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FANUC Certified Robot Operator with ROBOGUIDE

General Assessment Information

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General Assessment Information
Written Assessment Information

Specific Competencies Covered in the Test
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Test Type: The FANUC Certified Robot Operator with ROBOGUIDE national assessment is based on FANUC's industry recognized CERT Program, inclusive of FANUC's Robot Operations, HandlingPRO, HandlingTool Operations and Programming curriculums, Roboguide Simulation Software, and hands-on FANUC robot labs, provided by a FANUC certified academic instructor. Eligible participants can earn certification and an accompanying digital badge.



48.0501 - Machine Tool
Technology/Machinist



Science, Technology,
Engineering, and Mathematics



51-4011.00 Computer-Controlled Machine
Tool Operators, Metal and Plastic

Written Assessment

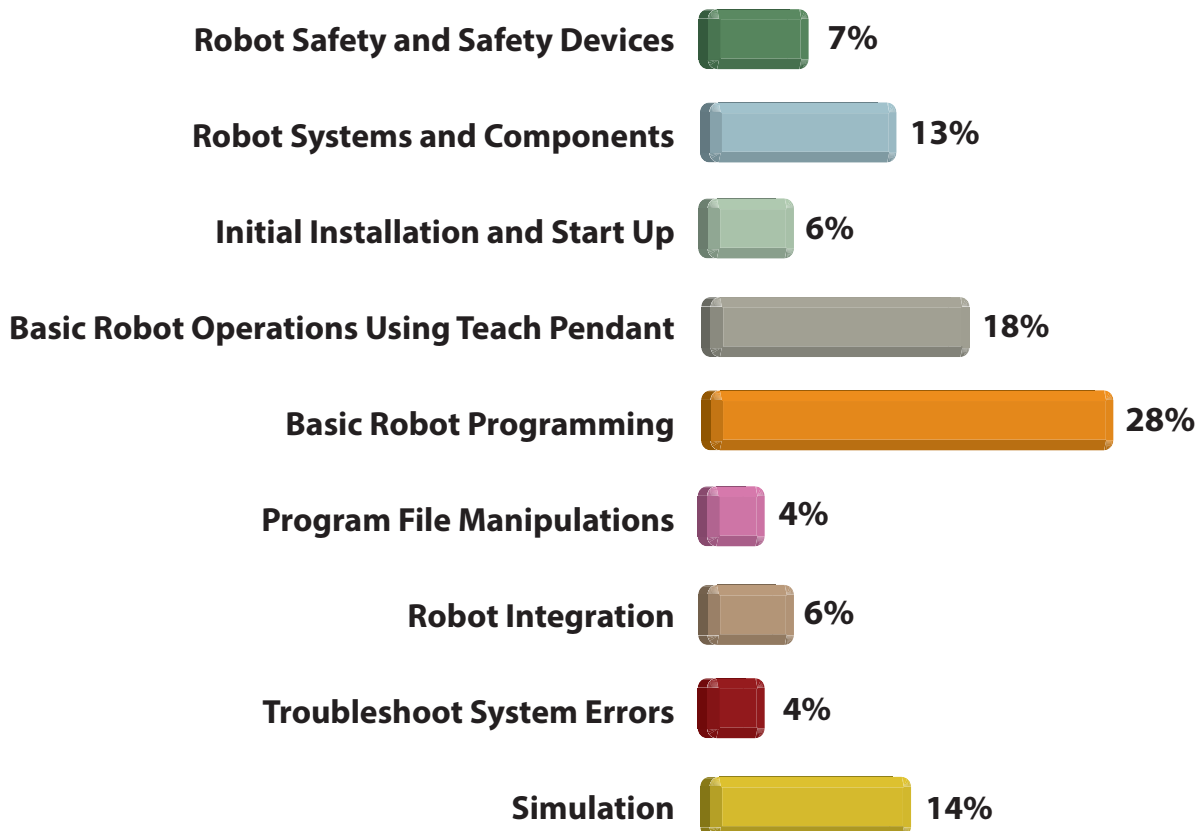
Written assessments consist of questions to measure an individual's factual theoretical knowledge.

