| Name:<br><br>Enrolment No: |  |
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**UNIVERSITY OF PETROLEUM AND ENERGY STUDIES**
**End Semester Examination, December 2022**

Course: Introduction to Virtualization and Cloud Computing      Semester: 3rd
Program: B. Tech.      Time      : 03 hrs.
Course Code: CSVT 2001      Max. Marks: 100

**Instructions: Attempt all questions**

### SECTION A
### (5Qx4M=20Marks)

| S. No. | | Marks | CO |
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| Q 1 | What are the economics concerns related with cloud computing? | 4 | CO1 |
| Q 2 | Differentiate among emulation, simulation, and virtualization. | 4 | CO2 |
| Q 3 | Briefly explain the role of different cloud service delivery model. | 4 | CO3 |
| Q 4 | (i) Set of servers that serve critical functions in the organization and Servers that constantly run at a higher utilization about 95% of the time can be retained as physical servers. True/False<br><br>(ii) The workload consists of some amount of application program running in the computer and number of users connected to it and interacting with the computer's applications. True/False<br><br>(iii) _____ enables dependent servers to be placed together on the same physical server and collected locally to enable better communication and reduction in communication and IO latency.<br><br>(iv) Regulated Industry workloads adhering to PCI, HIPAA compliance regulations are not suitable for which clouds.<br>    a) Public<br>    b) Hybrid<br>    c) Private<br>    d) None | 4 | CO4 |
| Q 5 | Differentiate between Cloud, Grid and Cluster Computing. | 4 | CO1 |

### SECTION B
### (4Qx10M= 40 Marks)

| Q 6 | What are the open challenges of cloud computing? | 10 | CO1 |
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| | **OR** Explain in detail the characteristics of a virtualized environment. | | |
| Q 7 | (a) Differentiate full virtualization and para-virtualization. (b) Differentiate between container and virtual machines. | **5*2 = 10** | **CO2** |
| Q 8 | What is public cloud? Analyze a public cloud on the parameter of decision factors. | **10** | **CO3** |
| Q 9 | What are the different types of workloads. Explain each in detail. | **10** | **CO4** |
| | **SECTION-C** **(2Qx20M=40 Marks)** | | |
| Q 10 | What is cloud computing? Discuss its anatomy in detail. **OR** Discuss the different cloud deployment decision factor in context of hybrid cloud. | **20** | **CO3** |
| Q 11 | What are the different types of virtualizations? Explain the different architectures for design of storage virtualization. | **5+15 = 20** | **CO2** |