

**Q1) A team is currently working on a repository in Azure Repos for managing all of the source code. There are a high number of feature requests that are making it difficult to follow the history of the changes to the master branch. You need to enforce a strategy that would:**

- Allow consolidation of all commit histories
- Merge the changes into a single commit

**You decide to implement a git fetch request.**

**Would this fulfill the requirement?**

- ☐ Correct
- ☒ Incorrect

**Explanation:-**The git fetch request is used to download objects from another repository

**Q2)**

**Your company has a project in Azure DevOps for a new web application.**

**You need to ensure that when code is checked in, a build runs automatically.**

**Solution: From the Continuous deployment trigger settings of the release pipeline, you enable the Pull request trigger setting.**

**Does this meet the goal?**

- ☐ Correct
- ☒ Incorrect

**Explanation:-**In Visual Designer you enable continuous integration (CI) by:

1. Select the Triggers tab.
2. Enable Continuous integration.

**Q3)**

**Your company has a project in Azure DevOps for a new web application.**

**You need to ensure that when code is checked in, a build runs automatically.**

**Solution: From the Pre-deployment conditions settings of the release pipeline, you select After stage.**

**Does this meet the goal?**

- ☐ Correct
- ☒ Incorrect

**Explanation:-**Instead, In Visual Designer you enable continuous integration (CI) by:

1. Select the Triggers tab.
2. Enable Continuous integration.

**Q4)**

**Your company has a project in Azure DevOps for a new web application.**

**You need to ensure that when code is checked in, a build runs automatically.**

**Solution: From the Pre-deployment conditions settings of the release pipeline, you select Batch changes while a build is in progress.**

**Does this meet the goal?**

- ☐ Correct
- ☒ Incorrect

**Explanation:-**Instead, In Visual Designer you enable continuous integration (CI) by:

1. Select the Triggers tab.
2. Enable Continuous integration.

**Q5)**

**Your company has a project in Azure DevOps for a new web application.**

**You need to ensure that when code is checked in, a build runs automatically.**

**Solution: From the Triggers tab of the build pipeline, you select Enable continuous integration.**

**Does this meet the goal?**

- ☒ Correct

**Explanation:-**

Correct because from Triggers tab --> you select Continuous Integration. This will meet the goal

In Visual Designer you enable continuous integration (CI) by:

1. Select the Triggers tab.
2. Enable Continuous integration.

A continuous integration trigger on a build pipeline indicates that the system should automatically queue a new build whenever a code change is committed.

- ☐ Incorrect

Q6)

**You have a project in Azure DevOps. You have an Azure Resource Group deployment project in Microsoft Visual Studio that is checked in to the Azure DevOps project.**

**You need to create a release pipeline that will deploy resources by using Azure Resource Manager templates. The solution must minimize administrative effort.**

**Which task type should you include in the solution?**

- ☐ Azure RM Web App Deployment
- ☒ Azure PowerShell

**Explanation:-**There are two different ways to deploy templates to Azure DevOps Services. Both methods provide the same results, so choose the one that best fits your workflow.

1. Add a single step to your build pipeline that runs the PowerShell script that's included in the Azure Resource Group deployment project (DeployAzureResourceGroup.ps1). The script copies artifacts and then deploys the template.
2. Add multiple Azure DevOps Services build steps, each one performing a stage task.

The first option has the advantage of using the same script used by developers in Visual Studio and providing consistency throughout the lifecycle.

- ☐ Azure Cloud Service Deployment
- ☐ Azure App Service Manage

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Q7)

**You have an Azure DevOps organization named Contoso and an Azure DevOps project named Project1.**

**You plan to use Microsoft-hosted agents to build container images that will host full Microsoft .NET Framework apps in a YAML pipeline in Project1.**

**What are two possible virtual machine images that you can use for the Microsoft-hosted agent pool?**

- ☐ vs.2015-win2012r2
- ☐ macOS-10.13
- ☒ win1803

**Explanation:-**The Microsoft-hosted agent pool provides 7 virtual machine images to choose from: Ubuntu 16.04 (ubuntu-16.04) Windows Server 1803 (win1803) - for running Windows containers Visual Studio 2019 Preview on Windows Server 2019 (windows-2019) Visual Studio 2017 on Windows Server 2016 (vs2017-win2016) Visual Studio 2015 on Windows Server 2012R2 (vs2015-win2012r2) macOS X Mojave 10.14 (macOS-10.14) macOS X High Sierra 10.13 (macOS-10.13)

- ☒ ubuntu-16.04

**Explanation:-**The Microsoft-hosted agent pool provides 7 virtual machine images to choose from: Ubuntu 16.04 (ubuntu-16.04) Windows Server 1803 (win1803) - for running Windows containers Visual Studio 2019 Preview on Windows Server 2019 (windows-2019) Visual Studio 2017 on Windows Server 2016 (vs2017-win2016) Visual Studio 2015 on Windows Server 2012R2 (vs2015-win2012r2) macOS X Mojave 10.14 (macOS-10.14) macOS X High Sierra 10.13 (macOS-10.13)

- ☐ vs2017-win2016

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Q8) Your company has a project in Azure DevOps.

