Atal Bihari Vajpayee Indian Institute of Information Technology & Management, Gwalior

IT401: Cloud Computing

Major Examination (Session 2023–24)

Maximum Time: 3 Hours   Max Marks: 60

Note: Answer all questions. Illustrations/diagrams will be rewarded.

1. (a) Explain the layered architecture of cloud computing. (b) Discuss advantages and disadvantages of public, private, and hybrid clouds.   (10 Marks)

2. (a) Explain hypervisors with examples of Type-I and Type-II. (b) Why are hypervisors critical in IaaS?   (10 Marks)

3. (a) Describe cloud storage architectures. (b) Discuss consistency and availability trade-offs in distributed cloud storage.   (10 Marks)

4. (a) What is MapReduce? Explain its working with a suitable example. (b) Compare with Apache Spark framework.   (10 Marks)

5. (a) Explain in detail cloud security threats such as multi-tenancy issues and data breaches. (b) Suggest methods to mitigate these risks.   (10 Marks)

6. Short Notes (any two): (i) Cloud orchestration (ii) Serverless computing (iii) Green cloud computing   (10 Marks)