S.No	Main Topics	Sub Topics	Lab Exercise	Duration (Theory) Hrs	Duration (Practical) Hrs
1	Virtualization Basics	Overview of Virtualization	N/A	2.5	0
		Evolution of Virtualization and Vmware history			
		Hypervisor basics			
		Types of Virtualization			
		Advantages and Disadvantages of Virtualization			
		Hyperthreading and Memory virtualization overview			
		Vmware products overview			
2	Installation and configuration of Vmware ESXi 6.0	What is ESXi ? Difference between ESX and ESXi	Install and configure ESXi Connect ESXi using putty and vpshere console Lock down settings in ESXi Network settings and configuration in ESXi Browse all the directories and log files	1	2
		Interactive installation of ESXi			
		Licensing an ESXi host			
		Configure NTP, DNS and routing in an ESXi host			
		Overview of Virtual Machine and Virtual Datacenter			
		Tools used to connect ESXi and vpshere console connectivity			
4	Vpshere tool	Use of vpshere tools	Install and configure vsphere console	0	0.5
		Install vpshere tool and explore the features			
3	Vcenter server 6.0	Difference of Vcenter server editions	Install and configure vcenter server View database settings Vcenters server services start/stop Install plugins Create datacenter and add ESXi host	1	3
		Deploy Vcenter server			
		Size the vcenter server database			
		Connect to the vcenter using vpshere and web console			
5	vSphere Networking	Identify vnetwork standard switch capabilities	Configure Standard switches Configure all network policies Configure vNICs and VLAN settings	1.5	1.5
		Create/Delete standard switch			
		Standard switch Vs Distributed switch			
		Configure vmNiCs			
		Configure vmkernel ports and port groups			
		Configure VLAN settings			
		Configure traffic shaping policies			
		Loadbalancing and failover policies			
6	Vsphere Storage	Datastore in Vmware	Create Datastore Mount/Unmount datastore Extend/expand datastore Selecting path and disabling path Performing Datastore in Maintenance mode	1	2
		Virtual storage file system VMFS3, VMFS5 etc..			
		Virtual disk formats and uses .vmdk, vmsn etc....			
		Virtual disk thin and thick provisioning			
		Storage adapters and devices			
		Scan and Rescan storage			
		Zoning and LUN masking practices			
		Use case for FCoE and iSCSI			
		Configure iSCSI initiator			
		Zoning and LUN masking practices			
6	Virtual Machine Management	Virtual Machine Hardware version	Create Virtual machine Configure VM resource settings (CPU, Disk and Memory) Install Guest OS on VMs Create template Create clone of a VM Install Vmware tools Snapshot creation and consolidation	2	3
		Creation of Virtual machine			
		Different ways of deploying virtual machines			
		Configure guest OS into a virtual machines			
		Configure vmware tools			
		Configuring virtual disk types			
		Explore Virtual disk formats and uses .vmdk, vmsn etc...			
		Modify the CPU, memory settings for a virtual machine			
		Templates and clones			
		Deploy virtual machines from a template			
		Snapshots and snapshot management			

		Consolidation of snapshots			
6	Vsphere High Availability	Vsphere High Availability features	Creation of cluster and adding ESXi and VMs in Cluster Configure HA and DRS Perform vmotion and storage vmotion Create FT for VMs	2	3
		Vsphere HA Failure scenarios			
		Vsphere HA architecture and cluster creation			
		Vsphere DRS features			
		Migration: Vmotion and types of vmotion			
		Vsphere Fault tolerance			
		Vpshere Replication and its related concepts			
7	Access contol and Resource monitoring	ESXi host access and authentication	Configure roles and permissions Steps to integrate with AD Create/ Acknowledge Alarms Creation of shares and resource pools Monitor VMs -CPU, Disk I/O and Memory usage	2	2
		Users and Groups			
		Roles and permissions in Vcenter server			
		Alarms			
		Shares, limits and reservations			
		vApps			
		Resource pools			
		Monitoring resource usage			