7.8.2 Module 7: Introduction to Automating, Developing, and Deploying Applications with Cisco Quiz (Answers)

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DevNet Associate 7.8.2 Module 7: Introduction to Automating, Developing, and Deploying Applications with Cisco Quiz (Answers)

1. What is the average cost per hour of an enterprise outage for the largest enterprises?

- $700,000.00 per hour
- $500,000.00 per hour
- **$300,000.00 per hour**
- $100,000.00 per hour

Explanation: According to the Gartner report on 2014, if a system outage occurs, the average cost per hour for a large enterprise outage is $300,000.00 per hour. Much of the outage time will include manual configuration tasks that can take an extensive amount of time and may incur an increased risk of misconfiguration.

2. What is idempotency in IT automation?

- **the quality of software**
- the reusing of shell commands
- the security level of software
- the scripting of shell commands

Explanation: Idempotency is a recurring theme in automation and it refers to the quality of software.

3. A student is creating an Ansible playbook to practice management automation of a Cisco router. Which command should the student add to the playbook to find the interface names, assigned IP addresses, and status of interfaces on the router?

- show running-config
- **show ip interface brief**
- show ip route
- ip address

Explanation: The **show ip interface brief** command can be used to verify the IP address configured on the router. The **show running-config** command can be used to see how IP addresses are assigned to the interfaces; however, if an interface obtains the IP address from the DHCP server, the running configuration will not show the actual IP address assigned. The **ip address** command is used in a Linux host to display information about network interfaces.

4. When following the best practices and core principles of DevOps, how is failure considered?

- **Failure is normal.**
- Failure is simply "repair work".
- Failure should only occur in Ops.
- Failure should not influence software design methodology.

Explanation: One of the many core principles and best practices of DevOps/SRE is that failure is normal. There is an assumption that failures will occur and that these occurrences will influence software design methodology.

5. What is a canary deployment?

- **the switchover of selected users to a new release deployment**
- a production test using a chaos tool to inject random failures with a limited blast-radius
- a server-by-server switchover to a new release deployment
- the use of two identical servers with load balancers to redirect traffic for an entire server as needed

Explanation: A canary deployment occurs when a project is deployed to a small fraction of users in order to reduce risk and improve the quality of feedback.

6. What are two challenges of cloud computing technologies? (Choose two.)

- utilizing generic host environments
- **maintaining access control**
- maintaining configurational consistency of platforms
- **managing costs**
- requesting additional resources

Explanation: The challenges when using cloud technologies include the following:

- Cloud permissions can be challenging to manage and controlling permissions and access is critical.
- Private and public cloud frameworks can cause confusion due to varying UIs, APIs, and quirks.

- The consumption of cloud resources can be hard to track and unexpected costs may occur and be difficult to calculate.

7. Which technology can run on bare metal or on large virtual machines to simulate Cisco networks and utilities?

- Git
- **VIRL**
- Puppet
- Ansible

Explanation: Cisco VIRL is an ideal tool for learning and simulating networks and it can run on bare metal or on large virtual machines on several hypervisor platforms.

8. An analyst is using Ansible to perform remote management tasks on network devices. Which file type is in the Ansible file structure that describes the devices under management?

- role folders and files
- variable file
- **inventory file**
- playbook file

Explanation: Ansible uses an inventory file, also called hosts file, that contains device information used by Ansible playbooks.

9. What is an error budget in the DevOps/SRE culture?

- It is the planned percentage of a monetary contract that is given back to a customer when an SLO is not met.
- It is a best-practice metric for availability, equivalent to only six minutes of unplanned offline time per year.
- It is an internal-only metric for calculating the actual availability of a service.
- **It is a method for measuring allowable errors as a gate on release speed.**

Explanation: Error budgets define the number of allowable errors per unit time and are also used as a gate on release speed.

10. Which programming language is used by Chef to execute the recipes?

- Bash
- Python
- **Ruby**
- Javascript

Explanation: Within a repo, code is organized in "cookbook" folders, comprising "recipes" (actual linear configuration code, written in the extended Ruby syntax of Chef).

11. A developer issues a Linux command python3 -m venv devenv. What is the developer trying to achieve?

- to install the devnet tool sets in the Python 3 virtual environment named venv
- to activate the Python 3 virtual environment named devenv
- to enter the Python 3 virtual environment named venv using the devnet tool sets
- **to create a Python 3 virtual environment named devenv**

Explanation: The syntax for creating a Python 3 virtual environment in a Linux system is **python3 -m venv** *virtual_environment*, where **venv** is the Python 3 module to create a virtual environment and **-m** is the switch to tell Python 3 the venv module is to be used.