

SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN  
(AUTONOMOUS)

(Affiliated to the University of Madras and Re-accredited with 'A+' Grade by NAAC)  
Chromepet, Chennai — 600 044.

B.Sc.(CGS) END SEMESTER EXAMINATIONS NOVEMBER -2023

SEMESTER - III

**21UCGCT3004 - Virtualization and Cloud**

Total Duration : 2 Hrs 30 Mins.

Total Marks : 60

### **Section B**

Answer any **SIX** questions ( $6 \times 5 = 30$  Marks)

1. Explain the concept of a distributed system and its advantages over a centralized system.
2. Describe the benefits of cloud computing system.
3. Classify the five essential characteristics of cloud computing and detail their contributions to the overall cloud infrastructure.
4. Solve the challenge of ensuring data security and compliance in cloud computing by implementing encryption and access control mechanisms.
5. Show the step-by-step process of creating a virtual machine in vSphere from selecting hardware specifications to install the operating system.
6. Infer the benefits of configuring virtual networks in vSphere in terms of increased flexibility and isolation of network traffic.
7. Interpret the importance of securing virtual machines in vSphere and highlights the key security features available for VM protection.
8. Organize the key components of a data center and their significance in supporting critical IT operations.

### **Section C**

Answer any **THREE** questions ( $3 \times 10 = 30$  Marks)

9. Predict the performance of a distributed system, when adding new nodes or handling sudden increases in user traffic.
10. Compute the potential cost savings that a company can achieve by migrating its IT infrastructure from a traditional setup to a public cloud environment.
11. Determine the role of vSphere in enabling disaster recovery solutions and recommend specific features to ensure business operations and data protection.

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12. Relate the benefits of vSphere Fault Tolerance in maintaining continuous availability for critical virtual machines without any downtime.
13. Examine the different rack types used in data centers and evaluate their suitability for specific hardware components and equipment.

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