SELF-EVALUATION TEST
AUTOMOBILE MECHANICS

This test contains four modules dealing with the knowledge and skills required to obtain a competency card in the field of automobile mechanics.

- Power Train
- Brakes
- Internal Combustion Engines
- Electricity and Supply System

Identification

Last name: _____
First name: _____
C/C #: _____

The CPA Montréal developed this self-evaluation test in collaboration with Emploi-Québec in order to avoid you being disappointed when you receive the results of your qualification exam. The goal of the self-evaluation test is to help assess your knowledge of **automobile mechanics**. This test will also help you determine what level you have reached in the learning process before you decide to take the qualification exam.

In order to be accurate, the test must be taken with seriousness and honesty, especially since it will be used to determine the amount of training that is necessary or the extent to which you are ready for the professional qualification exam.

The results will be used for general evaluation only and will not be included in your file. It will be used especially to guide you in preparing for the exam.

Version : 2007-05-23

<u>Directions</u>:

Simply check the **"Yes"** or **"No"** box located to the right of each question.

For example:

	Yes	No
1. Can you diagnose power brake (booster) problems?	✔	

After each module, the system will calculate the number of Yes(s) selected and interpret the results.

The result of each module will be automatically compiled into the Results table at the last page of the self -evaluation test.

MODULE 1 POWER TRAIN

	Yes	No
1. Do you know how to check or adjust the clutch pedal free play?	☐	☐
2. Do you know how to check a clutch for slipping?	☐	☐
3. Can you identify several possible reasons for a slipping clutch?	☐	☐
4. Do you know how to centre the clutch disc properly using the appropriate tools?	☐	☐
5. Can you perform routine inspection and maintenance of a differential (ventilation, oil level, bearings, etc.)?	☐	☐
6. Do you know how to find specifications using a shop manual (ex.: differential oil viscosity)?	☐	☐
7. Can you explain how a differential operates?	☐	☐
8. Do you know how to adjust the preload of a differential pinion equipped with a collapsible bushing?	☐	☐
9. Do you know how to adjust a differential backlash?	☐	☐
10. Do you know how to check and do the maintenance of universal joints (U-joints)?	☐	☐
11. Do you know how to inspect a CV joint when doing a road test?	☐	☐
12. Do you know how to perform the routine inspection and maintenance of an automatic transmission?	☐	☐
13. Do you know how to fill and bleed a power steering system?	☐	☐
14. Do you know how to disarm an air bag system when doing work on a steering column?	☐	☐
15. Do you know how to inspect the different suspension ball joints?	☐	☐

POWER TRAIN (CONT.)

	Yes	No
16. Can you diagnose a power steering system?	☐	☐
17. Do you know how to check and fill up fluid on a manual transmission?	☐	☐
18. Can you identify the internal parts of a manual transmission?	☐	☐
19. Do you know how to inspect the bearings on a disassembled manual transmission?	☐	☐
20. Can you name and differentiate the three drive systems of a vehicle?	☐	☐

Total : 0

MODULE 2 BRAKES

	Yes	No
1. Can you explain the role of brake fluid and its required maintenance?	☐	☐
2. Can you explain the routine maintenance that is done on brake system parts?	☐	☐
3. Do you know how to inspect and test the components of the brake system when you replace the shoes?	☐	☐
4. Do you know how to adjust the parking brake?	☐	☐
5. Can you identify the possible reasons for a brake pedal problem?	☐	☐
6. Do you know how to bleed the master cylinder?	☐	☐
7. Would you be able to disassemble a tandem master cylinder and identify its internal parts?	☐	☐
8. Can you explain the internal operation of a wheel cylinder?	☐	☐
9. Do you know how to disassemble and reassemble a wheel cylinder?	☐	☐
10. Can you identify and explain the operation of the automatic adjustment mechanism of drum brakes?	☐	☐
11. Do you know how to measure the run out on a rotor?	☐	☐
12. Can you identify the part of the brake caliper that allows the piston to return to its position after braking?	☐	☐
13. Do you know how to measure a brake drum and decide if it can be reused according to the specifications?	☐	☐
14. Can you explain the precautions to take when doing maintenance on brakes equipped with an ABS high-pressure system?	☐	☐
15. Do you know how to inspect the wheel speed sensors on a vehicle equipped with ABS brakes?	☐	☐

BRAKES (CONT.)