Administration Time: 3 hours

Number of Questions: 153

Number of Sessions: This assessment may be administered in one, two, or three sessions.

Areas Covered



Specific Standards and Competencies Included in this Assessment

Robot Safety and Safety Devices

- Demonstrate knowledge of internal robot safety devices and functions
- Demonstrate knowledge of external safety devices

Robot Systems and Components

- Identify teach pendant features and functions
- Demonstrate knowledge of function of robot controller
- Demonstrate knowledge of function of end-of-arm tool (EOAT)
- Demonstrate knowledge of axis configuration and functions

Initial Installation and Start Up

- Prepare robot for installation and start up
- Determine and perform various start up methods
- Perform software setup

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Specific Standards and Competencies (continued)

Basic Robot Operations Using Teach Pendant

- Jog the robot using teach pendant
- Master and re-master robot
- Identify common keys in teach pendant
- Set up robot coordinate frames
- Identify basic error and fault recovery

Basic Robot Programming

- Create various robot programs
- Identify variables to include in motion program
- Plan a motion path
- Program inputs/outputs
- Program non-motion logic structures
- Program macros

Program File Manipulations

- Backup individual and system files
- Restore individual and system files
- Perform image backup and restore

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Specific Standards and Competencies (continued)

Robot Integration

- Establish communication to peripheral devices
- Configure input/output
- Set end-of-arm tool parameters

Troubleshoot System Errors

- Troubleshoot configuration errors
- Troubleshoot Dual Check Safety (DCS) errors

Simulation

- Determine the function and use of simulations
- Demonstrate knowledge of simulation screen layout
- Prepare simulation model robot
- Jog the robot
- Define parts and fixtures in simulation
- Create robot TP program for simulation
- Create a simulation
- Execute simulation program
- Match real cell to Roboguide
- Transfer to and from robot

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Sample Questions

What hardwired safety signal allows the operator to enter the workcell while in teach mode and allow motion to the robot?

- A. emergency stop
- B. safety fence circuit
- C. HOLD
- D. PAUSE

Singularity error can be corrected by moving

- A. Joint 1 (+/-) 10 degrees
- B. Joint 2 (+/-) 10 degrees
- C. Joint 3 (+/-) 15 degrees
- D. Joint 5 (+/-) 10 degrees

Which of the following media is used to load software?

- A. USB device
- B. RAM
- C. WIFI
- D. Bluetooth

If the robot arm loses position when power is off, once you power up the robot, you are likely to receive

- A. A PULSE mismatch alarm
- B. a HOLD alarm that stays on
- C. TP on in auto alarm
- D. robot not at zero alarm

Which is the correct path to follow in order to assign a Macro?

- A. Menu - Setup - Type - Macro
- B. Menu - Setup - Type - Frames
- C. Menu - File - Type - Macro
- D. Menu - Data - Type - Macro

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Sample Questions (continued)

After performing a restore of an image, which error will likely occur?

- A. PULSE mismatch
- B. BZAL alarm
- C. BLAL alarm
- D. already locked by another task

These are electrical signals that enable the controller to communicate with the robot, end-of-arm, and other external devices such as PLC.

- A. Groups
- B. Deadman Switch
- C. Inputs and Outputs I/O
- D. Teach Pendant

When a DCS error occurs, what two keys do you press to clear the fault?

- A. SHIFT & RESET
- B. RESET & ENTER
- C. F1 & F5 keys
- D. PEF & NEXT keys

To transfer files from the "real" robot to the ROBOGUIDE workcell, use the following EXCEPT?

- A. Ethernet cable
- B. USB
- C. Compact flash
- D. Bluetooth

Simulations are used for all of the following EXCEPT

- A. to analyze motion profile
- B. to perform REACH and RANGE study
- C. to develop applications program
- D. to generate bill material