CERTNEXUS ITP-110

CertNexus CIoTP Certification Questions & Answers

Exam Summary – Syllabus –Questions

ITP-110
CertNexus Certified Internet of Things Practitioner (CIoTP)
100 Questions Exam – 60% Cut Score – Duration of 120 minutes

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Know Your ITP-110 Certification Well:

The ITP-110 is best suitable for candidates who want to gain knowledge in the CertNexus Internet of Things. Before you start your ITP-110 preparation you may struggle to get all the crucial CIoTP materials like ITP-110 syllabus, sample questions, study guide.

But don't worry the ITP-110 PDF is here to help you prepare in a stress free manner.
The PDF is a combination of all your queries like-

- What is in the ITP-110 syllabus?
- How many questions are there in the ITP-110 exam?
- Which Practice test would help me to pass the ITP-110 exam at the first attempt?

Passing the ITP-110 exam makes you CertNexus Certified Internet of Things Practitioner (CIoTP). Having the CIoTP certification opens multiple opportunities for you. You can grab a new job, get a higher salary or simply get recognition within your current organization.

CertNexus ITP-110 CIoTP Certification Details:

Exam Name	CertNexus Certified Internet of Things Practitioner (CIoTP)
Exam Code	ITP-110
Exam Price	$529.20 (USD)
Duration	120 mins
Number of Questions	100
Passing Score	60%
Books / Training	**ITP training**
Schedule Exam	**Pearson VUE**
Sample Questions	**CertNexus CIoTP Sample Questions**
Practice Exam	**CertNexus ITP-110 Certification Practice Exam**

ITP-110 Syllabus:

Topic	Details
The Impact of IoT - 18%	
Identify and describe the possible benefits that IoT provides to a business or organization.	- Increase business intelligence - Enhance existing revenue streams - Create new revenue streams - Enter and create new markets - Reduce costs - Increase productivity and agility - Increase operational efficiency - Decrease time to market - Reduce natural resources usage - Increase opportunities for innovation - Improve customer experience - Increase safety - Improve competitive position
Identify and describe the possible challenges that IoT presents to a business or organization.	- Applicability of automation throughout the organization - Scalability of legacy solutions to modern solutions - Connectivity and coverage concerns - Transformation from a product-oriented business to an everything-as-a-service business - Cultural transformation and adoption both in business and technology • Innovation • HR practices and processes (hiring, training, advancement)

Topic	Details
	• Skill adjacencies • Management commitment - Security, privacy, and safety concerns - Cost of transition - Digital disruption - Immaturity of standards, regulations, and oversight - Retrofitting modern design into an existing infrastructure
IoT Ecosystems - 46%	
Identify common IoT terminology.	- Things - Edge/Fog computing - Cloud - Data analytics - AI - ML - IIoT - M2M - IoT gateway
Understand the functionality of the typical physical and edge/fog computing elements.	- Sensors • Position • Proximity • Sound • Temperature

Topic	Details
	• Humidity • Accelerometer • Gyro • Magnetometer • Infrared • Camera • Voltage • Current • Pressure • Ambient light • Radiation • Chemical • Motion - Actuators • Solenoid • Motor • Servo • Relay • Switch • Stepper motor

Topic	Details
	- Power sources • Backup generators (fixed applications) • Generators/alternators (mobile applications) • Battery • Solar • Wind • Water • Power grid - Input/output • ADC • DAC • I/O modules - Edge and fog computing • Edge/fog computing capabilities 1. Application processing 2. Real-time processing 3. HMI 4. Monitoring 5. Storage 6. Device management 7. Safety and security 8. Analytics/AI • Computing elements 1. Things/end-point devices

Topic	Details
	- Connect to sensors and actuators directly to collect data - Optionally connect to and send data to the cloud or an IoT gateway - Receive and act upon device commands from the cloud or the IoT gateway 2. IoT gateway - Implementations (vary by industry) * Dedicated hardware device * Software function • Hardware platforms 1. Maker/proof of concept platforms - Arduino - Raspberry Pi - BeagleBone 2. Commercial MCUs and application processors - ARM - x86 • Programming languages 1. Java 2. Python 3. C/C++ 4. Swift 5. Rust 6. Go 7. Assembly language 8. Java Script 9. C# • Frameworks 1. Node

