affects the lubricant's ability to form a protective film
- B) It determines the color of the lubricant
- C) It affects the speed of the machine
- D) It has no significant effect on lubrication

Answer: A) It affects the lubricant's ability to form a protective film

- 9. When should the lubrication of a machine be checked?
- A) Once every year
- B) Before and after each operation
- C) Only after a malfunction
- D) When the machine is first purchased
- Answer: B) Before and after each operation
- 10. What is one of the common causes of lubricant failure?
- A) Proper storage conditions
- B) High operating temperature
- C) Low viscosity grade
- D) Using the wrong type of lubricant
- Answer: B) High operating temperature
- 11. Which of the following is NOT a benefit of having a proper lubrication schedule?
- A) Increased equipment lifespan
- B) Reduced energy consumption
- C) Increased chance of machine failure
- D) Improved operational efficiency
- Answer: C) Increased chance of machine failure



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- 12. Which of the following is an important part of a maintenance schedule?
- A) Cleaning the equipment
- B) Changing lubricants at specified intervals
- C) Checking the condition of components
- D) All of the above
- Answer: D) All of the above
- 13. What is a common sign that a machine requires lubrication?
- A) Increased noise
- B) Decreased temperature
- C) Decreased workload
- D) Increased vibration
- Answer: A) Increased noise
- 14. What is the role of additives in lubricants?
- A) To provide a barrier against contaminants
- B) To enhance the lubricant's properties, such as viscosity and corrosion resistance
- C) To reduce the lubrication cost
- D) To change the color of the lubricant

Answer: B) To enhance the lubricant's properties, such as viscosity and corrosion resistance

- 15. Which type of maintenance is typically done based on the manufacturer's recommendation?
- A) Corrective maintenance
- B) Preventive maintenance
- C) Predictive maintenance
- D) Reactive maintenance
- Answer: B) Preventive maintenance



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Unit 4: Fuel System

- 1. What is the primary function of an automobile fuel system?
- A) To cool the engine
- B) To deliver fuel to the engine
- C) To generate electricity
- D) To lubricate the engine
- Answer: B) To deliver fuel to the engine
- 2. Which component of the fuel system is responsible for mixing air and fuel?
- A) Fuel tank
- B) Fuel injector
- C) Carburetor
- D) Fuel filter
- Answer: C) Carburetor
- 3. What is the purpose of a fuel filter in an automobile fuel system?
- A) To prevent fuel from overheating
- B) To remove impurities and contaminants from the fuel
- C) To regulate fuel pressure
- D) To mix fuel with air
- Answer: B) To remove impurities and contaminants from the fuel
- 4. Which of the following components regulates the flow of fuel from the tank to the engine?
- A) Fuel pump
- B) Fuel gauge
- C) Carburetor
- D) Exhaust manifold
- Answer: A) Fuel pump



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- 5. What could cause the engine to stall when accelerating?
- A) Dirty fuel injectors
- B) Clogged fuel filter
- C) Faulty fuel pump
- D) All of the above
- Answer: D) All of the above
- 6. What is the function of the fuel pressure regulator in the fuel system?
- A) To control the flow of fuel into the fuel tank
- B) To ensure the fuel injectors receive fuel at the correct pressure
- C) To mix air with fuel
- D) To prevent fuel from evaporating

Answer: B) To ensure the fuel injectors receive fuel at the correct pressure

- 7. What can happen if the fuel injectors are clogged or malfunctioning?
- A) The engine may run smoothly
- B) The engine may experience misfires or rough idling
- C) The fuel consumption will decrease
- D) The exhaust system will be unaffected

Answer: B) The engine may experience misfires or rough idling

- 8. Which of the following could be a sign of a failing fuel pump?
- A) The engine won't start or has difficulty starting
- B) Unusual exhaust smoke
- C) Decreased engine temperature
- D) Increased oil pressure
- Answer: A) The engine won't start or has difficulty starting



