FREE PRACTICE QUESTIONS · 433A

TEN FREE 433A INDUSTRIAL MECHANIC MILLWRIGHT PRACTICE QUESTIONS.

QUESTIONS	COST	LAST CHECKED
10, multiple choice, answers explained	Free. No account, no email	October 2, 2026

Ten 433A Industrial Mechanic Millwright questions in the format of the Red Seal exam: four options, one correct answer, no trick questions. They are free to use, print and share. There is nothing to sign up for on this page.

01 How to use these

The questions come from the TicketPrep 433A bank and are spread across the exam's work activities in the order and roughly the proportion the Red Seal Program publishes for this trade: A (performs common occupational skills), B (performs rigging, hoisting/lifting and moving), C (services mechanical power transmission components and systems), D (services material handling / process systems), E (services fluid power systems), F (performs preventative and predictive maintenance, commissioning and decommissioning). Answer each one before opening the explanation. Every explanation covers all four options, because on the real exam the wrong options are written to be plausible, and knowing *why* they are wrong is most of the skill.

- **Pace.** The exam allows four hours for 135 questions, so about 1 min 47 s per question. Try these at that pace.
- **Print.** The printed version shows the questions and the answer key without the explanations, so it works as a handout.
- **Mark.** The pass mark is 70 percent on every Red Seal trade; seven of ten here is the same bar.

02 The questions

Q1 · RECALL · PERFORMS COMMON OCCUPATIONAL SKILLS

A millwright at a pulp mill must wear a tight-fitting half-mask respirator with organic-vapour cartridges to clean a stock chest with solvent. Which condition means the respirator cannot be relied on, even if the correct cartridges are fitted and in date?

A. The face piece was washed with mild soap and water after the last use.

B. Safety glasses worn over the half-mask.

C. The respirator is a half-mask rather than a full-face piece.

D. Facial hair where the face piece seals against the skin.

Q2 · CRITICAL · PERFORMS COMMON OCCUPATIONAL SKILLS

To identify an unmarked piece of round bar before making a shaft, a millwright touches it to a pedestal grinder. The sparks are long, straight, straw-coloured streams with only a few small forks and bursts near the ends. What is the most likely material?

A. Grey cast iron.

B. Austenitic stainless steel.

C. High-carbon tool steel.

D. Low-carbon (mild) steel.

Q3 · RECALL · PERFORMS RIGGING, HOISTING/LIFTING AND MOVING

A crane lift of a 2 400 kg (5 300 lb) gearbox is being planned at a cement plant. Besides the gearbox itself, what must be included in the total load compared against the hoisting equipment's rated capacity?

A. The slings only, since shackles are rated separately

B. A flat 25 % contingency on the gearbox mass

C. The rigging hardware and any added components

D. The design factor applied to the gearbox mass

Q4 · RECALL · SERVICES MECHANICAL POWER TRANSMISSION COMPONENTS AND SYSTEMS

The nameplate of a four-pole induction motor on a water treatment plant blower reads 1 750 rpm rather than 1 800 rpm. What accounts for the difference?

A. Friction in the motor bearings

B. Slip between the rotor and the rotating field

C. Voltage drop in the supply conductors

D. A supply frequency slightly below 60 Hz

Q5 · RECALL · SERVICES MECHANICAL POWER TRANSMISSION COMPONENTS AND SYSTEMS

A clutch on a sawmill log deck must engage the driven shaft on the operator's command while the motor is already running at full speed under load. Which clutch type can do this?

A. An overrunning clutch

B. A friction clutch

C. A centrifugal clutch

D. A positive-contact jaw clutch

Q6 · PROCEDURAL · SERVICES MATERIAL HANDLING / PROCESS SYSTEMS

A 6-axis welding robot in an auto plant body shop has been set on its grouted base, levelled, anchored and connected to its controller. Before the cell is released to production at full speed, how is the complete range of movement verified?