**You need to ensure that when there are multiple builds pending deployment, only the most recent build is deployed.**

**What should you use?**

- ☐ pull request triggers
- ☐ release gates
- ☒ deployment queue settings

**Explanation:-**The options you can choose for a queuing policy are:

- Number of parallel deployments
- If you specify a maximum number of deployments, two more options appear:
  - Deploy all in sequence
  - Deploy latest and cancel the others: Use this option if you are producing releases faster than builds, and you only want to deploy the latest build.
- ☐ deployment conditions

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Q9)

**Your company develops a client banking application that processes a large volume of data.**

**Code quality is an ongoing issue for the company. Recently, the code quality has deteriorated because of an increase in time pressure on the development team.**

**You need to implement static code analysis.**

**During which phase should you use static code analysis?**

- ☐ production release
- ☐ staging
- ☒ integration testing

**Explanation:-**The Secure Development Lifecycle (SDL) Guidelines recommend that teams perform static analysis during the implementation phase of their development cycle.

- ☐ build

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Q10)

**You have an approval process that contains a condition. The condition requires that releases be approved by a team leader before they are deployed.**

**You have a policy stating that approvals must occur within eight hours.**

**You discover that deployment fail if the approvals take longer than two hours.**

**You need to ensure that the deployments only fail if the approvals take longer than eight hours.**

**Solution: From Pre-deployment conditions, you modify the Time between re-evaluation of gates option.**

**Does this meet the goal?**

- ☐ Incorrect  
☒ Correct

**Explanation:-**Gates allow automatic collection of health signals from external services, and then promote the release when all the signals are successful at the same time or stop the deployment on timeout. Typically, gates are used in connection with incident management, problem management, change management, monitoring, and external approval systems.

Approvals and gates give you additional control over the start and completion of the deployment pipeline. Each stage in a release pipeline can be configured with pre-deployment and post-deployment conditions that can include waiting for users to manually approve or reject deployments, and checking with other automated systems until specific conditions are verified.

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**Q11)**

**You have an approval process that contains a condition. The condition requires that releases be approved by a team leader before they are deployed.**

**You have a policy stating that approvals must occur within eight hours.**

**You discover that deployment fail if the approvals take longer than two hours.**

**You need to ensure that the deployments only fail if the approvals take longer than eight hours.**

**Solution: From Pre-deployment conditions, you modify the Timeout setting for pre-deployment approvals.**

**Does this meet the goal?**

- ☐ Correct  
☒ Incorrect

**Explanation:-**Use a gate instead of an approval instead.

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**Q12)**

**You plan to create a release pipeline that will deploy Azure resources by using Azure Resource Manager templates. The release pipeline will create the following resources:**

- Two resource groups
- Four Azure virtual machines in one resource group
- Two Azure SQL databases in other resource group

**You need to recommend a solution to deploy the resources.**

**Solution: Create two standalone templates, each of which will deploy the resources in its respective group.**

**Does this meet the goal?**

- ☐ Correct  
☒ Incorrect

**Explanation:-**Use a main template and two linked templates.

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**Q13)**

**You plan to create a release pipeline that will deploy Azure resources by using Azure Resource Manager templates. The release pipeline will create the following resources:**

- Two resource groups
- Four Azure virtual machines in one resource group
- Two Azure SQL databases in other resource group

**You need to recommend a solution to deploy the resources.**

**Solution: Create a single standalone template that will deploy all the resources.**

**Does this meet the goal?**

- ☐ Correct  
☒ Incorrect

**Explanation:-**Use two templates, one for each resource group, and link the templates.

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**Q14)**

**You have an approval process that contains a condition. The condition requires that releases be approved by a team leader before they are deployed.**

**You have a policy stating that approvals must occur within eight hours.**

**You discover that deployment fail if the approvals take longer than two hours.**

**You need to ensure that the deployments only fail if the approvals take longer than eight hours.**

**Solution: From Post-deployment conditions, you modify the Timeout setting for post-deployment approvals.**

**Does this meet the goal?**

- ☐ Correct
- ☒ Incorrect

**Explanation:-**Use Pre-deployments conditions instead.  
Use a gate instead of an approval instead.

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**Q15)**

**You have an Azure DevOps project.**

**Your build process creates several artifacts.**

**You need to deploy the artifacts to on-premises servers.**

**Solution:** You deploy a Kubernetes cluster on-premises. You deploy a Helm agent to the cluster. You add a Download Build Artifacts task to the deployment pipeline.