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- 9. What is the role of the fuel tank in an automobile?
- A) To store fuel and supply it to the engine
- B) To regulate exhaust gases
- C) To monitor fuel consumption
- D) To cool the engine
- Answer: A) To store fuel and supply it to the engine
- 10. How often should a fuel filter be replaced in most automobiles?
- A) Every 10,000 miles
- B) Every 30,000 to 40,000 miles
- C) Every 100,000 miles
- D) Never, as it is a lifetime part
- Answer: B) Every 30,000 to 40,000 miles
- 11. What could cause fuel leakage in the fuel system?
- A) Worn-out fuel pump
- B) Cracked fuel lines or seals
- C) Overfilled fuel tank
- D) Both A and B
- Answer: D) Both A and B
- 12. Which of the following is a common cause of fuel system clogging?
- A) Using high-quality fuel
- B) Old or contaminated fuel
- C) Proper maintenance of the fuel system
- D) A clean fuel tank
- Answer: B) Old or contaminated fuel



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- 13. What is a fuel injector's role in the fuel system?
- A) To filter contaminants from the fuel
- B) To spray fuel into the combustion chamber
- C) To monitor fuel pressure
- D) To store the fuel before combustion

Answer: B) To spray fuel into the combustion chamber

14. Which part of the fuel system is responsible for ensuring the correct amount of fuel enters the engine

during combustion?

- A) Fuel filter
- B) Fuel pressure regulator
- C) Fuel injector
- D) Fuel tank
- Answer: C) Fuel injector
- 15. What is the effect of using the wrong octane fuel for an engine?
- A) It will cause engine knocking or pinging
- B) It will improve fuel efficiency
- C) It will increase horsepower
- D) It will prevent corrosion in the engine
- Answer: A) It will cause engine knocking or pinging



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Unit 5: Engine Tuning

- 1. What is the main purpose of engine tuning?
- A) To increase the vehicle's fuel efficiency
- B) To improve engine performance and efficiency
- C) To reduce the engine noise
- D) To clean the engine components

Answer: B) To improve engine performance and efficiency

- 2. Which of the following components is typically adjusted during an engine tuning?
- A) Carburetor settings
- B) Ignition timing
- C) Air-fuel mixture
- D) All of the above
- Answer: D) All of the above
- 3. What does adjusting the ignition timing help with in engine tuning?
- A) Increasing engine fuel consumption
- B) Reducing engine knocking and improving performance
- C) Cleaning the spark plugs
- D) Lowering engine temperature

Answer: B) Reducing engine knocking and improving performance

- 4. Why is it important to adjust the air-fuel mixture in engine tuning?
- A) To reduce exhaust emissions
- B) To optimize fuel efficiency and engine power
- C) To improve engine lubrication
- D) To increase engine noise
- Answer: B) To optimize fuel efficiency and engine power



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- 5. What is the result of a lean air-fuel mixture during engine tuning?
- A) Decreased engine power
- B) Increased fuel consumption
- C) Overheating of the engine
- D) All of the above

Answer: D) All of the above

- 6. What is the purpose of spark plug gap adjustment during engine tuning?
- A) To increase engine vibration
- B) To ensure optimal ignition of the air-fuel mixture
- C) To reduce fuel consumption
- D) To decrease engine noise

Answer: B) To ensure optimal ignition of the air-fuel mixture

- 7. When should engine tuning be performed?
- A) After every oil change
- B) Regularly, based on manufacturer recommendations or performance issues
- C) Only when the engine overheats
- D) Only when the vehicle is sold

Answer: B) Regularly, based on manufacturer recommendations or performance issues

- 8. What is the effect of incorrectly adjusted ignition timing?
- A) Improved fuel economy
- B) Engine knocking and reduced performance
- C) Reduced engine temperature
- D) More efficient combustion
- Answer: B) Engine knocking and reduced performance



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- 9. Which of the following is NOT a typical sign that your vehicle needs engine tuning?
- A) Poor acceleration
- B) Engine misfires
- C) Decreased fuel efficiency
- D) Smoother idle and higher engine temperature

