

- b. Outline the following virtualization with neat sketch. 10 3 2 5  
 (i) Hardware assisted CPU virtualization  
 (ii) Memory virtualization
28. a. How to sort the different clouds such as public, private and hybrid clouds? 10 2 3 1  
 With a neat diagram explain.
- (OR)
- b. Demonstrate the concept of full virtualization implementations. 10 3 3 3  
 (i) Binary translation of guest OS request using VMM.  
 (ii) Host based virtualization.
29. a.i. What is enterprise service bus? How does it work. 5 2 4 1  
 ii. With a neat sketch, discuss the 3tier system architecture. 5 2 4 1
- (OR)
- b. Describe about message oriented middleware architecture of publish and subscribe model. 10 3 4 5
30. a. In detail explain the programming on Amazon EC<sub>2</sub>. 10 2 5 1
- (OR)
- b. Discuss about Swazall and pig Latin high level language for parallel data processing. 10 3 5 5

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Reg. No.

**B.Tech. DEGREE EXAMINATION, MAY 2022**  
 Sixth Semester

**18ECE335T – INTRODUCTION TO VIRTUAL COMPUTING**  
 (For the candidates admitted from the academic year 2018-2019 to 2019-2020)

**Note:**

- (i) **Part - A** should be answered in OMR sheet within first 40 minutes and OMR sheet should be handed over to hall invigilator at the end of 40<sup>th</sup> minute.  
 (ii) **Part - B** should be answered in answer booklet.

Time: 2½ Hours

Max. Marks: 75

**PART – A (25 × 1 = 25 Marks)**

Answer **ALL** Questions

- |   | Marks | BL | CO | PO |
|---|-------|----|----|----|
| 1. The transparency that enables multiple instances of resources to be used is called _____<br>(A) Replication transparency (B) Scaling transparency<br>(C) Concurrency transparency (D) Performance transparency                         | 1     | 1  | 1  | 1  |
| 2. A paradigm of multiple autonomous computers, having a private memory, communicating through a computer network, is known as _____<br>(A) Distributed computing (B) Cloud computing<br>(C) Centralized computing (D) Parallel computing | 1     | 1  | 1  | 1  |
| 3. Cloud computing and web services platform are focused on applications like _____<br>(A) High performance computing (B) High throughput computing<br>(C) High control computing (D) High redundancy computing                           | 1     | 2  | 1  | 5  |
| 4. A global system of interconnected computer networks is known as _____<br>(A) Ethernet (B) Intranet<br>(C) Internet (D) Ultra-net   | 1     | 1  | 1  | 1  |
| 5. Grid and cloud platforms are regarded as _____<br>(A) Parallelized services (B) Innovative services<br>(C) Utility services (D) Cyber services   | 1     | 2  | 1  | 5  |
| 6. Logical extension of computation migration is _____<br>(A) Process migration (B) System migration<br>(C) Thread migration (D) Data migration   | 1     | 1  | 2  | 1  |
| 7. Processes on the remote systems are identified by _____<br>(A) Host ID (B) Host name and identifier<br>(C) Identifier (D) Process ID   | 1     | 2  | 2  | 1  |

8. Which technique is based on compile time program transformation for accessing remote data in a distributed memory parallel system? 1 2 2 1  
 (A) Cache coherence scheme (B) Computation migration  
 (C) Remote procedure call (D) Message passing
9. In distributed systems, link and site failure is detected by 1 1 2 1  
 (A) Polling (B) Handshaking  
 (C) Token passing (D) First come first serve
10. In the context of cloud computing, what is the full form of PaaS? 1 1 2 1  
 (A) Payment as a service (B) Platform as a service  
 (C) Performance as a service (D) Protocol as a service
11. Identify the odd one out 1 2 3 3  
 (A) Amazon web service (B) Microsoft azure  
 (C) Google cloud platform (D) Twitter platform
12. Which one of the following runs on XEN hypervisor? 1 1 3 1  
 (A) Azure (B) AWS EC2  
 (C) CAWS EC3 (D) AWS EC4
13. Which one of the following is the type of a service that manages and creates virtual network interfaces? 1 2 3 3  
 (A) VMware Vstorage (B) Application services  
 (C) VMware Vcomputer (D) VMware Vnetwork
14. In which type of VM, full virtualization can be possible? 1 1 3 1  
 (A) Type 4 (B) Type 3  
 (C) Type 2 (D) Type 1
15. Which of the following was owned by an organization that sells cloud services? 1 1 3 1  
 (A) Hybrid (B) Public  
 (C) Private (D) Community
16. The type of architecture that is considered responsible for the success of application servers is said to be 1 2 4 1  
 (A) Two tier architecture (B) Three tier architecture  
 (C) n-tier tier architecture (D) Peer-to-peer architecture
17. \_\_\_\_\_ is the architectural standard for cloud computing industry. 1 2 4 1  
 (A) Standardized web service (B) Web application frameworks  
 (C) Web based architecture (D) Service oriented architecture
18. In which of the following clients must have continuous connection to host to receive the messages? 1 1 4 1  
 (A) POP (B) IMAP  
 (C) SMTP (D) Both A and B

19. The most commonly used set of protocols uses \_\_\_\_\_ as the messaging format. 1 1 4 5  
 (A) JSON (B) BSON  
 (C) XML (D) HTTP
20. \_\_\_\_\_ lets a web service advertise itself in terms of a collection of endpoints. 1 2 4 5  
 (A) SOAP (B) WSDL  
 (C) VMc (D) SOA
21. Which of the following is used for the packaging and distribution of one or more virtual appliances? 1 2 5 5  
 (A) LAMP (B) AJAX  
 (C) OVF(Open Virtualization Format) (D) SMTP
22. What is the example of P2P networks? 1 2 5 1  
 (A) Facebook (B) Amazon  
 (C) Gmail (D) Azure
23. Point out the correct answer 1 2 5 5  
 (A) Data centers have been sited to optimize the overall system latency (B) Flipkart's infrastructure was built to support elastic demand so the system could accommodate peak traffic  
 (C) Datacenter's don't optimize the system latency (D) Google's cloud includes to datacenters worldwide
24. \_\_\_\_\_ enable multiple users to access the same application logic simultaneously. 1 1 5 1  
 (A) Web technology (B) Service technology  
 (C) Virtualization technology (D) Multitenant technology
25. Which of these companies is not a leader in cloud computing? 1 1 5 1  
 (A) Microsoft (B) Blackboard  
 (C) Google (D) Amazon

**PART – B (5 × 10 = 50 Marks)**  
 Answer ALL Questions

- |   | Marks | BL | CO | PO |
|---|-------|----|----|----|
| 26. a. Explain in detail about cluster job and resource management.                                   | 10    | 2  | 1  | 1  |
| (OR)  |       |    |    |    |
| b. Discuss in detail about multicore technologies.  | 10    | 3  | 1  | 5  |
| 27. a. Elaborately discuss about live VM migration steps and performance effects with a neat diagram. | 10    | 3  | 2  | 1  |

(OR)