**Does this meet the goal?**

- ☐ Correct
- ☒ Incorrect

**Explanation:-**Instead you should deploy an Azure self-hosted agent to an on-premises server.

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**Q16)**

**You have an Azure DevOps project.**

**Your build process creates several artifacts.**

**You need to deploy the artifacts to on-premises servers.**

**Solution:** You deploy a Docker build to an on-premises server. You add a Download Build Artifacts task to the deployment pipeline.

**Does this meet the goal?**

- ☐ Correct
- ☒ Incorrect

**Explanation:-**Instead you should deploy an Azure self-hosted agent to an on-premises server.

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**Q17) Your team is configuring a task in Azure Pipeline to deploy an application to Azure Service Fabric. Which of the following task type could be used for this requirement?**

- ☐ kubectl task
- ☐ Container Deployment Task
- ☒ Service Fabric Application Deployment Task

**Explanation:-**There is a separate Service Fabric Application Deployment Task for this. The Microsoft documentation mentions the following

- ☐ Deployment Task

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**Q18) A team is currently using Azure services for building and deploying their application. The application is based on Docker containers. Below are the key requirements for the deployment of the application:**

- The application needs to be deployed onto a managed cluster
- The application needs to be released using a managed CI/CI tool

**Which of the following would you use to host the deployment of the cluster?**

- ☐ Azure Pipelines
- ☐ Azure Functions
- ☒ Azure Kubernetes

**Explanation:-**Azure Kubernetes is a cluster-based service that can be used to host your docker based applications  
The Microsoft documentation mentions the following

- ☐ Azure Logic Apps
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**Q19) A team is currently using Azure services for building and deploying their application. The application is based on Docker containers. Below are the key requirements for the deployment of the application:**

- The application needs to be deployed onto a managed cluster
- The application needs to be released using a managed CI/CI tool

**Which of the following would you use for the automated deployment of the application onto the cluster?**

- ☐ Azure Artifact
- ☐ Azure Tests
- ☒ Azure Pipelines

**Explanation:-**Azure Pipelines is a CI/CD tool that has integration with the deployment of applications onto Azure Kubernetes. A blog article mentions the same on the integration

- ☐ Azure Boards
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**Q20)**

**You have an Azure DevOps project.**

**Your build process creates several artifacts.**

**You need to deploy the artifacts to on-premises servers.**

**Solution:** You deploy an Azure self-hosted agent to an on-premises server. You add a Copy and Publish Build Artifacts task to

the deployment pipeline.

Does this meet the goal?

- ☐ Incorrect
- ☒ Correct

**Explanation:-**To build your code or deploy your software using Azure Pipelines, you need at least one agent.

If your on-premises environments do not have connectivity to a Microsoft-hosted agent pool (which is typically the case due to intermediate firewalls), you'll need to manually configure a self-hosted agent on on-premises computer(s). The agents must have connectivity to the target on-premises environments, and access to the Internet to connect to Azure Pipelines or Team Foundation Server.

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**Q21) Your company hosts a web application in Azure. The company uses Azure Pipelines for the build and release management of the application.**

**Stakeholders report that the past few releases have negatively affected system performance.**

**You configure alerts in Azure Monitor.**

**You need to ensure that new releases are only deployed to production if the releases meet defined performance baseline criteria in the staging environment first.**

**What should you use to prevent the deployment of releases that fall to meet the performance baseline?**

- ☐ a trigger
- ☒ a gate

**Explanation:-**Scenarios and use cases for gates include:

- Quality validation. Query metrics from tests on the build artifacts such as pass rate or code coverage and deploy only if they are within required thresholds.

Use Quality Gates to integrate monitoring into your pre-deployment or post-deployment. This ensures that you are meeting the key health/performance metrics (KPIs) as your applications move from dev to production and any differences in the infrastructure environment or scale is not negatively impacting your KPIs.