Answer: D) Smoother idle and higher engine temperature

- 10. How does a properly tuned engine affect emissions?
- A) Increases harmful emissions
- B) Decreases harmful emissions
- C) Has no effect on emissions
- D) It causes incomplete combustion
- Answer: B) Decreases harmful emissions
- 11. Which of the following is a tool commonly used to check and adjust ignition timing during engine tuning?
- A) Torque wrench
- B) Timing light
- C) Compression tester
- D) Fuel pressure gauge
- Answer: B) Timing light
- 12. What is one of the primary benefits of tuning the carburetor in older vehicles?
- A) Reducing the air-fuel mixture
- B) Improving fuel atomization and engine efficiency
- C) Increasing the fuel tank size
- D) Reducing the size of the exhaust pipes
- Answer: B) Improving fuel atomization and engine efficiency



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- 13. What is the role of the idle speed in engine tuning?
- A) To maintain a smooth engine start
- B) To reduce exhaust gas emissions at low RPM
- C) To prevent engine stalling and ensure smooth idling
- D) To increase fuel consumption

Answer: C) To prevent engine stalling and ensure smooth idling

- 14. How does engine tuning affect the vehicle's acceleration?
- A) It improves acceleration by optimizing power delivery
- B) It decreases acceleration due to more fuel consumption
- C) It has no effect on acceleration
- D) It causes jerky acceleration and engine stalls

Answer: A) It improves acceleration by optimizing power delivery

- 15. What is the primary reason for replacing old spark plugs during engine tuning?
- A) To reduce engine vibrations
- B) To prevent incomplete combustion and misfires
- C) To reduce the noise of the engine
- D) To improve fuel efficiency
- Answer: B) To prevent incomplete combustion and misfires





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Short Answer Questions

Question No	Question	Marks
Unit 3 : Lubrication and Maintenance Schedule		
01	What are the key benefits of lubrication in machinery?	02
	 Reduces friction between moving parts. Minimizes wear and tear on components. Prevents overheating by dissipating heat. Enhances machine efficiency and performance. Extends the lifespan of the equipment. 	
02	What factors should be considered when setting up a lubrication schedule?	02
	 Manufacturer's recommendations for lubrication intervals. Operating conditions (e.g., temperature, load, and speed). Type of machinery and its specific requirements. Environmental conditions such as dust, moisture, or corrosive agents. Frequency of use and machine downtime. 	
03	Why is it important to follow a regular maintenance schedule for machines?	02
	 Prevents unexpected equipment breakdowns and costly repairs. Ensures machines operate at peak efficiency. Helps identify potential issues early, avoiding larger failures. Reduces downtime, improving productivity. Increases the overall lifespan of the equipment. 	
04	What could be the consequences of neglecting lubrication intervals?	02
	 Increased friction and wear on moving parts. Overheating, leading to potential component failure. Reduced machine efficiency and performance. Increased risk of unexpected breakdowns. Shortened lifespan of the equipment. 	
05	What role does oil viscosity play in lubrication?	02
	 Determines the thickness and flow rate of the lubricant. Ensures proper lubrication at various operating temperatures. Prevents excessive wear by maintaining a protective oil film. 	





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	 Affects fuel efficiency and engine performance. 	
	Ensures that the lubricant can reach all necessary parts of the machine.	
06	What components should be regularly checked as part of a lubrication maintenance	02
	schedule?	
	Oil levels and quality (check for contamination).	
	Lubricant filters and strainers (ensure they are clean).	
	Lubrication points (ensure proper lubrication is applied).	
	➢ Gaskets and seals (check for leaks).	
	The condition of moving parts and machinery (to ensure no dry spots).	
07	What happens if a fuel filter becomes clogged in a machine?	02
	Reduced fuel flow to the engine, causing power loss.	
	Increased engine strain, leading to overheating.	
	Potential damage to the fuel system and injectors.	
	Poor fuel efficiency and increased emissions.	
	Possible engine misfires or stalling.	
08	What are the signs that lubrication needs to be checked or changed?	02
	Unusual noises from machinery (e.g., squeaking or grinding).	
	 Increased engine temperature or overheating. 	
	Visible leaks around lubrication points.	
	Poor machine performance or sluggish operation.	
	Vibration or irregular movement of moving parts.	
09	What should be done if a machine's lubrication system is found to be faulty?	02
	Shut down the machine to prevent further damage.	
	Inspect and replace the faulty components (e.g., pumps, filters).	
	Clean the lubrication system to remove debris or contamination.	
	Reapply the correct type and amount of lubricant.	
	Test the system after repairs to ensure proper operation.	
10	How can a maintenance schedule impact the overall efficiency of machinery?	02
	Ensures that machines are regularly inspected and serviced.	
	Helps to detect and address potential issues before they lead to failures.	
	Maintains peak performance, reducing energy waste.	
	Reduces the risk of unplanned downtime, increasing productivity.	
	Enhances the reliability of equipment, leading to fewer operational	
	disruptions.	