A. Run the production program at full speed and watch for collisions.

B. Measure the arm's reach with a tape and compare it to the cell drawing.

C. Rely on the manufacturer's factory test certificate for the arm.

D. Jog each axis slowly through its full travel and check for interference.

Q7 · PROCEDURAL · SERVICES MATERIAL HANDLING / PROCESS SYSTEMS

The suction and discharge valve assemblies of a reciprocating compressor have been refurbished. When reinstalling them, which point is critical?

A. Valves swapped between cylinders to even out the wear.

B. Valves bedded in with a film of grease on the seats.

C. Each valve in its own port, in the correct orientation.

D. All valve springs replaced with the stiffest available.

Q8 · PROCEDURAL · SERVICES FLUID POWER SYSTEMS

A sawmill carriage clamp cylinder has a 100 mm (3.94 in) bore. The circuit is set at 10 000 kPa (1 450 psi). Using force = pressure × area and area = π × radius², what force does the cap end develop on extension?

A. 19.6 kN (4 410 lb)

B. 25.0 kN (5 620 lb)

C. 78.5 kN (17 650 lb)

D. 314.2 kN (70 630 lb)

Q9 · PROCEDURAL · SERVICES FLUID POWER SYSTEMS

After replacing a relief valve cartridge on a food-line press, the millwright must set it to the drawing value of 13 800 kPa (2 000 psi). What is the correct method?

A. Set it to 13 800 kPa with the cylinder moving mid-stroke.

B. Back it off, stall the actuator, turn in to 13 800 kPa, lock it.

C. Back it off, stall the actuator, set 13 800 kPa on the tank-line gauge.

D. Turn it fully in, stall the actuator, then back off to 13 800 kPa.

Q10 · RECALL · PERFORMS PREVENTATIVE AND PREDICTIVE MAINTENANCE, COMMISSIONING AND DECOMMISSIONING

A pulp mill is reviewing its maintenance program using reliability-centred maintenance (RCM). What is the central question RCM asks about each piece of equipment?

A. How to move all maintenance to condition monitoring

B. Which machines are the oldest and should be replaced first

C. How each function can fail and what the consequence would be

D. How to shorten every PM interval until failures stop

03 Answer key

QUESTION	ANSWER	WORK ACTIVITY
Q1	D	Performs common occupational skills
Q2	D	Performs common occupational skills
Q3	C	Performs rigging, hoisting/lifting and moving
Q4	B	Services mechanical power transmission components and systems

QUESTION	ANSWER	WORK ACTIVITY
Q5	B	Services mechanical power transmission components and systems
Q6	D	Services material handling / process systems
Q7	C	Services material handling / process systems
Q8	C	Services fluid power systems
Q9	B	Services fluid power systems
Q10	C	Performs preventative and predictive maintenance, commissioning and decommissioning

04 More free questions

For the 433A exam itself, the 433A exam guide covers the work activities, their weights and how the exam is scored, and the 433A Industrial Mechanic Millwright practice exam page describes the full TicketPrep 433A question bank. The same free format is available for the other 11 trades, plus the free guides on the pass mark, question counts, exam day and how to study.

310S
Automotive Service Technician questions

310T
Truck and Coach Technician questions

309A
Electrician questions

403A
Carpenter questions

421A
Heavy Duty Equipment Technician questions

332A
Hairstylist questions

313A
Refrigeration & AC Systems Mechanic questions

415A
Cook questions

307A
Steamfitter/Pipefitter questions

456A
Welder questions

306A
Plumber questions

HUB
All free practice questions

GUIDES
The Red Seal exam, explained

How these questions are written and checked: how our questions are made. Found a mistake? Tell us and we will fix it.

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05 Questions by exam block

Working on one part of the 433A exam? Each block has its own page with five more free questions, the tasks the block covers and their weights.

BLOCK A · 18.5% OF THE EXAM
Safety, Tools & Measuring

BLOCK B · 12.6% OF THE EXAM
Rigging & Hoisting

BLOCK C · 23.7% OF THE EXAM
Bearings, Drives & Alignment

BLOCK D · 17.8% OF THE EXAM
Pumps, Compressors & Conveyors

BLOCK E · 15.6% OF THE EXAM
Hydraulics & Pneumatics

BLOCK F · 11.9% OF THE EXAM
Vibration, PM & Commissioning