- ☐ an Azure Scheduler job
- ☐ an Azure function

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**Q22) You plan to share packages that you wrote, tested, validated, and deployed by using Azure Artifacts.**

**You need to release multiple builds of each package by using a single feed. The solution must limit the release of packages that are in development.**

**What should you use?**

- ☐ local symbols
- ☐ views
- ☐ global symbols
- ☒ upstream sources

**Explanation:-**Upstream sources enable you to manage all of your product's dependencies in a single feed. We recommend publishing all of the packages for a given product to that product's feed, and managing that product's dependencies from remote feeds in the same feed, via upstream sources. This setup has a few benefits:

- Simplicity: your NuGet.config, .npmrc, or settings.xml contains exactly one feed (your feed).
- Determinism: your feed resolves package requests in order, so rebuilding the same codebase at the same commit or changeset uses the same set of packages
- Provenance: your feed knows the provenance of packages it saved via upstream sources, so you can verify that you're using the original package, not a custom or malicious copy published to your feed
- Peace of mind: packages used via upstream sources are guaranteed to be saved in the feed on first use; if the upstream source is disabled/removed, or the remote feed goes down or deletes a package you depend on, you can continue to develop and build

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**Q23)**

**Your company is concerned that when developers introduce open source libraries, it creates licensing compliance issues.**

**You need to add an automated process to the build pipeline to detect when common open source libraries are added to the code base.**

**What should you use?**

- ☐ PDM
- ☒ WhiteSource

**Explanation:-**WhiteSource is the leader in continuous open source software security and compliance management. WhiteSource integrates into your build process, irrespective of your programming languages, build tools, or development environments. It works automatically, continuously, and silently in the background, checking the security, licensing, and quality of your open source components against WhiteSource constantly-updated definitive database of open source repositories.

Azure DevOps integration with WhiteSource Bolt will enable you to:

1. Detect and remedy vulnerable open source components.
2. Generate comprehensive open source inventory reports per project or build.
3. Enforce open source license compliance, including dependencies' licenses.
4. Identify outdated open source libraries with recommendations to update.

- ☐ Microsoft Visual SourceSafe
- ☐ OWASP ZAP

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**Q24)**

**Company ABC Ltd. is concerned that when developers introduce open source libraries, it creates licensing compliance issues.**

**You need to add an automated process to the build pipeline to detect when common open source libraries are added to the code base.**

**What should you use?**

- ☐ Jenkins
- ☐ Code Style
- ☒ Black Duck

**Explanation:-**Secure and Manage Open Source Software

Black Duck helps organizations identify and mitigate open source security, license compliance and code-quality risks across application and container portfolios.

Black Duck Hub and its plugin for Team Foundation Server (TFS) allows you to automatically find and fix open source security vulnerabilities during the build

process, so you can proactively manage risk. The integration allows you to receive alerts and fail builds when any Black Duck Hub policy violations are met.

- ☐ Microsoft Visual SourceSafe
- ☐ SourceGea
- ☐ OWASP ZAP

**Q25) You have an application that consists of several Azure App Service web apps and Azure functions.**

**You need to access the security of the web apps and the functions.**

**Which Azure features can you use to provide a recommendation for the security of the application?**

- ☐ Security & Compliance in Azure Log Analytics
- ☐ Resource health in Azure Service Health
- ☐ Smart Detection in Azure Application Insights
- ☒ Compute & apps in Azure Security Center

**Explanation:-**Monitor compute and app services: Compute & apps include the App Services tab, which App services: list of your App service environments and current security state of each.

Recommendations

This section has a set of recommendations for each VM and computer, web and worker roles, Azure App Service Web Apps, and Azure App Service Environment that Security Center monitors. The first column lists the recommendation. The second column shows the total number of resources that are affected by that recommendation. The third column shows the severity of the issue.

**Q26) You have a private distribution group that contains provisioned and unprovisioned devices.**

**You need to distribute a new iOS application to the distribution group by using Microsoft Visual Studio App Center.**

**What should you do?**

- ☐ Add the device owner to the organization in App Center.
- ☐ Create an active subscription in App Center Test.
- ☒ Register the devices on the Apple Developer portal.

**Explanation:-**When releasing an iOS app signed with an ad-hoc or development provisioning profile, you must obtain tester's device IDs (UDIDs), and add them to the provisioning profile before compiling a release. When you enable the distribution group's Automatically manage devices setting, App Center automates the before mentioned operations and removes the constraint for you to perform any manual tasks. As part of automating the workflow, you must provide the user name and password for your Apple ID and your production certificate in a .p12 format.

App Center starts the automated tasks when you distribute a new release or one of your testers registers a new device. First, all devices from the target distribution group will be registered, using your Apple ID, in your developer portal and all provisioning profiles used in the app will be generated with both new and existing device ID. Afterward, the newly generated provisioning profiles are downloaded to App Center servers.

- ☐ Request the Apple ID associated with the user of each device.

