ANSIBLE INTERVIEW QUESTIONS:

1. **What Is Ansible?**

Ansible is an open-source automation tool developed by Redhat that is meant for simplifying the configuration management, application deployment, and automation of tasks. It allows us in automating repetitive tasks, ensuring consistency and efficiency in managing servers and networks using SSH protocol for make communication with the network Agentless.

2. **What Is Inventory?**

In Ansible, an inventory is a file with specifying the information of hosts that going to be managed. It contains information such as hostnames, IP addresses, and groups of organization.

3. **Explain The Concept Of Configuration Management?**

Configuration management is the process of systematically handling changes to a system's configuration by ensure consistency, reliability of the IT environment of managed nodes in a network.(Pls refer what I teach in the class).

4. **What Are The Features Of Ansible?**

Ansible comes with several features that make it powerful and popular automation tool. A few of the key features are listed here:

- Agentless: Ansible does not require any agent installation on the managed nodes. It communicates with the nodes in the network using SSH simplifying deployment and reduces complexity.
- Declarative Language: Ansible uses a simple human-readable YAML syntax to specify the desired state of the system making it easy to write and understand automation scripts.
- Playbooks: Automation scripts in Ansible are known as playbooks. Playbooks are written in YAML by defining a set of tasks that to be executed on remotely specifying in the host's section.
- Modules: Modules are used in ansible to perform specific tasks on managed nodes. They are 2 types of modules as built-in modules (that are already created and comes with ansible) and custom modules that are created by users.
- Inventory Management: Ansible uses an inventory file to specify the hosts information such as IP address or domain name, user details etc... on which the automation tasks have to be executed. The inventory file can be either static or dynamic include host groups.

5. **Describe Infrastructure as Code (IaC) And How Ansible Aligns With This Concept?**

Infrastructure as Code (IaC) is the way of process used for managing and provisioning the infrastructure using code instead of manual workflow process. Ansible follows this approach allowing the users to describe and manage infrastructure in a code-like manner.

6. **What Are Ansible Tasks, And How Do They Contribute To The Automation Process?**

Ansible tasks are individual work units within a playbook coming with defined actions that to be performed on remote hosts, contributing to the overall automation process.

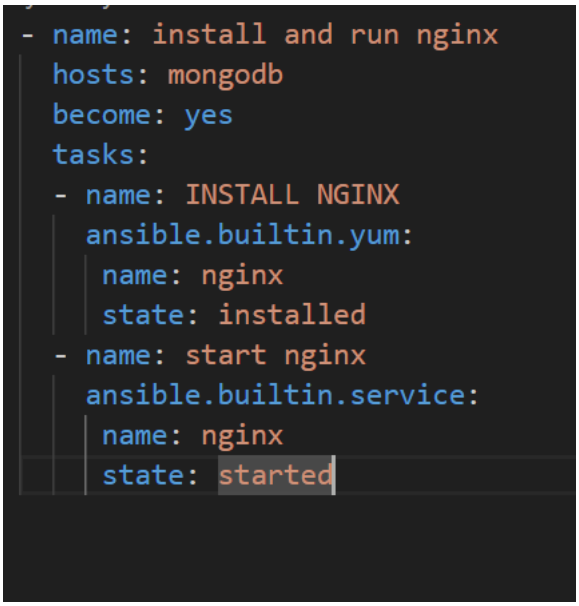
7. **Briefly Explain Ansible's Architecture?**

The control node communicates with managed nodes through SSH protocol executing tasks defined in playbooks. Ansible consists of a control node, managed nodes, inventory, modules, and plugins.

8. **What Is the Foundational Programming Language Of Ansible?**

Ansible is built on top of Python, enhancing its simplicity for clear playbooks and versatility in creating robust modules. Python's wide range of adoption provided good community support, making Ansible an effective and flexible automation tool.

9. **How Do You Set Up a Basic Ansible Playbook to Install a Package On a Group Of Servers?**



```
- name: install and run nginx
  hosts: mongodb
  become: yes
  tasks:
  - name: INSTALL NGINX
    ansible.builtin.yum:
      name: nginx
      state: installed
  - name: start nginx
    ansible.builtin.service:
      name: nginx
      state: started
```

10. **What Command Will You Use To Run An Ansible Playbook With a Specific Inventory File?**

ansible-playbook -i <inventory-file> <playbook.yml>

(OR) (we can include addition options)

Ansible-playbook -I inventory -e ansible_user=centos -e ansible_password=DevOps321 playbook_name

11. **What Is The Ad-hoc Command In Ansible, And When Is It Typically Used?**

In Ansible, an ad-hoc command is a fast, one liner task that you perform directly from the command line. This command helps for quick fixes or checks on remote systems.(Pls refer what are the commands I teach in the class).

12. Highlight The Key Differences Between Ansible And Puppet In Terms Of Architecture And Approach?

The Ansible is agentless automation tool uses YAML syntax for wrting of scripts following a push based model whereas Puppet is agent-based automation tool , uses its own DSL (Domain Specific Language) works on following a pull-based model.

13. What is a playbook?

A playbook has a series of YAML-based files that send commands to remote computers via scripts. Developers can configure completely complex environments by passing a script to the required systems rather than using individual commands to configure computers from the command line remotely. Playbooks are one of Ansible's strongest selling points and are often referred to as Ansible's building blocks.

14. What is a YAML file and how do we use it in Ansible?

YAML files are like any formatted text file, with a few sets of rules similar to those of JSON or XML. Ansible uses this syntax for playbooks as it is more readable than other formats.

15. Compare Ansible with Chef?

Ansible	Chef
Easy to set up.	Not very easy to set up.
Easy to manage.	Management is not easy.
The configuration language is YAML (Python).	The configuration language is DSL (Ruby).
Self-support package is $5,000 annually. Premium version costs $14,000 annually for each 100 nodes	Standard plan starts at $72 annually per node. The automation version charges $137 per node annually.

16. How is Ansible different from Puppet?

Ansible	Puppet
Easy to set up.	Comparatively harder to set up.
Very easy to manage.	Not very easy to manage.
The configuration language is YAML (Python).	The configuration language is DSL (Puppet DSL).
Self-support package is $5,000 annually. The premium version costs $14,000 annually for each 100 nodes.	Enterprise pricing starts at $120 per node annually. The premium version costs $19,900 annually for each 100 nodes.

17. What is an Ansible vault?

Ansible vault is used to keep sensitive data, like passwords, rather than placing it as plain text in playbooks or roles. Any structured data file or single value inside a YAML file can be encrypted by Ansible. (Pls refer about vault).

18. What is idempotency?

Idempotence is an essential feature of Ansible, which helps you to execute one or more tasks on a server as many times as needed, but without changing the result beyond the initial application.

19. What is Ansible can do?

Ansible can do the following for us:

- Configuration management
- Application deployment
- Task automation
- IT orchestration.

20. Please define what is Ansible Galaxy?

Ansible Galaxy refers to the website Galaxy where the users will be able to share all the roles to a CLI (Command Line Interface) where the installation, creation, and management of roles happen.

PLEASE REFER the playbooks and commands from the class.