BCA (H) Semester-VI Examination, 2022-23

Bachelor of Computer Application [Honours]

Course ID : 63316   **Course Code : BCA/DSE-03**

Course Title : Cloud Computing

Time : 3 Hours   Full Marks : 80

The figures in the right-hand margin indicate marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

GROUP–A

1. Answer **all** the questions: 1×10=10

    i)   Which of the following factors should a company consider before implementing cloud computing systems?

         a)   User Satisfaction

         b)   Potential cost reduction

         c)   Information sensitivity

         d)   All of the above

         e)   None of the above

    ii) Which of the following techniques is vital for creating cloud computing environments?

         a)   Virtualization

         b)   Personalization

         c)   Localization

         d)   All of the above

         e)   None of the above

    iii) Which of the following service is not a cloud computing service/solution?

         a)   Amazon EC2

         b)   Google GAE

         c)   IBM Deep Blue

         d)   Microsoft Azure

         e)   None of the Above

    iv) Which of the following programming language did Google include for development around APP engine?

         a)   C++

         b)   Java

         c)   SQL

         d)   Visual Basic

         e)   None of the above

v) Which one of the following providers provides compliance as a Services (SaaS)?

a) Amazon

b) GoGrid

c) Bankserv

d) RackSpace PCI

e) None of the above

vi) What is the expansion of WSDL expands to-

a) Web Security Description Language

b) Web Service Description Language

c) Web Solution Description Language

d) Web Service Differentiation Language

e) None of the above

vii) Which of the following describes a cloud services that can only be accessed by a limited number of people?

a) Data center

b) Private cloud

c) Public cloud

d) Virtualization

e) None of the above

viii) Amazon Web Services is which type of cloud computing distribution model?

a) SaaS

b) PaaS

c) IaaS

d) Baas

e) None of the above

ix) What is Cloud Foundry?

a) A Factory that produces cloud components

b) VMware-led open source PaaS

c) An industry wide PaaS initiative

d) VMware-led closed sources PaaS

e) None of the above

x) Which of the following isn't an advantage of cloud?

a) No worries about running out of storage

b) Easier to maintain a cloud network

c) Immediate access to computing resources

d) Paying only for what you use

e) None of the above

GROUP–B

2. Answer any **ten** questions: 2×10=20

   i) What is IaaS?

   ii) What is Hypervisor?

   iii) What is load balancing?

   iv) What is meant by Elasticity and Multitenancy?

   v) Mention the layers of PaaS architecture.

   vi) Write about Function as a Services.

   vii) Mention the reliability and availability of cloud computing.

   viii) What is on demand functionality? How it is provided in cloud computing?

   ix) What are the security benefits of cloud computing?

   x) How would you secure data for transport in cloud?

   xi) What do you mean by VPN? What does it contain?

   xii) What are sever less components in cloud computing?

   xiii) List the platforms that are used for large scale cloud computing.

   xiv) Explain the difference between cloud and traditional data centers.

   xv) How does resource replication take place in cloud computing?

GROUP–C

3. Answer any **four** questions: 5×4=20

   i) Explain PaaS with example. What is the difference between PaaS and IaaS? 3+2

   ii) Write a short note on Hypervisor.

   iii) Differentiate between Google Ad Words and Ad sense.

   iv) Explain different computing platforms and technologies.

   v) Describe communications in cloud computing.

   vi) Explain in brief, what "Multitenancy" is in the context of SaaS. Mention three significant characteristics of a typical SaaS solution. 2+3

GROUP–D

4. Answer any **three** questions: 10×3=30

   i) With respect to the NIST Reference Model of Cloud Computing, explain the following with suitable schematic and example:

   a) Service Model

   b) Deployment Model

ii) Describe key parameters used in a typical Cloud Service Level Agreement. Discuss three main advantages and two major disadvantages of cloud computing with suitable examples. 6+4

iii) a) Difference between 'Full Virtualization' and 'Para-virtualization'.

b) Amazon Machine Images (AMI) use both types of virtualization, namely, Hardware Virtual Machine (HVM) as well as Para-virtualization (PV). Mention the respective situations in which AMI's can use PV or HVM. 7+3

iv) a) Explain Amazon EC2 service characteristics.

b) Describe how cloud computing technology can be applied to support remote ECG monitoring. 5+5

v) What is Eucalyptus? Explain the Eucalyptus architecture with diagram. 2+8

vi) Briefly explain the architecture of IBM Smart Cloud with a neat architectural diagram. Explain load balancing. 8+2

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