**Q27) Your company has a project in Azure DevOps for a new application. The application will be deployed to several Azure virtual machines that run Windows Server 2016.**

**You need to recommend a deployment strategy for the virtual machines. The strategy must meet the following requirements:**

- **Ensure that the virtual machines maintain a consist configuration.**
- **Minimize administrative effort to configure the virtual machines.**

**What should you include in the recommendation?**

- ☐ Deployment YAML and Azure pipeline deployment groups
- ☒ Azure Resource Manager templates and the Custom Script Extension for Windows

**Explanation:-**The Custom Script Extension downloads and executes scripts on Azure virtual machines. This extension is useful for post deployment configuration, software installation, or any other configuration or management tasks. Scripts can be downloaded from Azure storage or GitHub, or provided to the Azure portal at extension run time. The Custom Script Extension integrates with Azure Resource Manager templates, and can be run using the Azure CLI, PowerShell, Azure portal, or the Azure Virtual Machine REST API.

- ☐ Azure Resource Manager templates and the PowerShell Desired State Configuration (DSC) extension for Windows
- ☐ Deployment YAML and Azure pipeline stage templates

**Q28) You manage a project in Azure DevOps.**

**You need to prevent the configuration of the project from changing over time.**

**Solution: Add a code coverage step to the build pipelines.**

**Does this meet the goal?**

- ☐ Correct
- ☒ Incorrect

**Explanation:-**Instead implement Continuous Assurance for the project.

**Comprehension:**

**Overview**

Montana is an online training provider

**Requirements**

Montana has currently undertaken several development projects. These projects will develop applications which will be hosted in Azure.

Montana goes ahead and sets up an Azure subscription and creates a Devops organization. The Devops organization currently consists of a Docker extension and an agent pool named Montana pool. The deployment pool contains 5 Azure Virtual Machines that run Windows Server 2016.

Below are the different projects which are going to be hosted in Azure Devops

**Q29) Which of the following command can be used to register a virtual machine as a node for montanagroup?**

- ☐ Update-AzureRmAutomationDscNode
- ☒ Register-AzureRmAutomationDscNode

**Explanation:-**The right command is Register-AzureRmAutomationDscNode. The Microsoft documentation mentions the following

- ☐ Set-AzureRmAutomationDscNode
- ☐ New-AzureRmAutomationDscNode

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### Comprehension:

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**Q30)**

**You need to ensure that you meet the requirements for the project "montanaB".**

**Which of the following would you implement for this requirement?**

- ☒ Create a service endpoint in Azure Devops

**Explanation:-**So here you need to create a service endpoint in either VSTS or Azure Devops. This is mentioned in the SonarQube documentation page

- ☐ Create an authentication token in Azure Devops
- ☐ Create a service endpoint in SonarQube
- ☐ Create an authentication token in SonarQube

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**Q31)**

**You need to comply with the requirement for the project "montanaD".**

**Which of the following would you set for the folder /data?**

- ☒ A branch filter to include

**Explanation:-**Since here we need to ensure all artifacts are part of the build, we need to have a branch filter to include. There is an example also mentioned in the Microsoft documentation refer - <https://docs.microsoft.com/en-us/azure/devops/pipelines/process/pipeline-triggers?view=azure-devops&tabs=yaml>

- ☐ A branch filter to exclude
- ☐ A path filter to include
- ☐ A path filter to exclude

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### Comprehension:

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**Q32)**

**You need to comply with the requirement for the project "montanaD".**

**Which of the following would you set for the folder /\*?**

- ☐ A path filter to exclude
- ☐ A path filter to include
- ☒ A branch filter to include

**Explanation:-**Since here we need to ensure all artifacts are part of the build, we need to have a branch filter to include. There is an example also mentioned in the Microsoft documentation

- ☐ A branch filter to exclude

### Comprehension:

#### Overview

Montana is an online training provider

#### Requirements

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Below are the different projects which are going to be hosted in Azure Devops

#### Q33)

**You need to implement the requirement for the project "montanaF".**

**Which of the following steps would you implement for this requirement? Choose 3 answers from the options given below**

- ☐ Ensure to add a manual intervention task
- ☒ Ensure to Add Query Work items

**Explanation:-**"You can add gates that can be used to validate whether there are no active bugs against the application. The Microsoft documentation mentions the following You can construct queries to search for values of interest that can then be used. The below snapshots from the Microsoft documentation showcases how this can be achieved 1. First, go to the release pipeline editor. 2. Then Query for Work Items 3. Then define the condition for the work items"

- ☒ Make sure to enable gates

**Explanation:-**"You can add gates that can be used to validate whether there are no active bugs against the application. The Microsoft documentation mentions the following You can construct queries to search for values of interest that can then be used. The below snapshots from the Microsoft documentation showcases how this can be achieved 1. First, go to the release pipeline editor. 2. Then Query for Work Items 3. Then define the condition for the work items"

- ☐ Use the triggers tab
- ☒ Use the release pipeline editor

**Explanation:-**"You can add gates that can be used to validate whether there are no active bugs against the application. The Microsoft documentation mentions the following You can construct queries to search for values of interest that can then be used. The below snapshots from the Microsoft documentation showcases how this can be achieved 1. First, go to the release pipeline editor. 2. Then Query for Work Items 3. Then define the condition for the work items"

### Comprehension:

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Montana has currently undertaken several development projects. These projects will develop applications which will be hosted in Azure.