Topic	Details
	2. .NET 3. Angular • Operating systems 1. Linux 2. FreeRTOS 3. Contiki 4. Wind River VxWorks 5. Android Things 6. ARM Mbed OS 7. Apple iOS - Location awareness • GPS • Galileo • GLONASS • BeiDou
Understand the functionality of the typical elements of IoT networks and connectivity.	- Wired protocols/technologies • Industrial Ethernet standards 1. PROFINET 2. EIP 3. EtherCAT 4. IEEE 1588 v2 5. TSN • Legacy field buses 1. PROFIBUS 2. Modbus 3. HART

Topic	Details
	- Wireless protocols/technologies • Near range 1. NFC 2. Passive RFID 3. Active RFID • Medium range 1. 802.15.4 - Zigbee - Thread 2. Z-Wave 3. Bluetooth/BLE 4. 802.11 (Wi-Fi) • Long range 1. Cellular 2. Satellite 3. Sigfox 4. LoRa/LoRaWAN 5. RPMA - Applications/messaging protocols • MQTT • AMQP • HTTP/HTTPS • CoAP - IoT networking • IP addressing 1. IPv4 2. IPv6

Topic	Details
	• Routing and QoS • Encryption • SDN/NFV • Encapsulation and bridging
Understand the functionality of the typical elements of the cloud and cloud platforms.	- Deployment models • On premise • Cloud 1. Public cloud 2. Private cloud • Hybrid - Cloud service models • SaaS • PaaS • IaaS - Cloud platforms • Microsoft Azure • Amazon Web Services • Google Cloud Platform • IBM Cloud • Oracle Cloud

Topic	Details
	• SAP Cloud Platform • Huawei FusionSphere - Common functions of IoT platforms • Device management • Security management • Data management - Virtualization technologies • Hypervisors • Containers - IoT data analytics • Techniques 1. Streaming analytics 2. Predictive analytics 3. Prescriptive analytics • Tools 1. Spark 2. Hadoop 3. Cassandra - AI • Techniques 1. Machine learning/cognitive computing 2. Computer vision 3. Natural language processing

Topic	Details
	• Tools 1. TensorFlow 2. Caffe 3. Theano 4. Torch
Identify the various IoT market sectors and describe the applications and things common to that sector.	- Agriculture • Applications 1. Fuel management 2. Fleet management 3. Crop management 4. Livestock management 5. Weather forecasting 6. Soil optimization 7. Water management • Examples of things 1. Harvester 2. Planter 3. Sprayer 4. Drones 5. Irrigation systems 6. Livestock monitor - Security/public safety • Applications 1. Traffic management/control 2. Public safety monitoring/control 3. Environmental monitoring 4. Emergency services (police/fire/EMS/HAZMAT)

Topic	Details
	• Examples of things 1. Cameras 2. Traffic sensors 3. Drones 4. Detectors (smoke/carbon monoxide/radon) 5. Radio/communication systems 6. Body cameras 7. Vehicles - Retail • Applications 1. Access control 2. Security 3. Inventory management 4. Vending and payment 5. Proximity-based/location-based monitoring - Advertising - Directions - Crowd control 6. Distribution systems - Warehouse - Transportation - Logistics - Customer analytics - Real-time pricing - Energy management • Examples of things 1. Card readers 2. POS - Cash register - Mobile payment capture

Topic	Details
	3. Self-serve kiosks 4. BLE/NFC beacons 5. Mobile devices - Smartphones - Tablets 6. Digital signage - Transportation and logistics • Applications 1. Fleet management 2. Fuel and engine management 3. Operations and maintenance - Diagnostics - Predictive maintenance - Regulatory compliance 4. Telematics • Examples of things 1. Aircraft 2. Vehicles 3. Locomotives 4. Ships 5. Radar systems 6. GPS 7. Engines - Manufacturing • Applications 1. Factory/process/machine automation 2. Robotics 3. Asset and inventory management 4. Supply chain management

