

Sample Items

Revised September 2008

Postsecondary

Agricultural Mechanics Technology

Test Code: 201

Mississippi Department of Education
Office of Student Assessment



MS-CPAS2 Sample Test Items

The MS-CPAS2 sample test items for the Mississippi Vocational–Technical Curriculum Frameworks are now available to the public.

Sample test items are provided to help familiarize students with the MS-CPAS2. The sample test items in this publication are representative only and should not be interpreted as exact duplicates of the items on the MS-CPAS2. Although the results of the MS-CPAS2 sample test items can be used to determine students' strengths and weaknesses, they should not replace other forms of classroom assessment.

The answer keys are located at the back of each sample item document and can be used to identify the unit/course to which the sample item is aligned as well as the cognitive level (C1 or C2) of each item.

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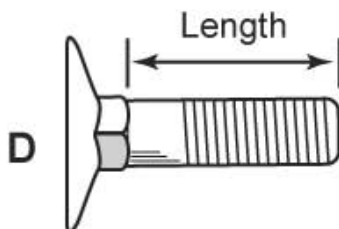
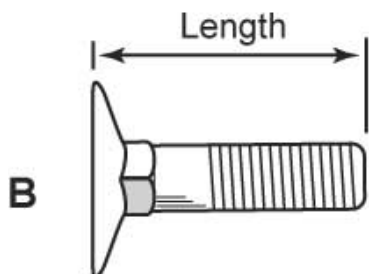
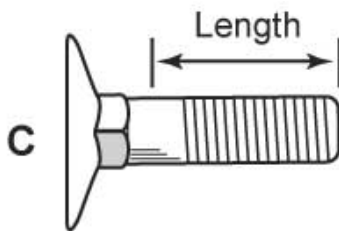
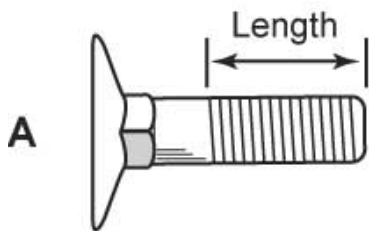
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1

Which illustration below shows the correct way to measure a cap screw?



- A. A
- B. B
- C. C
- D. D

2

Never operate power equipment that is:

- A. ungrounded.
- B. grounded.
- C. clean.
- D. light.

3

The type of micrometer whose measurement is graduated in hundredths of a millimeter is the:

- A. metric measure micrometer.
- B. English measure micrometer.
- C. liter measure micrometer.
- D. air flow micrometer.

4

The first thing that should be done before servicing a piece of power equipment is:

- A. disconnecting the power.
- B. tightening any loose bolts.
- C. cleaning the equipment.
- D. removing any blades or bits.

201 Agricultural Mechanics Technology Sample

5

Which of the following is NOT a safe rule for power tools?

- A. Keep all guards in place.
- B. Remove or fasten any loose clothing.
- C. Wear eye protection.
- D. Make adjustments with the machine plugged in.