Total : 0

MODULE 3 INTERNAL COMBUSTION ENGINES

	Yes	No
1. Can you explain the position of the valves and the piston for each of the four engine strokes?	☐	☐
2. Do you know how to adjust the timing of the camshaft and the crankshaft, and how to position the timing belt or chain?	☐	☐
3. Do you know how to adjust the engine valves according to manufacturer specifications?	☐	☐
4. Can you explain in detail how to do a compression check?	☐	☐
5. Can you diagnose the causes of a weak compression?	☐	☐
6. Do you know how to do a leak down test on a cylinder?	☐	☐
7. Can you diagnose a cylinder head gasket before disassembly (internal leak)?	☐	☐
8. Can you disassemble and measure the parts of a gas-powered four-cylinder engine with an overhead cam?	☐	☐
9. Can you explain how to measure a cylinder for out of round?	☐	☐
10. Can you identify the tools that are needed to measure a cylinder for taper?	☐	☐
11. Do you know how to use a micrometer (metric and standard)?	☐	☐
12. Are you familiar with the different parts of the crankshaft?	☐	☐
13. Do you know how to measure the crankshaft end play?	☐	☐
14. Do you know how to measure the crankshaft-to-bearing clearance using a plastic gauge?	☐	☐
15. Do you know how to check the straightness of a cylinder head?	☐	☐

INTERNAL COMBUSTION ENGINES (CONT.)

	Yes	No
16. Do you know how to measure ring end gap?	☐	☐
17. Do you know how to prepare the cylinder walls when installing new piston rings?	☐	☐
18. Do you know how to inspect the PCV (positive crankcase ventilation) valve?	☐	☐
19. Can you list the different components of the cooling system?	☐	☐
20. Do you know how to check a radiator cap?	☐	☐

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MODULE 4 ELECTRICITY AND SUPPLY SYSTEM

	Yes	No
1. Do you know how to use all of the multimeter functions (voltmeter, ammeter, ohmmeter, diode tester)?	☐	☐
2. Do you know how to do a load test on a battery?	☐	☐
3. Do you know how to do a discharge test on a battery on a vehicle?	☐	☐
4. Do you know how to test the charging system of a vehicle using a carbon pile?	☐	☐
5. Do you know how to inspect the internal parts of an alternator (ex.: diode, stator) using a multimeter?	☐	☐
6. Do you know how to do a voltage drop test on a charging circuit?	☐	☐
7. Do you know how to find the voltage required by a starter?	☐	☐
8. Can you identify, between the starter and the solenoid, which of the two parts is defective when replacing the set?	☐	☐
9. Do you know how to inspect the two solenoid windings on a starter using a multimeter?	☐	☐
10. Do you know how to check the voltage drop on the positive side of the starter circuit?	☐	☐
11. Do you know how to check the condition of the relay using a multimeter?	☐	☐
12. Do you know how to measure the primary and secondary resistance of an ignition coil using a multimeter?	☐	☐
13. Do you know how to check the voltage going from the computer to a fuel injection system sensor?	☐	☐
14. Do you know how to inspect an oxygen (O_2) sensor using a multimeter?	☐	☐
15. Do you know how to check the fuel pressure on a vehicle?	☐	☐

ELECTRICITY AND SUPPLY SYSTEM (CONT.)

Total : 0

		I need to refresh my knowledge	
	I am ready for the exam	**Self-training guide**	**Course**
Power Train			
Brakes			
Internal Combustion Engines			
Electricity and Supply System			

If you are ready to take the exam, please complete the application form for the exam.

To purchase a self-study guide, please complete the order form and send it by mail with your paiement.

For training, please contact the Training Department at 514 288-3003.

To ensure rapid processing of your qualification record, you can inform us of your results by telephone at 514 288-3003 or by fax at 514 288-2984.