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Below are the different projects which are going to be hosted in Azure Devops

#### Q34)

**"You need to configure Azure Automation for the montanagroup.**

**Which of the following steps would you implement?"**

- ☒ Run the Start-AzureRmAutomationDscCompilationJob powershell command

**Explanation:-**"The steps for managing this are mentioned in the Microsoft documentation. 1. The first step is to create a DSC configuration 2. The next step is to import a configuration which can be done via the portal or via PowerShell 3. And next, you need to compile the configuration which can be done either via the portal or via Powershell."

- ☐ Run the New-AzureRmResourceGroupDeployment powershell command
- ☐ Create a resource manager template
- ☒ Create a Desired State Configuration file

**Explanation:-**"The steps for managing this are mentioned in the Microsoft documentation. 1. The first step is to create a DSC configuration 2. The next step is to import a configuration which can be done via the portal or via PowerShell 3. And next, you need to compile the configuration which can be done either via the portal or via Powershell."

- ☒ Use the Import-AzureRmAutomationDscConfiguration powershell command.

**Explanation:-**"The steps for managing this are mentioned in the Microsoft documentation. 1. The first step is to create a DSC configuration 2. The next step is to import a configuration which can be done via the portal or via PowerShell 3. And next, you need to compile the configuration which can be done either via the portal or via Powershell."

#### Q35) You manage a project in Azure DevOps.

**You need to prevent the configuration of the project from changing over time.**



**Solution:** Implement Continuous Integration for the project.  
**Does this meet the goal?**

- ☐ Correct
- ☒ Incorrect

**Explanation:**-Instead implement Continuous Assurance for the project.

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**Q36) You manage a project in Azure DevOps.**  
**You need to prevent the configuration of the project from changing over time.**  
**Solution:** Implement Continuous Assurance for the project.  
**Does this meet the goal?**

- ☐ Incorrect
- ☒ Correct

**Explanation:**-The basic idea behind Continuous Assurance (CA) is to setup the ability to check for "drift" from what is considered a secure snapshot of a system. Support for Continuous Assurance lets us treat security truly as a 'state' as opposed to a 'point in time' achievement. This is particularly important in today's context when 'continuous change' has become a norm.

There can be two types of drift:

- Drift involving 'baseline' configuration: This involves settings that have a fixed number of possible states (often pre-defined/statically determined ones). For instance, a SQL DB can have TDE encryption turned ON or OFF...or a Storage Account may have auditing turned ON however the log retention period may be less than 365 days.
  - Drift involving 'stateful' configuration: There are settings which cannot be constrained within a finite set of well-known states. For instance, the IP addresses configured to have access to a SQL DB can be any (arbitrary) set of IP addresses. In such scenarios, usually human judgment is initially required to determine whether a particular configuration should be considered 'secure' or not. However, once that is done, it is important to ensure that there is no "stateful drift" from the attested configuration. (E.g., if, in a troubleshooting session, someone adds the IP address of a developer machine to the list, the Continuous Assurance feature should be able to identify the drift and generate notifications/alerts or even trigger 'auto-remediation' depending on the severity of the change).
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**Q37) Your company uses ServiceNow for incident management.**  
**You develop an application that runs on Azure.**  
**The company needs to generate a ticket in ServiceNow when the application fails to authenticate.**  
**Which Azure Log Analytics solution should you use?**

- ☐ Automation & Control
- ☒ IT Service Management Connector (ITSM)

**Explanation:**-The IT Service Management Connector (ITSMC) allows you to connect Azure and a supported IT Service Management (ITSM) product/service.

ITSMC supports connections with the following ITSM tools:

- ServiceNow
- System Center Service Manager
- Provance
- Cherwell

With ITSMC, you can

- Create work items in ITSM tool, based on your Azure alerts (metric alerts, Activity Log alerts and Log Analytics alerts).
- Optionally, you can sync your incident and change request data from your ITSM tool to an Azure Log Analytics workspace.

- ☐ Application Insights Connector
  - ☐ Insight & Analytics
- 

**Q38) You use Azure SQL Database Intelligent Insights and Azure Application Insights for monitoring.**  
**You need to write ad-hoc queries against the monitoring data.**  
**Which query language should you use?**

- ☐ Transact-SQL
- ☐ PL/SQL
- ☐ PL/pgSQL
- ☒ Azure Log Analytics

**Explanation:**-Data analysis in Azure SQL Analytics is based on Log Analytics language for your custom querying and reporting.

