



B.TECH DEGREE EXAMINATIONS: DEC 2022

(Regulation 2018)

Seventh Semester

INFORMATION TECHNOLOGY

U18ITI7202 - Cloud Computing

COURSE OUTCOMES

CO1:	Develop private cloud using tools
CO2:	Identify cloud service and its applications
CO3:	Illustrate functions of web service with cloud service
CO4:	Apply virtualization concepts for real time problems
CO5:	Develop Economic based scheduling algorithm
CO6:	Create algorithm using different Queuing model

Time: Three Hours

Maximum Marks: 100

**Answer all the Questions: -
PART A (10 x 1 = 10 Marks)**

1. Matching the following

CO1 [K₂]

List I	List II
A. Xen architecture	i. Open source hypervisor based on Linux
B. KVM architecture	ii. VMWare ESX server
C. High level language VM	iii. ISA defined user module programs
D. VMWare	iv. Micro kernel hypervisor

	A	B	C	D
a)	iv	i	ii	iii
b)	iii	i	iv	ii
c)	ii	iii	iv	i
d)	ii	i	iv	iii

2. The _____ cloud infrastructure is operated for the exclusive use of an organization.

CO1 [K₁]

- | | |
|-----------------|--------------------|
| a) Public cloud | b) Private cloud |
| c) Hybrid cloud | d) Community cloud |

3. Which of the following statements are false?

CO3 [K₂]

- i) SOA provides the standards that transport the messages and makes the infrastructure to support it possible
- ii) SOA provides access to reusable Web services over a SMTP network
- iii) SOA offers access to ready-made, modular, highly optimized, and widely shareable components that can minimize developer and infrastructure costs

- a) i only
- b) i and ii
- c) ii only
- d) i, ii and iii

4. Azure Storage plays the same role in Azure, that _____ plays in Amazon Web Services CO2 [K1]

- a) EC2
- b) S3
- c) EC3
- d) S2

5. **Assertion (A):** The web-based project management program known as @task (www.attask.com) offers a variety of traditional projection management functions. CO4 [K2]

Reason (R): In @ task the tasks are fine-tuned with the variety of filter techniques.

- a) Both A and R are Individually true and R is the correct explanation of A
- b) Both A and R are Individually true but R is not the correct explanation of A
- c) A is true but R is false
- d) A is false but R is true

6. Matching the following CO2 [K2]

List I	List II
A. AOL instant messenger	i. Text based instant message and VoIP phone calls
B. Google Talk	ii. America Online (AOL)
C. ICQ	iii. MSN messenger
D. Windows Live messenger	iv. RSS feeds, file sharing

- | | | | | |
|----|-----|-----|----|-----|
| | A | B | C | D |
| a) | iv | i | ii | iii |
| b) | iii | i | iv | ii |
| c) | ii | iii | iv | i |
| d) | ii | iv | i | iii |

7. Identify the correct sequence order of High Level VM CO4 [K2]

- 1.Host instructions
- 2.Portable code
- 3.Virtual memory image
- 4.HLL program

- a) 4-2-3-1
- b) 2-1-3-4
- c) 2-4-1-3
- d) 1-2-3-4

8. Select the correct statements about paravirtualization. CO5 [K₂]
- i. Guest OS must be tailored specifically to run on top of the virtual machine monitor.
 - ii. Xen is an open-source software project, incorporates paravirtualization.
 - iii. The cost of maintaining paravirtualization is very low.
 - iv. Para virtualization is more complicated one.
- a) i b) i, ii
 c) ii d) i, ii, iii
9. **Assertion (A):** VM Ware is the industry’s first full fill architecture virtualization that allows enterprises and small business to transform, manage and optimize their IT system infrastructure through virtualization. CO5 [K₂]
- Reason (R):** VMware Workstation supports bridging existing host adapters and sharing physical disk drives and USB devices with a virtual machine
- a) Both A and R are Individually true and R is the correct explanation of A b) Both A and R are Individually true but R is not the correct explanation of A
 c) A is true but R is false d) A is false but R is true
10. Identify the correct sequence taxonomy of Process virtual machine CO3 [K₂]
1. Multiprogrammed systems
 2. Same ISA
 3. Dynamic binary optimizers
 4. Process VMs
- a) 1-2-3-4 b) 2-4-1-3
 c) 3-4-2-1 d) 4-2-1-3

PART B (10 x 2 = 20 Marks)
(Answer not more than 40 words)

11. Explain about cloud service provider and service consumer. [CO1] [K₂]
12. Differentiate Private and public cloud. [CO2] [K₂]
13. What is Google file system? [CO2] [K₂]
14. Define Virtualization and its types. [CO3] [K₂]
15. What is online calendar application? Give four examples [CO3] [K₂]
16. Enumerate network virtualization. [CO4] [K₂]
17. Differentiate system virtual machine and process virtual machine. [CO4] [K₂]
18. Draw the relation between VM and VMM. [CO5] [K₂]
19. What do you mean by Social Network Analysis? [CO6] [K₂]
20. What is the role of Open Cloud Consortium? [CO6] [K₂]

**Answer any FIVE Questions: -
PART C (5 x 14 = 70 Marks)
(Answer not more than 300 words)**

Q.No. 21 is Compulsory

- | | | | | |
|-----|---|----|-------|-------------------|
| 21. | Describe the working principles of Hadoop and HDFS architecture. | 14 | [CO2] | [K ₂] |
| 22. | What do you understand by service-oriented architecture (SOA)? How it supports cloud computing? Explain.
What is Cloud Reference Model? What are the applications of these models? | 7 | [CO1] | [K ₃] |
| 23. | (i). Briefly explain about any two open-source tools used for managing cloud computing.
(ii). What are the essential characteristics of cloud computing? | 7 | [CO2] | [K ₂] |
| 24. | List the types of web-based communication tools and explain each of the categories. | 14 | [CO3] | [K ₃] |
| 25. | (i). Explain the pros and conditions of a virtualization offered by both organizations and vendors.
(ii). What is market-based management of clouds? | 10 | [CO5] | [K ₂] |
| 26. | What is the need of virtualization? Discuss the architecture of Hyper-V and discuss its use in cloud computing. | 4 | [CO6] | [K ₂] |
| | | 14 | [CO4] | [K ₃] |