Topic	Details
	5. Predictive maintenance 6. AR • Examples of things 1. PLC/PAC/CNC 2. Robots/cobots 3. Motor drives 4. Machine vision cameras - Healthcare, medical, and life science • Applications 1. Telemedicine/remote care/remote monitoring 2. Connected hospital 3. Robotic surgery 4. Patient monitoring 5. Drug supply chain monitoring 6. Tracking laboratory samples 7. Cold chain monitoring • Examples of things 1. Surgical robots 2. Sleep monitors 3. Pacemakers 4. Insulin pumps 5. Glucose monitor 6. CPAP machines 7. Lab equipment - Consumer and home • Applications 1. Home automation 2. Home security

Topic	Details
	3. Water/gas/electric management 4. Connected appliances • Examples of things 1. Thermostat 2. Smart hub 3. Surveillance cameras 4. Garage door opener 5. Refrigerator 6. Wearables - Energy and utilities • Applications 1. Smart grid 2. Energy management 3. SCADA 4. Automatic meter reading 5. Power distribution automation 6. Inspection and preventive maintenance 7. Flow control 8. Energy trading • Examples of things 1. Protection relays 2. Connected meters 3. Solar panels 4. Wind turbines 5. Water/oil/gas pipelines - Buildings • Applications 1. Automated lighting 2. Waste management 3. Building management systems

Topic	Details
	4. Surveillance and security 5. Occupancy management 6. Self-aware buildings 7. Air quality management • Examples of things 1. Card readers 2. Cameras 3. Toll gates 4. HVAC systems 5. Power distribution systems 6. Monitoring devices (environment, presence, etc.) 7. Elevators/escalators - Defense • Applications 1. Cost efficiency 2. Warfighter effectiveness 3. C2 4. ISR 5. Intracommunications 6. Unmanned systems 7. Human performance 8. Logistics tracking 9. Medical tracking • Examples of things 1. Tanks 2. Aircraft 3. Drones 4. Ships 5. Submarines

Topic	Details
	6. Connected warfighter 7. Satellites - Smart city • Applications 1. Route optimization 2. Smart parking 3. Smart lighting 4. Traffic management 5. Security and threat detection 6. Noise management 7. Air quality control 8. Waste management 9. Structural integrity monitoring 10. Public transportation • Examples of things 1. Connected garbage receptacle 2. Street lights 3. Traffic lights 4. Connected vehicles 5. Connected manhole 6. Cameras 7. Light rail/subway systems
Security, Privacy, and Safety - 28%	
Understand common IoT security and privacy threats.	- Malware • Trojan horse • Backdoor

Topic	Details
	• Keylogger • Ransomware • Spyware • Worms • Viruses - Network attacks • DoS/DDoS 1. Botnets • MITM • Wireless attacks • Spoofing • Pharming - Password attacks • Password cracking • Password sniffing - Social engineering • Phishing • Spearphishing • Shoulder surfing/dumpster diving • Impersonation

Topic	Details
	- Elevation of privilege - Fuzzing - Cross-site scripting - Code injection - Buffer overflow • SQL injection
Understand common IoT security and privacy countermeasures.	- CIA triad • Confidentiality 1. Data encryption • Integrity 1. Blockchain 2. Nonrepudiation • Availability 1. DoS/DDoS defense 2. High availability - AAA - Firmware/software • Secure firmware updates • OS hardening • Secure coding • Code review/scanning • Application security - Physical security - Vulnerability assessment

Topic	Details
	• Penetration testing - Data anonymization
Identify and describe common IoT safety concerns.	- Physical/loss of life accidents • Autonomous vehicle accidents • Aircraft accidents • Transportation accidents • Workplace accidents • Industrial disasters - Infrastructure outages • Mass power outages • Mass Internet outages - Biological/medical • Water supply contamination • Failure/hacking of diagnostic/treatment devices - Supply chain disruption • Contamination of the food supply • Slipping in counterfeit or substandard parts into the supply chain • Interruption of logistics