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**Q39) You have a multi-tier application that has an Azure Web Apps front end and an Azure SQL Database back end.**  
**You need to recommend a solution to capture and store telemetry data. The solution must meet the following requirements:**  
• Support using ad-hoc queries to identify baselines.  
• Trigger alerts when metrics in the baseline are exceeded.  
• Store application and database metrics in a central location.  
**What should you include in the recommendation?**

- ☐ Azure Event Hubs
- ☐ Azure SQL Database Intelligent Insights
- ☐ Azure Application Insights
- ☒ Azure Log Analytics

**Explanation:**-Azure Platform as a Service (PaaS) resources, like Azure SQL and Web Sites (Web Apps), can emit performance metrics data natively to Log Analytics.

The Premium plan will retain up to 12 months of data, giving you an excellent baseline ability.

There are two options available in the Azure portal for analyzing data stored in Log analytics and for creating queries for ad hoc analysis.

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**Q40) Your company creates a web application.**  
**You need to recommend a solution that automatically sends to Microsoft Teams a daily summary of the exceptions that occur in the application.**  
**Which two Azure services should you recommend?**

- ✔ Azure Application Insights

**Explanation:-**You can programmatically query Application Insights data to generate custom reports on a schedule. The following options can help you get started quickly:

- Automate reports with Microsoft Flow
- Automate reports with Logic Apps
- Azure DevOps Project
- Microsoft Visual Studio App Center
- Azure Pipelines
- ✔ Azure Logic Apps

**Explanation:-**You can programmatically query Application Insights data to generate custom reports on a schedule. The following options can help you get started quickly:

- Automate reports with Microsoft Flow
- Automate reports with Logic Apps

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#### Q41)

**Your company is building a mobile app that targets Android and iOS devices.**

**Your team uses Azure DevOps to manage all work items and release cycles.**

**You need to recommend a solution to perform the following tasks:**

- **Collect crash reports for issue analysis.**
- **Distribute beta releases to your testers.**
- **Get user feedback on the functionality of new apps.**

**What should you include in the recommendation?**

- Azure Application insights widgets
- Microsoft Visual Studio App Center integration
- ✔ the Microsoft Test & Feedback extension

**Explanation:-**The "Exploratory Testing" extension is now "Test & Feedback" and is now Generally Available.

Anyone can now test web apps and give feedback, all directly from the browser on any platform: Windows, Mac, or Linux. Available for Google Chrome and Mozilla Firefox (required version 50.0 or above) currently. Support for Microsoft Edge is in the pipeline and will be enabled once Edge moves to a Chromium-compatible web platform.

- Jenkins integration

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**Q42) You have an Azure DevOps project named Project1 and an Azure subscription named Sub1. Sub1 contains an Azure virtual machine scale set named VMSS1.**

**VMSS1 hosts a web application named WebApp1. WebApp1 uses stateful sessions.**

**The WebApp1 installation is managed by using the Custom Script extension. The script resides in an Azure Storage account named sa1.**

**You plan to make a minor change to a UI element of WebApp1 and to gather user feedback about the change.**

**You need to implement limited user testing for the new version of WebApp1 on VMSS1.**

**Which three actions should you perform?**

- Update the configuration of a virtual machine in VMSS1.
- ✔ Modify the Custom Script extension settings of VMSS1.
- ✔ Upload a custom script file to sa1.
- ✔ Redeploy VMSS1.
- Modify the load balancer settings of VMSS1.

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**Q43) You have a GitHub repository.**

**You create a new repository in Azure DevOps.**

**You need to recommend a procedure to clone the repository from GitHub to Azure DevOps.**

**What should you recommend?**

- Create a webhook.
- Create a service connection for GitHub.
- ✔ From Import a Git repository, click Import.

**Explanation:-**You can import an existing Git repo from GitHub, Bitbucket, GitLab, or other location into a new or empty existing repo in your project in Azure DevOps.

Import into a new repo -

1. Select Repos, Files.
2. From the repo drop-down, select Import repository.
3. If the source repo is publicly available, just enter the clone URL of the source repository and a name for your new Git repository.

- Create a pull request.
- Create a personal access token in Azure DevOps.

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**Q44) You have a branch policy in a project in Azure DevOps. The policy requires that code always builds successfully.**

**You need to ensure that a specific user can always merge changes to the master branch, even if the code fails to compile. The solution must use the principle of least privilege.**

**What should you do?**

- Add the user to the Build Administrators group.
- Add the user to the Project Administrators group.
- From the Security settings of the repository, modify the access control for the user.
- ✔ From the Security settings of the branch, modify the access control for the user.

