1. **What does a Administrator use the Azure Portal For?:** Lets you build, manage, and monitor everything from simple web apps to complex cloud applications in a singe, unified console.
2. **What does a Administrator use the Azure Cloud Shell For?:** An interactive, browser-accessible shell for managing Azure resources. You can choose a shell that best suits the way you work, like a bash shell or PowerShell. Its untethered from a local machine.
3. **What does a Administrator use Azure PowerShell For?:** A module you add to Windows PowerShell or PowerShell core to enable you to connect to your azure subscription and manage resources. It adds Azure-specific commands. Comes in an interactive mode with one command at a time (one liners) or a scripting mode where you can execute a script that consists of multiple commands (Like PowerShell ISE)
4. **What does a Administrator use Azure CLI For?:** Allows you to execute commands through a terminal, command-line prompt, or script instead of a web browser. Comes in an interactive mode with one command at a time or a scripting mode where you can execute a script using the syntax of your chosen shell.
5. **How do you find the commands you need in Azure CLI?:** One way is to use az find, commands in the cli are structured in groups and subgroups. For instance, the Storage group consists of subgroups including account, blob, storage, and queue. with "az find blob" you will get a list of commands and the "--help" argument will get you more detailed info on the command, and for a command group, a list of available subcommands.
6. **What is Azure Resource Manager?:** A consistent management layer to perform tasks through Azure PowerShell, Azure CLI, Azure portal, REST API, and client SDKs. The tasks are passed through the same Azure Resource Manager API and authenticates and authorizes requests through the service. Then they are routed to the appropriate resource providers.
7. **What are key terminology you should know for Azure Resource Manager?-:** resource, resource group, resource provider, template, declarative syntax.
8. **What is a resource?:** A manageable item that is available through Azure. Some common resources are a virtual machine, storage account, web app, database, and virtual network, but there are many more.
9. **What is a resource group?:** A container that holds related resources for an Azure solution. It can include all the resources for the solution, or only those resources that you want to manage as a group. You decide how to allocate resources based on what makes the most sense for your organization.
10. **What is a resource provider?:** A service that supplies the resources you can deploy and manage through Resource Manager. Each resource provider offers

operations for working with the resources that are deployed. Common providers are Microsoft.Compute, which supplies the virtual machine resource, Microsoft.Storage, which supplies the storage account resource, and Microsoft.Web which supplies the resources related to web apps.

11. **What is a template?:** A JSON (JavaScript Object Notation) file that defines one or more resources to deploy to a resource group. It also defines the dependencies between the deployed resources. Can be used to deploy the resources consistently and repeatedly.
12. **What is Declarative Syntax?:** Lets you state "Here is what i intend to create" without having to write the sequence of programming commands to create it. The Resource Manager template is an example of this.
13. **What is the format for a resource type?:** {resource-provider}/{resource-type} for example, Microsoft.KeyVault/vaults
14. **What are some small rules for resource groups?:** Resources can only exist in one resource group. Resource groups cannot be renamed. Resource groups can have resources of many different types (service) Resource groups can have resources from many different regions.
15. **How do you prevent resource groups from being deleted?:** Using Resource Manager locks in the form of
Read-Only locks, which prevent any changes to the resource
Delete locks, which prevents deletion
These locks can be applied to a subscription, resource group, or resource.
Can only be created by owner and user access administrator roles
16. **What happens when you move a resource to another resource group or subscription?:** Both the source and target group are locked during the operation, write and delete operations are blocked on the resource group until the move completes.
17. **How do you move a resource?:** Select the resource group containing those resources and select the move button, acknowledge that you need to update scripts.
18. **How do you remove resource groups?:** Use powershell "Remove-AzResourceGroup -name "ContosoRG01" or the delete button on the portal.
19. **How do you limit your resource?:** Using the Usage + Quotas option to track current usage, and plan for future use.
20. **What is a Azure Resource Manager template?:** Precisely defines all the resource manager resources in a deployment. Can be deployed to a resource group as a single operation
21. **What are the benefits of using templates?:** Templates improve consistency
Templates help express complex deployments
Templates reduce manual, error-prone tasks

