



Name:			
Enrolment No:			
<b>UNIVERSITY OF PETROLEUM AND ENERGY STUDIES</b> <b>End Semester Examination, May 2019</b>			
Course: Cloud Deployment Model		Semester: VI	
Programme: B Tech CCVT		Code: CSIB378	
Time: 03 hrs		Max. Marks: 100	
<b>SECTION A</b>			
S.No.		Marks	CO
Q 1.	<b>List</b> four factors determining why Private Cloud is needed? [2 marks] <b>Explain</b> one of the factors. [2 marks]	4	CO1
Q 2.	<b>Illustrate</b> Cinder Architecture diagrammatically with all its Components, Internal, &, External interfaces; and <b>Label</b> the type of each interface. [4x1 mark]	4	CO2
Q 3.	<b>Represent</b> and <b>group</b> in a block diagram all IaaS, IaaS+, shared and deployment/management services in OpenStack. [4x1 mark]	4	CO3
Q 4.	<b>Evaluate</b> and write a short note on vmware vCloud Suite, the commercial cloud deployment software platform.	4	CO4
Q 5.	<b>Differentiate</b> between High Availability [HA] and Disaster Recovery [DR] in a Cloud Data Center.	4	CO4
<b>SECTION B</b>			
Q 6.	a. <b>Point out</b> basic networking functionalities offered by Neutron. [4 marks] b. <b>Draw</b> the networking architecture and flow diagram. [4 marks] c. Clearly <b>identify</b> type of each interface. [2 marks]	10	CO2
Q 7.	<b>List</b> and briefly <b>summarize</b> any 5 advance services of OpenStack. [5x2 marks]	10	CO3
Q 8.	<b>Compare</b> Containerization with Virtualization by highlighting the differences.	10	CO4
Q 9.	<b>Justify</b> the need for SDN in Cloud Deployments. <b>OR</b>	10	CO4
	<b>Create and explain</b> Microservice deployed by Containerization and maintained using DevOps using an example.		CO4
<b>SECTION C</b>			
Q 10.	<b>Construct</b> OpenStack Deployment Architecture for self service network on physical infrastructure. <b>Draw</b> block diagram. <b>Explain</b> the model.	20	CO3
Q 11.	Cumulonimbus is a cloud service provider facing lot of issues in their compute, storage and network Data Center infrastructure. Cumulonimbus hired you as Automation Expert to solve their problem. <b>Describe</b> you plan of automation using any of the automation tools by giving 4 automation use cases. [5x4 marks] <b>OR</b>	20	CO5
	As a CTO of WannaBeRich stock investment start-up, you are asked to deploy company IT infrastructure on Public Cloud. However, you are not convinced. You know that Hybrid Cloud implementation is the best solution for your start-up. <b>Present and Support</b> your views to the investors. Also, <b>Analyze</b> and highlight the potential issues that you might face during the Hybrid Cloud implementation.		CO5

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**SECTION A**

S.No.	Question	Marks	CO
Q 1.	<i>List</i> the steps involved in building Private Cloud?	4	CO1
Q 2.	Briefly <i>explain</i> Volume, Snapshot, Backup & Quota in Storage Service. [1x4 mark]	4	CO2
Q 3.	<i>Discuss</i> the function and working of any one new/advanced OpenStack Service.	4	CO3
Q 4.	<i>Evaluate</i> and write a short note on vmware vCloud Suite, the commercial cloud deployment software platform.	4	CO4
Q 5.	<i>Differentiate</i> between User Access Management and a Firewall.	4	CO4

**SECTION B**

Q 6.	<i>Describe</i> and <i>Illustrate</i> with diagram the working of cinder-volume [Back-end-storage devices] in Linux for implementing block-storage service. [5+5 marks]	10	CO2
Q 7.	a. <i>Relate</i> the <i>purpose</i> of 4 physical networks in a Cloud Data Center. [2x4 marks] b. <i>Represent</i> in a <i>diagram</i> the physical networks and their connectivity to different components. [2 marks]	10	CO3
Q 8.	<i>Justify</i> the need for SDN in Cloud Deployments.	10	CO4
Q 9.	<b>Compare</b> Containerization with Virtualization by <u>highlighting the differences</u> .	10	CO4
	<b>OR</b>		
	<i>Create and explain</i> Microservice deployed by Containerization and maintained using DevOps <u>using an example</u> .		CO4

**SECTION C**

Q 10.	<i>Construct</i> any one of the possible OpenStack Deployment Architecture on physical infrastructure. <i>Draw</i> block diagram. <i>Explain</i> the model.	20	CO3
Q 11.	Being Chief Operating Officer [COO] of NoRains Beverages company you are evaluating multiple vendors for moving your in-house IT infrastructure onto public cloud provider. <i>List</i> and <i>justify</i> the factors that you will use in selecting cloud vendor.	20	CO5
	<b>OR</b>		
	As Chief Technology Officer [CTO] of InstantApp web-app development company you have to <i>evaluate</i> the major vendors like Amazon, Azure, Google, Oracle, Rackspace and such. <i>Summarize</i> your findings to justify why you would select one of them to migrate your data center on their platform.		CO5