**MCA DEGREE EXAMINATIONS:  NOV/DEC 2023**

(Regulation 2020)

Third Semester

**MASTER OF COMPUTER APPLICATIONS**

P20CAI3203 **:** Cloud Application Development

## COURSE OUTCOMES

**CO1:**     Design and develop elegant and flexible cloud software solutions.

**CO2:**     Manage and deploy a cloud-based application.

**CO3:**     Analyze a real-world problem and develop a cloud-based software solution.

**CO4:**     Evaluate the deployment of web services from cloud architecture.

**CO5:**     Evaluate the security issues related to the development of cloud applications.

**CO6:**     Develop services using cloud computing.

**Time: Three Hours**                                                                                    **Maximum Marks: 100**

### Answer all the Questions:-

### PART A (10 x 2 = 20 Marks)

| | | | |
|---|---|---|---|
| 1. | Why do we need a hybrid cloud? Justify | CO1 | [K$_1$] |
| 2. | List any two open-source platforms used for creating and managing private clouds. | CO1 | [K$_1$] |
| 3. | What is on-demand functionality? How is it provided in cloud computing? | CO2 | [K$_2$] |
| 4. | What is the difference between cloud datacenters and traditional datacenters? | CO2 | [K$_2$] |
| 5. | List the benefits of Amazon Elastic File System (EFS). | CO4 | [K$_1$] |
| 6. | What is CRM in Salesforce? | CO3 | [K$_1$] |
| 7. | Summarize the purpose of Azure Resource Manager (ARM) in Microsoft Azure. | CO4 | [K$_1$] |
| 8. | Illustrate the primary purpose of Microsoft SharePoint Services and provide an example of a scenario for enhance collaboration within an organization. | CO4 | [K$_2$] |
| 9. | Define encryption and how to relate the context in cloud computing. | CO5 | [K$_2$] |
| 10. | What is the advantage for using version control in AWS S3? | CO6 | [K$_2$] |

### PART B (6 x 5 = 30 Marks)

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|---|---|---|---|
| 11. | Explain the concept of scalability and highly availability in cloud computing and provide a real-world example. | CO2 | [K$_2$] |

| 12. | Why do we prefer to go with Cloud Computing? what are the advantages of using cloud computing? | CO1 | [K2] |
|---|---|---|---|

| 13. | Define Software as a Service (SaaS) and elucidate its advantages. | CO2 | [K2] |
|---|---|---|---|

| 14. | What are the various ways to provide cloud security? Explain. | CO5 | [K2] |
|---|---|---|---|

| 15. | How does cloud database distinguish itself from traditional on-premises Relational Database Management Systems (RDBMS)? | CO6 | [K3] |
|---|---|---|---|

| 16. | What is the difference between private or public cloud? provide a real-time example for illustrating this preference. | CO3 | [K2] |
|---|---|---|---|

## Answer any FIVE Questions
## PART C (5 x 10 = 50 Marks)

| 17. | As an AWS Cloud Operations Engineer, you are responsible for carrying out the maintenance, considering scalability, reliability, and cost-effectiveness, Design and plan cloud infrastructure solutions based on business requirements. If a primary computer system (EC2 instance) fails in the data center, elaborate the steps that must be carried out to overcome the failure. illustrate the same with a neat sketch. | CO2 | [K3] |
|---|---|---|---|

| 18. | Explain the difference between Amazon Elastic Block Store (EBS) and Amazon Simple Storage Service (S3). You have an EC2 instance running a database on AWS, and you need to increase storage by attaching an additional EBS volume. Describe the steps to attach the volume, ensuring it's ready for use by the volume. | CO3 | [K3] |
|---|---|---|---|

| 19. | What is the difference between AWS RDS with DynamoDB? Write the step -by- step procedure to create a student database and update the records in std_profile table using RDS - MySQL. | CO4 | [K3] |
|---|---|---|---|

| 20. | You are working as a Network Manager in ABC IT service company and you are responsible for overseeing four different networks with different subnets, each comprising four routers and multiple switches connecting 100 computers each, all operating in internet-enabled environments, how will you secure your networks? Explain with neat sketch. | CO6 | [K3] |
|---|---|---|---|

21. Contrast between hosting a static website on a traditional web server and utilizing Amazon S3? Additionally, elucidate the steps involved in constructing a static website by creating an HTML file and hosting the resulting index.html file in an S3 bucket.    CO5    [K$_4$]

22. What is hypervisor? Why hypervisor is important in Cloud Computing? What are the benefits of hypervisor?    CO1    [K$_2$]

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