Topic	Details
Explain common safety risk management approaches.	- Hazard classification and analysis - Root cause analysis - Quality management systems - CAPA - Safety certification
The IoT System Development Life Cycle - 8%	
Identify and describe the phases of the IoT SDLC.	- Initiation - System concept development - Planning - Requirements analysis - Design - Development - Integration and testing - Implementation - Operations and maintenance - Disposition

CertNexus ITP-110 Sample Questions:

Question: 1

Which deliverable is associated with the Design phase of an IoT project?

a) Project charter
b) Architecture blueprints and interface specifications
c) Test execution logs
d) User training plan

Answer: b

Question: 2

What are two benefits of cloud integration in IoT architecture? (Select Two)

a) Scalability
b) Local-only data buffering
c) Global data access
d) Real-time analog control

Answer: a, d

Question: 3

Why might developers choose Raspberry Pi or Arduino for IoT prototypes?

a) They include built-in cloud platforms
b) They are inexpensive, open-source, and developer-friendly for prototyping
c) They offer closed-system environments
d) They use advanced GPU processing

Answer: b

Question: 4

Why is phishing considered a high-risk social engineering tactic in IoT environments?

a) It encrypts network traffic
b) It affects only physical systems
c) It tricks users into revealing credentials or installing malware
d) It automates firmware upgrades

Answer: c

Question: 5

Why are DDoS attacks a critical concern in IoT networks?

a) They enhance sensor accuracy
b) They ensure network uptime
c) They can cripple entire IoT infrastructures using botnets
d) They reduce energy usage

Answer: c

Question: 6

Which characteristics describe Fog/Edge computing? (Select Two)

a) High latency
b) Distributed processing
c) Reduced cloud dependency
d) Always centralized

Answer: b, c

Question: 7

What form of attack involves an intruder gaining higher-level permissions than allowed?

a) Elevation of privilege
b) CoAP tunneling
c) Buffer overflow
d) Packet sniffing

Answer: a

Question: 8

How does IoT improve competitive position in manufacturing? (Select Two)

e) By increasing human intervention
f) Through faster prototyping and adaptation
g) Through real-time quality monitoring
h) By reducing data visibility

Answer: b, c

Question: 9

Which actions are performed during the Disposition phase of IoT SDLC? (Select Two)

a) Secure removal of IoT hardware
b) Archive or destroy collected data
c) Initiate product marketing
d) Add new system modules

Answer: a, b

Question: 10

Why are IoT devices often more vulnerable to attacks than traditional IT systems?

a) They often lack robust security controls due to limited resources
b) They are always air-gapped from the internet
c) They are managed by highly skilled users
d) They use quantum encryption by default

Answer: a

Study Guide to Crack CertNexus CIoTP ITP-110 Exam:

- Getting details of the ITP-110 syllabus, is the first step of a study plan. This pdf is going to be of ultimate help. Completion of the syllabus is must to pass the ITP-110 exam.
- Making a schedule is vital. A structured method of preparation leads to success. A candidate must plan his schedule and follow it rigorously to attain success.
- Joining the CertNexus provided training for ITP-110 exam could be of much help. If there is specific training for the exam, you can discover it from the link above.
- Read from the ITP-110 sample questions to gain your idea about the actual exam questions. In this PDF useful sample questions are provided to make your exam preparation easy.
- Practicing on ITP-110 practice tests is must. Continuous practice will make you an expert in all syllabus areas.

Reliable Online Practice Test for ITP-110 Certification

Make EduSum.com your best friend during your CertNexus Internet of Things Practitioner exam preparation. We provide authentic practice tests for the ITP-110 exam. Experts design these online practice tests, so we can offer you an exclusive experience of taking the actual ITP-110 exam. We guarantee you 100% success in your first exam attempt if you continue practicing regularly. Don't bother if you don't get 100% marks in initial practice exam attempts. Just utilize the result section to know your strengths and weaknesses and prepare according to that until you get 100% with our practice tests. Our evaluation makes you confident, and you can score high in the ITP-110 exam.

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