

Name:	 UPES UNIVERSITY WITH A PURPOSE
Enrolment No:	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
Online End Semester Examination, Dec 2020

Course: Virtualization and Cloud Computing	Semester: V
Program: B Tech (CSE-IT Infrastructure)	Time 03 hrs.
Course Code: CCVT-3014	Max. Marks: 100

SECTION A

- 1. Each Question will carry 5 Marks**
- 2. Instruction: Answer in brief**

S. No.	Question	CO
Q 1	Differentiate between Emulation and Virtualization. Give at least 2 meaningful differences	CO1
Q2	List types of hypervisors and their functions? Give at least 2 functions.	CO2
Q3	What do you understand by 'Application Portability'? Give an example	CO1
Q4	List the components of cloud. Discuss the functionality of at least 2 of them.	CO4
Q5	In context of cloud computing, define the following terms: (a). Multitenancy (b). Elasticity	CO3
Q6	Elucidate the relationship between Cloud and Virtualization. Give example to support your answer.	CO3

SECTION B

- 1. Each question will carry 10 marks**
- 2. Instruction: Write short / brief notes**

Q 7	Compare full and partial virtualization. Discuss when is it advised to go for para virtualization?	CO2

Q 8	Describe and briefly explain how does Storage Virtualization overcome the challenges of Interoperability, Manageability and Security?	CO1
Q 9	Discuss PAAS. List at least 6 examples of PAAS.	CO4
Q 10	Give an example to elaborate on advantages of VPN? Use illustrations.	CO1
Q 11	Taking an example of your own discuss the implementation of desktop virtualization outlining its benefits. Use neat illustrations.	CO1

Section C

- 1. Each Question carries 20 Marks.**
- 2. Instruction: Write long answer.**

Q12	<p>Rutgers college, in New Jersey, has IT staff being faced with challenge to double the size of the school's 500-square-foot data center. Rutger's growing need for more services, more applications, and more servers was fast outpacing its capacity. But the \$2 million price tag for the expansion was hanging heavy over the IT department. The college has 1700 students. They currently have 101 physical servers. Some servers are the web servers hosting web sites, some of them run various services of student admissions, some handle finance, planning, and business issues of college, and some are email servers and the other servers that handle day-to-day tasks of the college. These servers have been constantly eating away their floor space.</p> <p>The college is looking for a solution that saves on their number of servers, physical space and cost. They are looking for a better manageability. They do not want to invest in additional servers to meet their growing computing requirements.</p> <p>Suggest solution to Rutgers College. Describe in detail how step-wise suggested solution can be implemented and how it can overcome the issues faced by them.</p> <p style="text-align: center;">OR</p> <p>'Dazzle Diamonds' is a multi-national firm dealing with business of sale-purchase of diamonds, and design of diamond jewelry items. They have been in business for last five decades and successfully holding on to significant percentage of market share in India. These days they want to move their operations to digital space. They have five outlets across the country. They deal with both confidential data (trademarked designs, email data, customer records, financial dealings with suppliers/customers/market stakeholders, product pricing specifications, quality checks details etc). Certain design software for antic designs are old time and require legacy environment. Availability, Reliability and Security are of prime importance to 'Dazzle Diamonds', while they deal with their customers, their orders and their internal processes. On other hand, the company wants to heavily spend on its marketing and promotional campaigns, they want to regularly advertise their products, schemes, offers and customer satisfaction stories.</p> <p>The organization wants to deploy cloud model. Discussing the decision factors suggest an appropriate cloud deployment model. Describe in detail your solution and its benefits to the organization. Make suitable assumptions as required.</p>	CO5
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