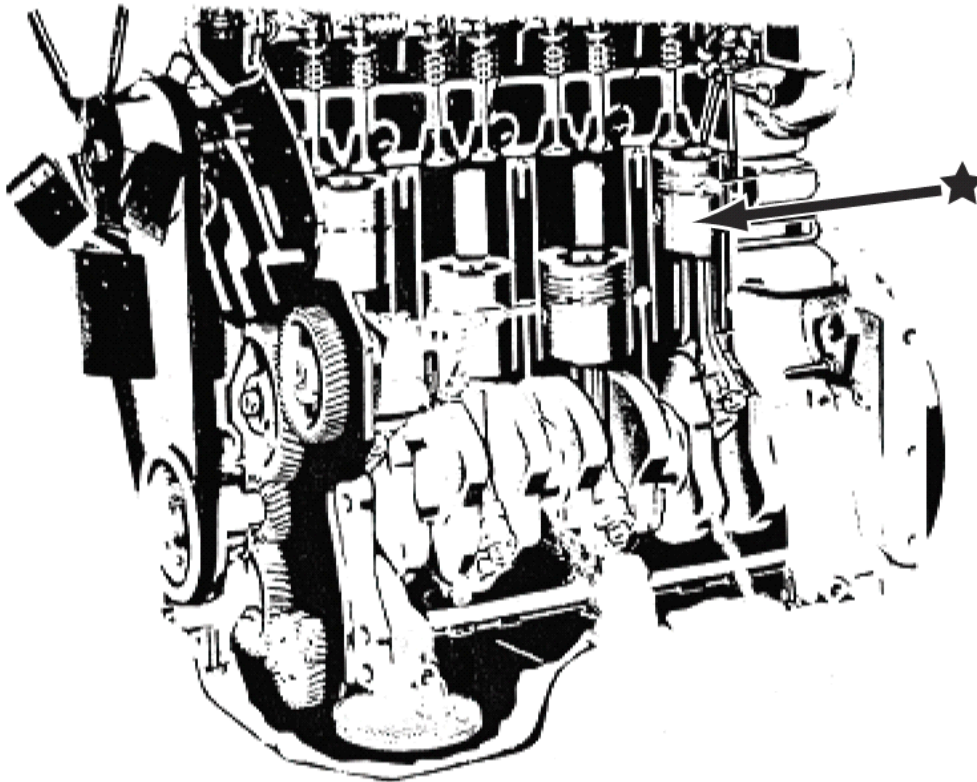
6

In basic math, what is 14 ft 2 1/4 in. converted to a decimal?

- A. 14.25 ft
- B. 14.19 ft
- C. 1,419 in.
- D. 16.25 ft

7

Which part of the diesel engine is marked in the diagram below?



- A. Flywheel
- B. Piston
- C. Crankshaft
- D. Cylinder head

201 Agricultural Mechanics Technology Sample

8

The function of fuel filters in a diesel engine is to:

- A. lubricate engine parts.
- B. cool the engine.
- C. remove foreign materials from fuel.
- D. regulate air flow.

9

Most cylinder blocks on today's agricultural engines are made of:

- A. steel.
- B. aluminum alloy.
- C. cast iron.
- D. fiberglass.

10

What do diesel fuel systems use to remove unwanted particles from the fuel?

- A. A bypass valve
- B. A fuel pump
- C. A fuel filter
- D. A fuel screen

11

A diesel engine that is running, but is not running properly, may have a problem with the:

- A. fuel filter.
- B. hydraulic filter.
- C. differential.
- D. spark plugs.

12

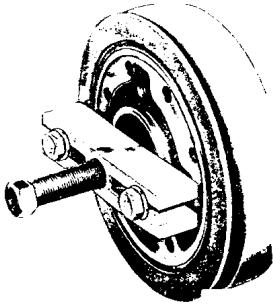
The process that aligns the main bearing holes is called:

- A. boring.
- B. line boring.
- C. main journals.
- D. crankshaft turning.

201 Agricultural Mechanics Technology Sample

13

The illustration below shows a vibration damper being removed. Student A says that this type of puller will NOT damage the damper. Student B says that pulling on the damper rim with a jaw-type puller will damage it.. Who is correct?



- A. Student A
- B. Student B
- C. Both A and B
- D. Neither A nor B

14

If a cylinder has been bored 0.040, you should buy:

- A. .040 undersized pistons.
- B. .040 oversized pistons.
- C. .040 oversized rings.
- D. both B and C.

15

Technician A says that all lifters are mechanical. Technician B says that all lifters are hydraulic. Who is correct?

- A. Technician A
- B. Technician B
- C. Both A and B
- D. Neither A nor B

16

Hydraulic fluid should be changed when it:

- A. is foamy.
- B. is low.
- C. is contaminated.
- D. has a different odor.

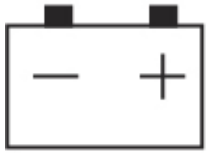
17

Which of the following components of the charging system is used to measure the rate of current flow?

- A. Regulator
- B. Ammeter
- C. Battery
- D. Generator or alternator

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18 Which electrical symbol below represents the heater?



A



B



C



D

- A. A
- B. B
- C. C
- D. D

19 What should be used to test alternator output?

- A. AC probe
- B. Charging system analyzer
- C. Battery charger
- D. Strobe light

20 How is the alternator usually driven?

- A. Electric motor
- B. Belt
- C. Fan
- D. Transmission

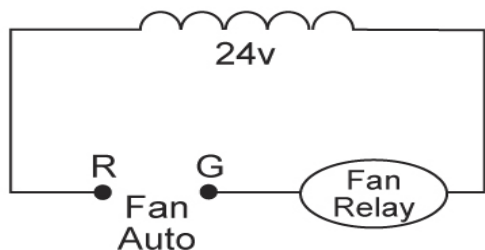
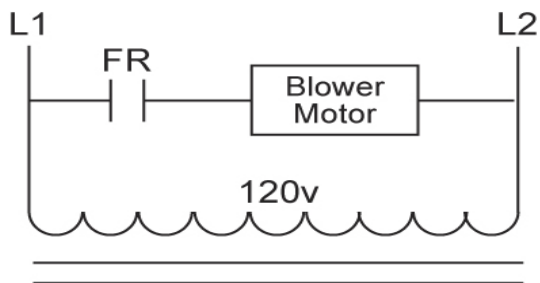
21 The typical parts of an alternator do NOT include:

- A. a rectifier assembly.
- B. a stator winding.
- C. diodes.
- D. a solenoid.

