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**MCS-227**

**MASTER OF COMPUTER  
APPLICATIONS**

**(MCA-NEW)**

**Term-End Examination**

**June, 2026**

**MCS-227 : CLOUD COMPUTING  
AND IoT**

*Time : 3 Hours*

*Maximum Marks : 100*

*Weightage : 70%*

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**Note :** (i) *Question No. 1 is compulsory.*

(ii) *Answer any three questions from the rest.*

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1. (a) Describe the fundamental differences between traditional computing and cloud computing. 5

- (b) Explain the layers and anatomy of the cloud. 5
- (c) List cloud deployment models and discuss any *two* of them. 10
- (d) Compare Single Tenancy with Multi-Tenancy. Describe the various ways through which Multi-Tenancy can be implemented. 10
- (e) What is Identity and Access Management (IAM) in cloud computing. Write benefits and challenges of IAM. 10
2. (a) Explain the concept of load balancing in cloud and discuss any *two* load balancing strategies. 10

- (b) What is virtualization ? Explain network and storage virtualization techniques. 10
3. (a) What is industrial IoT ? How is it related to industry 4.0 ? Discuss IIoT architecture with the help of a block diagram. 10
- (b) What is M2M and how is it different from IoT ? List the applications, benefits and challenges of M2M. 10
4. (a) What is cloud elasticity ? How does it work ? List its advantages and also discuss any *two* use cases briefly. 10
- (b) What is Resource Pooling ? With respect to resource pooling architecture, explain the following : 10
- (i) Server pool
  - (ii) Storage pool
  - (iii) Network pool

5. Write short notes on any *four* of the following : 20

- (a) VM sizing
- (b) Multi-cloud computing
- (c) Smart Grids
- (d) Fog-computing
- (e) Edge computing

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