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Unit 4 : Fuel System		
1	What is the primary function of an automobile fuel system?	02
	• To store and deliver fuel to the engine.	
	• To mix air with fuel in the correct ratio for combustion.	
	• To ensure consistent fuel pressure and flow to the engine.	
	• To filter contaminants from the fuel before reaching the engine.	
	• To support proper fuel combustion for engine efficiency and power.	
2	What are the main components of a typical fuel system in an automobile?	02
	• Fuel tank: Stores fuel for the engine.	
	• Fuel pump: Delivers fuel from the tank to the engine.	
	• Fuel filter: Removes impurities from the fuel before it reaches the engine.	
	• Fuel injectors: Spray fuel into the combustion chamber in a controlled manner.	
	• Fuel pressure regulator: Ensures consistent fuel pressure for proper injector	
	function.	
3	What are the signs that a fuel system might be malfunctioning?	02
	Engine misfires or poor acceleration.	
	• Difficulty starting the engine or stalling during operation.	
	• Decreased fuel efficiency or poor mileage.	
	• Unusual engine noises, such as knocking or rough idling.	
	Check engine light or fuel-related error codes.	
4	How does a clogged fuel filter affect the fuel system?	02
	• Restricts fuel flow to the engine, causing poor engine performance.	
	• Can lead to engine misfires or stalling.	
	Reduces fuel efficiency and causes poor acceleration.	
	• May cause fuel pump damage due to excessive strain.	
	• Results in inconsistent fuel pressure, affecting engine performance.	
5	What maintenance steps should be taken to keep the fuel system in good condition?	02
	Regularly replace the fuel filter to ensure clean fuel flow.	
	• Inspect and replace fuel lines for leaks or wear.	
	Clean or replace fuel injectors to prevent clogging.	
	Check and maintain fuel pressure regularly.	
	• Use high-quality fuel and add fuel system cleaner periodically.	





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6	What is the role of a fuel injector in an automobile fuel system?	02
	• Delivers the correct amount of fuel into the combustion chamber.	
	• Sprays fuel in a fine mist for better atomization and combustion.	
	• Operates electronically or mechanically based on engine demand.	
	• Helps maintain the air-fuel mixture for optimal engine performance.	
	• Can be cleaned or replaced when clogged or malfunctioning.	
7	What could cause a fuel pump to fail, and how does it affect the engine?	02
	• Contamination or debris in the fuel tank.	
	• Overheating due to lack of fuel or poor ventilation.	
	• Electrical issues or worn-out pump components.	
	• Loss of fuel pressure, leading to engine stalling or failure to start.	
	• Inconsistent fuel delivery causing rough idling or poor acceleration.	
8	What are the advantages of modern fuel injection systems over older carbureted systems?	02
	More precise control over fuel-air mixture, improving fuel efficiency.	
	• Faster response time to engine demands, improving performance.	
	• Reduced emissions due to better combustion control.	
	• Easier to maintain and troubleshoot with fewer moving parts.	
	• Enhanced starting performance, especially in cold weather.	
9	How does using the wrong type of fuel affect the fuel system?	02
	• Can cause engine knocking or misfiring due to incorrect octane levels.	
	• May lead to clogged fuel injectors or filters with contaminants.	
	• Increases carbon buildup in the engine, affecting performance.	
	• Results in poor fuel efficiency and increased exhaust emissions.	
	• Damages fuel system components, such as the fuel pump and lines.	
10	What role does the fuel pressure regulator play in the fuel system?	02
	• Ensures the fuel injectors receive consistent and adequate pressure.	
	• Prevents over-pressurization, which could damage injectors or fuel lines.	
	• Maintains the correct air-fuel ratio for optimal engine performance.	
	• Helps improve fuel efficiency by regulating the flow of fuel.	
	• Allows for better control of engine power and response under varying loads.	









