

MODULE 3: Communication and Terminology for Certification

TOPIC 3: Writing a Multiple Choice Exam

LEARNING OUTCOMES:

At the end of this lesson, participants will be able to:

- ◆ be familiar with all of the requirements of the Certificate of Qualification Interprovince exam
- ◆ determine the most correct answer amongst a number of answers
- ◆ write a test required for a certification

AUTOMOTIVE SERVICE TECHNOLOGY TERMINOLOGY WORKSHOP

| TOPIC | SKILLS | CLB COMPETENCE AREA | COMPETENCIES | PRE-TASKS | TASK | POST TASK |
|--|---|---|--|---|--|---|
| <ul style="list-style-type: none"> ◆ Writing a multiple choice exam | <ul style="list-style-type: none"> ◆ Listening/ Speaking ◆ Writing ◆ Reading | <ul style="list-style-type: none"> ◆ exchanging information ◆ suasion ◆ formatted text | <ul style="list-style-type: none"> ◆ scanning for specific information ◆ applying process of elimination to determine an answer ◆ justifying a correct answer by giving reasons | <ul style="list-style-type: none"> ◆ practise writing a multiple choice test using strategies ◆ justify answers | <ul style="list-style-type: none"> ◆ write a one hour mini-test | <ul style="list-style-type: none"> ◆ assess the test |

**Facilitator's Guide for Module 3
Topic 3 Writing a Multiple Choice Exam**

FACILITATOR PREPARATION

Content

The terminology in this lesson will be presented and practised within a functional language context: using occupational terminology to describe physical principles as well as AST principles, and isolating the most correct answer amongst a number of answers.

Delivery

As many copies as necessary should be made of the following handouts:

1. Handout 1 - How to write a multiple choice exam
2. Handout 2 - Sample Practice Test
3. Handout 3 - Practice Test (5 pages)

Methodology

Introduction

1. Explain to the class that the terminology in this lesson will be presented and practised within a functional language context: using occupational terminology to describe physical principles as well as AST principles, and isolating the most correct answer amongst a number of answers.

Pre-tasks

- (25 minutes)** 1. Using Handout 1, “teach” the class how to write a multiple choice exam.
- (30 minutes)** 2. Distribute “practice” text, Handout 2 and have participants complete it in small groups.

- (40 minutes)** 3. Have groups present their answers, giving reasons why they chose certain answers over others. Take up answers with the participants.

Tasks

- (60 minutes)** 1. Give the participants a sample multiple choice mini-test for one hour.

Post tasks

- (20 minutes)** 1. Go over the answers with participants using the Facilitator's Guide. Or prepare an answer sheet for the participants to assess themselves on their own.

Handout 1:

How to Write a Multiple-Choice Exam:

Writing a multiple choice exam requires isolating the most correct answer from a number of answers. Usually four choices are given. Of the four, one is obviously wrong. Another is possibly right, but probably not, while the third and fourth are very similar. It will be easy to detect the obviously wrong one, so eliminate it first. Secondly, concentrate on eliminating the answer that could be right, but probably isn't. Then your choice is limited to only two answers. For example,

A brake lining:

- a) comes into contact with the drum when the brake is applied.
- b) comes into contact with the disc attached to the wheel hub when the brake is applied.
- c) is the curved metal part of a drum brake to which the disc is attached.
- d) is made of asbestos.

In this example, b) may be correct, but upon closer examination, it is confused with the brake drum. While d) may be true, it is not necessarily true, and c) is wrong because it obviously confuses a brake lining with a brake shoe. Therefore, a) is the correct answer.

Likewise, there may be questions that ask for ALL OF THE ABOVE or NONE OF THE ABOVE.

For example,

A wrench is a tool that:

- a) grips a bolt.
- b) tightens or loosens objects.
- c) comes in a variety of shapes and sizes.
- d) all of the above.

In this example, all of the above answers apply to the tool known as a wrench. Sometimes, however, there are tricks in the question. For example, two are correct but the third isn't. For example,

A wrench is a tool that:

- a) grips a bolt.
- b) tightens or loosens objects.
- c) is used to strike objects.
- d) all of the above.

In this case, while a wrench might be used to strike objects, this is not its intended purpose. Therefore, d) cannot be the correct answer. Likewise, watch for the same trick in NONE OF THE ABOVE questions. For example,

A screwdriver is a tool that:

- a) bores holes.
- b) is used to grip an object.
- c) is used to secure a screw into place.
- d) none of the above.

In this case, a) and b) are obviously incorrect; however, c) is correct, and therefore, the correct answer. Also, pay close attention to HOW the question is worded. There may be just one word in the question that changes the meaning of the sentence. For example,

The following are all of the different types of screwdrivers. Circle True or False.

- a) Phillips
- b) ratchet
- c) right-angled
- d) Benson

While it is true that a), b) and c) are ALL names of screwdrivers, they are not ALL the types of screwdrivers that exist. Therefore, the answer is FALSE.

Handout 2:

Practice Questions:

In a group, negotiate the answers to the following multiple choice questions. For each, make sure you can explain why you chose one answer over the others.

1. The engine produces power by the:
 - a) rotation of the crankshaft
 - b) valve action
 - c) combustion pressure pushing on pistons
 - d) up-and-down movement of pistons

2. Catalytic converters are required on:
 - a) some cars made after 1970
 - b) all cars made after 1970
 - c) some cars made before 1981
 - d) all cars made before 1981

3. Power leaves the transmission section of a manual transaxle through a:
 - a) pinion gear
 - b) ring gear
 - c) cluster gear
 - d) countergear

4. Before working on brakes, use a special vacuum cleaner with a HEPA filter to:
 - a) remove the asbestos dust
 - b) blow the dust off the parts
 - c) prevent contaminants in the air from damaging the brakes

FACILITATOR'S NOTES**Answer Key to Handout 2****Practice Questions:**

In a group, negotiate the answers to the following multiple choice questions. For each, make sure you can explain why you chose one answer over the others.