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22

In the circuit below, the switch that provides power directly to the blower motor is the:



- A. fan relay coil.
- B. fan auto switch.
- C. transformer.
- D. fan relay contacts.

23

Hydraulic systems control and transmit energy through:

- A. fluids.
- B. gases.
- C. solids.
- D. hydrometers.

24

Liquids are used in hydraulic brake systems because they:

- A. are not compressible.
- B. are corrosive.
- C. evaporate easily.
- D. are less expensive.

25

In a hydraulic system, when pressure is applied to a confined fluid, it is transmitted:

- A. equally to all surfaces of the container.
- B. only to the movable surfaces of the container.
- C. back to the pump or cylinder that is causing the pressure.
- D. only to the top and bottom of the container.

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26

The type of heat involved in the change of state of a substance is called:

- A. latent.
- B. sensible.
- C. enthalpy.
- D. micron.

27

PSIA stands for:

- A. pounds per square inch area.
- B. pounds per square inch absolute.
- C. pounds per square inch algebra.
- D. pounds per square inch around.

28

The correct procedure for checking the acidity of refrigerant oil is to:

- A. blow a sample of oil out of the system with the gauge and set it into an acid test kit to check acidity.
- B. recover the refrigerant from the system, draw an oil sample, and check acidity.
- C. recycle the refrigerant, draw an oil sample, and check acidity.
- D. draw the oil from the system with the gauge set and take it to a lab for analysis.

29

Which of the following is the correct direction of flow for the refrigerant through the system?

- A. Compressor, evaporator, metering device, drier, condenser
- B. Compressor, metering device, drier, condenser, evaporator
- C. Metering device, evaporator, compressor, condenser, drier
- D. Evaporator, metering device, compressor, drier, condenser

30

The ability to change speeds in a tractor transmission is made possible by:

- A. constant-speed pulleys.
- B. reversible clutches.
- C. V-belts.
- D. sliding gears.

31

A loud clunk can be heard in the differential when the tractor is accelerated and decelerated. This can be caused by:

- A. overtightened bearing straps.
- B. axle shaft end play.
- C. axle gear's backlash.
- D. a loose pinion flange retaining nut.

201 Agricultural Mechanics Technology Sample

32 What type of gear drive produces linear motion?

- A. Planetary gear
- B. Bevel gear
- C. Rack and pinion
- D. Worn gear

33 In all gear drives, what is a prime consideration?

- A. Lubrication
- B. Alignment
- C. Power
- D. Efficiency

34 If a transmission or transaxle grinds when put into gear, what should be checked first?

- A. Synchronizer (unit)
- B. Cluster gear
- C. Clutch freeplay
- D. Axle shaft alignment

35 If a block and tackle has a mechanical advantage of six, how much force is required to lift an object weighing 300 lb?

- A. 25 lb
- B. 50 lb
- C. 100 lb
- D. 1,800 lb

201 Agricultural Mechanics Technology Sample

?	⊙	Answer/ Scale	Objective	?	⊙	Answer/ Scale	Objective
1	1	B	AMT 1123-C1	19	19	B	AMT 1223-C1
2	2	A	AMT 1123-C1	20	20	B	AMT 1223-C1
3	3	A	AMT 1123-C1	21	21	D	AMT 1223-C1
4	4	A	AMT 1123-C1	22	22	D	AMT 1223-C2
5	5	D	AMT 1123-C1	23	23	A	AMT 1613-C1
6	6	B	AMT 1123-C2	24	24	A	AMT 1613-C1
7	7	B	AMT 1423-C1	25	25	A	AMT 1613-C1
8	8	C	AMT 1423-C1	26	26	A	AMT 1511-C1
9	9	C	AMT 1423-C1	27	27	B	AMT 1511-C1
10	10	C	AMT 1423-C1	28	28	B	AMT 1511-C2
11	11	A	AMT 1423-C1	29	29	C	AMT 1511-C2
12	12	B	AMT 1423-C1	30	30	D	AMT 1313-C1
13	13	A	AMT 1423-C2	31	31	C	AMT 1313-C1
14	14	D	AMT 1423-C2	32	32	C	AMT 1313-C1
15	15	D	AMT 1423-C2	33	33	A	AMT 1313-C1
16	16	C	AMT 2813-C1	34	34	C	AMT 1313-C2
17	17	B	AMT 1223-C1	35	35	B	AMT 1313-C2
18	18	C	AMT 1223-C1				