Unit 5 : Engine Tuning		
1	What is the purpose of engine tuning in automobile maintenance?	02
	• To optimize engine performance and efficiency.	
	• To improve fuel efficiency and reduce emissions.	
	• To ensure the proper air-fuel mixture for combustion.	
	• To reduce engine knocking and misfires.	
	• To enhance overall vehicle power and acceleration.	
2	What components are commonly adjusted during engine tuning?	02
	• Ignition timing: Ensures optimal spark for efficient combustion.	
	• Air-fuel mixture: Adjusted for the right balance for performance and efficiency.	
	• Idle speed: Maintains smooth engine operation at idle.	
	• Spark plug gap: Optimized for better ignition and combustion.	
	• Carburetor or fuel injectors: Adjusted for accurate fuel delivery.	
3	What can cause poor engine performance that requires tuning?	02
	Incorrect ignition timing, leading to engine knocking.	
	 Clogged or dirty fuel injectors, causing fuel misdelivery. 	
	• Worn spark plugs that misfire or don't ignite fuel properly.	
	• A lean or rich air-fuel mixture affecting engine smoothness.	
	• A dirty air filter reducing air intake, affecting combustion efficiency.	
4	How does improper ignition timing affect engine performance?	02
	• Can cause engine knocking or pinging.	
	• Reduces engine power and acceleration.	
	 Leads to poor fuel efficiency and increased emissions. 	
	• Can cause excessive engine wear due to improper combustion.	
	• May result in engine misfires and rough idling.	
5	Why is it important to adjust the air-fuel mixture during engine tuning?	02
	• To ensure the engine operates with the optimal air-fuel ratio.	
	Affects fuel efficiency and overall engine performance.	
	• A lean mixture can cause engine overheating, while a rich mixture wastes fuel.	
	• Helps prevent carbon build-up and excessive emissions.	
	• Improves engine smoothness and reduces misfires.	
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6	What are the signs that an engine may need tuning?	02
	 Poor acceleration or sluggish response from the engine. Rough idling or engine stalling at low speeds. Increased fuel consumption or reduced fuel economy. Engine knocking or unusual sounds from the engine. The check engine light indicating performance issues. 	
7	What role do spark plugs play in engine tuning?	02
	 Spark plugs ignite the air-fuel mixture in the combustion chamber. Proper spark plug gap ensures efficient ignition and combustion. Worn or dirty spark plugs can cause misfires and poor engine performance. They help reduce emissions by ensuring complete combustion. Regular inspection and replacement maintain engine efficiency. 	
8	How does engine tuning affect fuel efficiency?	02
	 Proper ignition timing and air-fuel mixture improve combustion efficiency. A well-tuned engine minimizes wasted fuel and maximizes power output. Reduces the chances of excessive fuel consumption due to misfires or inefficiencies. Improves overall engine smoothness, leading to better miles per gallon. Keeps the engine running at its optimal state, preventing fuel waste. 	
9	What tools are commonly used during engine tuning?	02
	 Timing light: Used to check and adjust ignition timing. Vacuum gauge: Helps diagnose engine performance issues related to timing or fuel delivery. Spark plug gap tool: Used to adjust the spark plug gap for optimal performance. Fuel pressure gauge: Measures fuel pressure to ensure proper fuel delivery. Carburetor tuning tools: Used to adjust the carburetor for the correct air-fuel mixture. 	
10	What are the risks of not performing regular engine tuning?	02
	 Reduced engine performance, including lower horsepower and slower acceleration. Increased fuel consumption and decreased fuel economy. Greater likelihood of engine knocking, misfires, or stalling. Increased engine wear due to inefficient combustion. Higher emissions, potentially causing the vehicle to fail emissions tests. 	