**Explanation:-**In some cases, you need to bypass policy requirements so you can push changes to the branch directly or complete a pull request

even if branch policies are not satisfied. For these situations, grant the desired permission from the previous list to a user or group. You can scope this permission to an entire project, a repo, or a single branch. Manage this permission along the with other Git permissions.

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**Q45) Your company deploys applications in Docker containers.**

**You want to detect known exploits in the Docker images used to provision the Docker containers.**

**You need to integrate image scanning into the application lifecycle. The solution must expose the exploits as early as possible during the application lifecycle.**

**What should you configure?**

- ☐ a task executed in the continuous integration pipeline and a scheduled task that analyzes the production container
- ☐ a task executed in the continuous deployment pipeline and a scheduled task against a running production container
- ☐ manual tasks performed during the planning phase and the deployment phase
- ☒ a task executed in the continuous integration pipeline and a scheduled task that analyzes the image registry

**Explanation:-**You can use the Docker task to sign into ACR and then use a subsequent script to pull an image and scan the container image for vulnerabilities.

Use the docker task in a build or release pipeline. This task can be used with Docker or Azure Container registry.

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**Q46) Your company uses Azure DevOps for the build pipelines and deployment pipelines of Java-based projects.**

**You need to recommend a strategy for managing technical debt.**

**Which two actions should you include in the recommendation?**

- ☐ Integrate Azure DevOps and Azure DevTest Labs.
- ☒ Integrate Azure DevOps and SonarQube.
- ☒ Configure pre-deployment approvals in the deployment pipeline.
- ☐ Configure post-deployment approvals in the deployment pipeline.

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**Q47) Your company has a hybrid cloud between Azure and Azure Stack.**

**The company uses Azure DevOps for its full CI/CD pipelines. Some applications are built by using Erlang and Hack.**

**You need to ensure that Erlang and Hack are supported as part of the build strategy across the hybrid cloud. The solution must minimize management overhead.**

**What should you use to execute the build pipeline?**

- ☒ D. Azure DevOps self-hosted agents on virtual machines that run on Azure Stack

**Explanation:-**Azure Stack offers virtual machines (VMs) as one type of an on-demand, scalable computing resource. You can choose a VM when you need more control over the computing environment.

- ☐ C. Azure DevOps self-hosted agents on Hyper-V virtual machines
- ☐ B. Azure DevOps self-hosted agents on Azure DevTest Labs virtual machines.
- ☐ A. a Microsoft-hosted agent

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**Q48) You plan to create a release pipeline that will deploy Azure resources by using Azure Resource Manager templates. The release pipeline will create the following resources:**

- Two resource groups
- Four Azure virtual machines in one resource group
- Two Azure SQL databases in other resource group

**You need to recommend a solution to deploy the resources.**

**Solution: Create a main template that has two linked templates, each of which will deploy the resources in its respective group. Does this meet the goal?**

- ☐ Incorrect
- ☒ Correct

**Explanation:-**To deploy your solution, you can use either a single template or a main template with many related templates. The related template can be either a separate file that is linked to from the main template, or a template that is nested within the main template.

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**Q49) Your company develops an app for iOS. All users of the app have devices that are members of a private distribution group in Microsoft Visual Studio App Center.**

**You plan to distribute a new release of the app.**

**You need to identify which certificate file you require to distribute the new release from App Center.**

**Which file type should you upload to App Center?**

- ☐ .pfx
- ☒ .p12

**Explanation:-**A successful IOS device build will produce an ipa file. In order to install the build on a device, it needs to be signed with a valid provisioning profile and certificate. To sign the builds produced from a branch, enable code signing in the configuration pane and upload a provisioning profile (.mobileprovision) and a valid certificate (.p12), along with the password for the certificate.

- ☐ .cer
- ☐ .pvk

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**Q50) Correct or Incorrect: Azure Cache for Redis improves the performance of your application by storing a snapshot of data in memory.**

- ☐ Incorrect
- ☒ Correct

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**Q51) Which of the following best describes Application Insights?**

- ☒ A service to monitor availability, performance, and the use of web applications
- ☐ A workspace to enable collection of logs across infrastructure and applications
- ☐ An implementation of the health endpoint monitoring pattern

- A single view for all your monitoring needs in Azure

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**Q52) Which is the most accurate description of scaling out?**

- Reaching the maximum level of scale for your application
- Adding additional storage to a virtual machine
- ✔ Increasing the number of instances serving requests

**Explanation:-**Scaling out increases the number of instances service requests.

- Increasing the amount of resources allocated to an instance

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**Q53) Which is the most accurate description of scaling down?**

- Taking ownership of how your application scales
- ✔ Decreasing the amount of resources allocated to an instance

**Explanation:-**Scaling down is the reduction of resources that a single instance has available.

- Decreasing the number of instances serving requests
  - Remaining below the maximum level of scale for your application
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