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Handout 3 - Test (page 1)

Part 1: Electrical, Electronic and Vacuum Control Systems

1. Electrons flowing in the same direction are called:
 - a) a nucleus
 - b) magnetism
 - c) voltage
 - d) electric current

2. Voltage is:
 - a) current flow
 - b) resistance to current flow
 - c) electrical pressure
 - d) amperes flow

3. All of the following are true about resistance in a cable EXCEPT:
 - a) resistance decreases with increasing temperature
 - b) resistance decreases with larger diameter
 - c) resistance increases with increasing length
 - d) resistance increases with increasing temperature

4. Technician A says according to Ohm's law more current will flow if the voltage increases. Technician B says more current will flow if resistance increases. Who is right?
 - a) A only
 - b) B only
 - c) A and B
 - d) neither A nor B

Part 2: Fuel Systems

1. The two fuel systems used with spark-ignition engines are:
 - a) carburetor and diesel
 - b) fuel injection and diesel
 - c) port and throttle body
 - d) fuel injected and carbureted

FACILITATOR'S NOTES

Answer Key to Handout 3 (page 1)

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Handout 3 - Test (page 2)

Part 3: Braking Systems

1. In a duo-servo brake, the secondary shoe is worn more than the primary shoe. This indicates:
 - a) stuck pistons in the wheel cylinder
 - b) normal operation
 - c) failure of the shoe to self-energize
 - d) a defective brake drum

2. Disc brakes self-adjust when the lining wear allows the piston to:
 - a) contact the disc
 - b) slide outward through the seal
 - c) cause seal deflection
 - d) reposition the seal groove in the caliper

3. The rear disc brake with an integral parking brake has:
 - a) two shoes in a hub-mounted drum brake
 - b) a small brake drum mounted on the rear-axle halfshaft
 - c) a piston that can be operated hydraulically or mechanically
 - d) a separate fluid reservoir for the parking brake

FACILITATOR'S NOTES**Answer Key to Handout 3 (page 2)****Part 3: Braking Systems**

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Handout 3 - Test (page 3)

Part 4: Internal Combustion Engines

1. The two basic types of internal-combustion engines are the:
 - a) rotary and reciprocating
 - b) pushrod and reciprocating
 - c) spark-ignition and compression-ignition
 - d) gasoline and spark-ignition

2. The two basic types of piston engines are the:
 - a) piston and reciprocating
 - b) reciprocating and rotary
 - c) reciprocating and pushrod
 - d) rotary and spark-ignition

Part 5: Steering and Suspension Systems

1. A right front wheel has too much negative caster. The result will be:
 - a) a feathered edge on the inside of the tire tread
 - b) a feathered edge on the outside of the tire tread
 - c) pulling to the right
 - d) pulling to the left

Part 6: Emission Control and Exhaust Systems

1. The crossover pipe in the dual exhaust system:
 - a) increases engine power
 - b) strengthens the pipes
 - c) helps reduce noise
 - d) feeds exhaust gas into the catalytic converter

2. Backfiring in the exhaust system is caused by:
 - a) a rich mixture in the exhaust gas
 - b) a lean mixture in the exhaust gas
 - c) low fuel-pump capacity
 - d) disconnected air-cleaner vacuum hose

FACILITATOR'S NOTES

Answer Key to Handout 3 (page 3)

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 - b) pushrod and reciprocating
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 - d) gasoline and spark-ignition

2. The two basic types of piston engines are the:
 - a) piston and reciprocating
 - b) reciprocating and rotary
 - c) reciprocating and pushrod
 - d) rotary and spark-ignition

3.

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1. A right front wheel has too much negative caster. The result will be:
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Handout 3 - Test (page 4)

Part 7: Automatic Transmissions

1. The Simpson planetary gearset has all the following EXCEPT:
 - a) one sun gear
 - b) two sets of planet pinions
 - c) two internal gears
 - d) long and short planet pinions

Part 8: Manual Transmission

1. When the gear ratio through the transmission is 1:1, the transmission is in:
 - a) overdrive
 - b) direct drive
 - c) underdrive
 - d) neutral

FACILITATOR'S NOTES

Answer Key to Handout 3 (page 4)

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Handout 3 - Test (page 5)

Part 9: Differentials, Drive Shafts, Drive Lines

1. In a limited-slip differential, when one wheel starts to spin:
 - a) all the torque goes to the spinning wheel
 - b) the differential side gears become locked to the case
 - c) the ring gear is held stationary
 - d) the pinion gears are demeshed from the side gears

Part 10: Work Practices, Safety

1. The most common cause of accidents in the shop is:
 - a) defective parts
 - b) failure to follow instructions
 - c) defective equipment
 - d) faulty workmanship

Part 11: Cooling Systems, Climate Control

1. The purpose of the cooling system is to:
 - a) prevent the coolant from boiling
 - b) prevent the coolant from freezing
 - c) keep the engine running as cool as possible
 - d) keep the engine running at its most efficient operating temperature

Part 12: Body Hardware and Trim

1. Body construction consists of:
 - a) body-and-frame
 - b) unitized body or unibody
 - c) space frame
 - d) all of the above

FACILITATOR'S NOTES**Answer Key to Handout 3 (page 5)****Part 9: Differentials, Drive Shafts, Drive Lines**

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 - a) *all the torque goes to the spinning wheel*
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