

- (c) Ethernet
 - (d) Intranet
- 1-d. Which of the following can be considered PaaS offering? (CO2) 1
- (a) Google Maps
 - (b) Gmail
 - (c) Google Earth
 - (d) All of the mentioned
- 1-e. Type-1 Hypervisor runs directly on underlying _____ (CO3) 1
- (a) Software
 - (b) Hardware
 - (c) Firmware
 - (d) Compiler
- 1-f. A “service” is the atomic unit of an _____(CO3) 1
- (a) Service oriented architecture (SOA)
 - (b) Openstack
 - (c) EC2
 - (d) HTTP
- 1-g. Goal of Cloud security is. (CO4) 1
- (a) Prevent cloud services
 - (b) lack in security
 - (c) Utility
 - (d) only a and b
- 1-h. Provisioning parameters helps to (CO4) 1
- (a) Minimize response time
 - (b) Maximize Cost
 - (c) Maximize SLA Violation
 - (d) All of the mentioned
- 1-i. What is Google App Engine for? (CO5) 1
- (a) Google App Engine is for detecting malicious apps.
 - (b) Google App Engine is for running web applications on Google’s infrastructure
 - (c) Google App Engine replaces the modern computer

(d) Google App Engine is a system to develop hardware interfaces.

- 1-j. Application of Big Data is _____.(CO5) 1
- (a) Education
 - (b) Banking
 - (c) Insurance
 - (d) All of the above

2. Attempt all parts:-

- 2.a. Define PaaS service. (CO1) 2
- 2.b. write the various services given by AWS. (CO2) 2
- 2.c. Discuss the Virtualization in brief. (CO3) 2
- 2.d. Explain global exchange of cloud resources with suitable example. (CO4) 2
- 2.e. Discuss any 5 advantages of Google App Engine. (CO5) 2

SECTION B

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3. Answer any five of the following:-

- 3-a. Draw the Cloud Architecture .Explain the benefits over the parallel computing. (CO1) 6
- 3-b. Explain on-demand functionality in cloud computing with suitable example. (CO1) 6
- 3-c. Discuss the role of cloud broker and cloud carrier in the NIST Reference Architecture. (CO2) 6
- 3-d. Discuss the operational and economic benefits of PaaS. (CO2) 6
- 3.e. Differentiate between REST and SOAP. (CO3) 6
- 3.f. Define VM security and also write the steps to evaluate security. (CO4) 6
- 3.g. Describe cloud federation and future of cloud federation. (CO5) 6

SECTION C

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4. Answer any one of the following:-

- 4-a. Identify the drawback of client server computing and justify how to remove by cluster computing? (CO1) 10
- 4-b. Discuss the various services of cloud vendors. (CO1) 10

5. Answer any one of the following:-

- 5-a. Discuss in detail about NIST architecture of cloud computing with actors and their functions.. (CO2) 10
- 5-b. List and discuss the principles for designing public cloud, private cloud and hybrid cloud. 10

(CO2)

6. Answer any one of the following:-

6-a. Describe Hypervisor. Differentiates between native Hypervisor and Hosted Hypervisor. 10
(CO3)

6-b. Write note on 1) Server Virtualization 2) Cloud Disaster Recovery 3) Memory Virtualization. 10
(CO3)

7. Answer any one of the following:-

7-a. Describe Cloud Resource Provisioning and Express the various types of cloud resources provisioning method. (CO4) 10

7-b. "Cloud security helps to know organization's risks and their business impact", clarify the statement in detail. (CO4) 10

8. Answer any one of the following:-

8-a. Define " volume" , "variety" and "velocity" .Discuss challenges with big data. (CO5) 10

8-b. Explain Open Stack. Draw your review on the component that offers networking facility to user in OpenStack. (CO5) 10