Bharati Vidyapeeth's
Institute of Computer Applications and Management (BVICAM)
A-4, Paschim Vihar, New Delhi-63
THIRD SEMESTER [MCA] Internal Examination, September 2023

Paper Code: MCA–223	Subject: Cloud Computing
Time: 2 Hours	Maximum Marks: 45

Note: Attempt THREE questions in all. Question No. 1 is compulsory, and attempt one question from each unit.

1. Answer all the following questions briefly: -   1.5 × 10 = 15

    (a) What is a hypervisor? What are its types?   CO2

    (b) Explain storage virtualization.   CO2

    (c) Describe Guest operating System?   CO2

    (d) What is meant by Elasticity and Multitenancy?   CO1

    (e) What is a docker? Give an insight on popularity of docker   CO2

    (f) Discuss the IDAAS's different illustrations   CO1

    (g) Highlight the importance of the term "cloud computing" with its applications.   CO1

    (h) Differentiate grid computing and cloud computing   CO1

    (i) Give the basic operations of a VM.   CO2

    (j) Differentiate between the different service models of cloud computing. CO1

UNIT - I

2. (a) Judge the different computing models based on the parameters such as   5 CO1
         resource handling, scalability, reliability, network type, security etc.

    (b) Suppose you open up your own organization named ABC. They want to   5 CO1
         migrate some of their webservers to an IaaS instance in AWS to test their
         strategy. They understand that they need to do a full migration plan first, but
         they want to determine what sort of architecture would be required to
         support their web services. Explain the types of Cloud Architectures that you
         think would be useful for ABC to use as part of their webserver infrastructure
         in the Cloud.

    (c) Apply map reduce algorithm to solve a word count problem. Discuss the file   5 CO1
         system where we can apply map reduce.

3. (a) Service providers are responsible for giving services to the customers.   5 CO1
         Elaborate on the different service providers, their features and differences.

    (b) Axis bank hires you in the IT Department. The data of the bank is increasing   5 CO1
         at a high pace. Axis bank is a big fish in banking sector and needs a secure
         platform to save all its customers information. Scaling up is also a challenge
         for them? What solution you will suggest to your manager and why? As per
         you suggestion manger will ask you the following questions:
         a) How will the solution given by you affect the company?

b) Which deployment model will you prefer and why?

(c) Elaborate the cloud reference model used to control access to computer resources. 5 CO1

UNIT - II

4. (a) Differentiate between containerization and virtualization 5 CO2

(b) Suppose a company decides to set up a cloud to deliver Software as a Service to its clients through a remote location. What are the security risks for which a customer needs to be careful about? 5 CO2

(c) What are the levels of virtualization while we are implementing virtualization in any hardware architecture? 5 CO2

5. (a) You as a student has made an ERP system for your institute on a cloud platform and it is working well. Your teachers are also happy by its working. Now the membership of institute from that cloud provider is finished and institute wants to move to another service provider. As soon as the new ERP system is moved to new cloud provider, it is not working. What is the reason and what is its solution? 5 CO2

(b) Explain privacy and trust issues in cloud computing. 5 CO2

(c) Explain the different Virtualization implementation techniques in detail 5 CO2