Templates are code
Templates promote reuse
Templates are linkable
Templates simplify orchestration

22. **What language is used for Azure Resource Manager templates?:** They are written in JSON, Allows you to express data stored as an object in text. Key-value pairs
23. **What is the parameters section for in a template?:** You can specify which values you can input when deploying the resources
24. **What are Azure Quickstart templates?:** Templates provided by the azure community, Everything you need to deploy in your solution or just a starting point for your template
25. **What tools are available for administrators to create resource groups and provision Virtual Machines (VMs)?:** The Azure portal
The Azure CLI
Azure PowerShell
26. **What is interactive mode in PowerShell?:** Writing commands and executing them immediately
27. **What is a PowerShell cmdlet?:** A command in powershell, it manipulates a single feature
28. **PowerShell What is the Get-Help cmdlet for?:** Pulling up a programmed in help file associated with every cmdlet
29. **What is a PowerShell module?:** A DLL that includes the code to process each available cmdlet, You can get a list of loaded modules by using the Get-Module command
30. **PowerShell What is the Az module:** A module that contains cmdlets to work with Azure features. -AzureRM is a legacy module that should be moved off of
31. **What are the steps to create a resource group with Azure PowerShell?: -** There are four steps we need to perform:
Import the Azure cmdlets.
Connect to your Azure subscription.
Create the resource group.
Verify that creation was successful.
32. **PowerShell How do you import the Azure cmdlets?:** Import-Module Az (did you install it into your computer?)
33. **PowerShell How do you connect your Azure Acct?:** Connect-AzAccount
34. **PowerShell How do you determine what azure subscription you are in?: -** Get-AzContext

35. **PowerShell How do you change the subscription you are in?:** Select-Az-Subscription -SubscriptionID 'XXXXXXXXXXX'
36. **PowerShell How do you get a list of all resource groups?:** Get-AzResource-Group | Format-Table
37. **PowerShell How do you create a resource group?:** New-AzResourceGroup -Name <name> -Location <location>
38. **PowerShell How do you create an Azure Virtual Machine?:** New-AzVm
-ResourceGroupName <resource group into which the new vm will be placed>
-Name <the name of the VM in Azure>
-Credential <an object containing the username and password for the VM admin account. The Get-Credential cmdlet will prompt for a username and password and package it into a credential object>
-Location <geographic location where the VM will be provisioned>
-Image <the operating system to use for the VM, a linux distro or windows server>
39. **PowerShell What is a variable?:** Marked as "$variablename = X" variables can be used to package complex items in commandlets further down the script like a group of computers or an item that the user prompts for in the script. This variable persists for the session or until you re assign it
40. **What is a PowerShell script?:** A text file containing commands and control constructs. The commands are invocations of cmdlets and the control constructs are programming features like loops, variables, parameters, comments, etc. supplied by PowerShell.
41. **PowerShell What are Loops?:** For, Do...While, For...Each, Depending on what form you use a loop causes a command to repeat until a certain result is met, like you have created enough machines.
42. **PowerShell What are Parameters?:** variables that are waiting for values to be assigned them. They are assigned names.
43. **What is a good practice to run at the end of your session to keep resources from existing after your finished your PowerShell testing?:** The PowerShell command
Remove-AzResourceGroup -Name MyResourceGroupName
44. **What is the Azure CLI?:** A command-line program to connect to azure and execute administrative commands on azure resources.
45. **How do you find commands you need in Azure CLI?:** az find X or for example az find blob
46. **How do you log in to Azure with Azure CLI?:** az login
47. **How do you create a resource group with Azure CLI?:** az group create --name <name> --location <location>

48. **How do you see a list of resources you have in Azure CLI?:** az group list --output table
49. **What is infrastructure as code?:** Enables you to describe, through code, the infrastructure that you need for your application
50. **What is an ARM template?:** JSON files that define infrastructure and configuration for your deployment. The template uses a declarative syntax that describes what resources will look like without describing its control flow.