

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA**(An Autonomous Institute Affiliated to AKTU, Lucknow)****B.Tech****SEM: VI - THEORY EXAMINATION (2022-2023)****Subject: Cloud and Edge Computing****Time: 3 Hours****Max. Marks: 100****General Instructions:****IMP:** Verify that you have received the question paper with the correct course, code, branch etc.

1. This Question paper comprises of **three Sections -A, B, & C.** It consists of Multiple Choice Questions (MCQ's) & Subjective type questions.
2. Maximum marks for each question are indicated on right -hand side of each question.
3. Illustrate your answers with neat sketches wherever necessary.
4. Assume suitable data if necessary.
5. Preferably, write the answers in sequential order.
6. No sheet should be left blank. Any written material after a blank sheet will not be evaluated/checked.

SECTION A**20****1. Attempt all parts:-**

- 1-a. Cloud computing is a kind of abstraction which is based on the notion of combining physical resources and represents them as _____resources to users. [CO1] 1
- (a) Real
(b) Cloud
(c) Virtual
(d) none of the mentioned
- 1-b. Amazon _____ provides developers the tools to build failure resilient applications and isolate themselves from common failure scenarios. [CO1] 1
- (a) EC2
(b) VPC
(c) Both A and B
(d) None of the above
- 1-c. Which of the following characteristics is not true about web services? [CO2] 1
- (a) XML-Based

- (b) Tightly coupled
 - (c) Support RPCs
 - (d) Interoperability amongst applications
- 1-d. The technology used to distribute service requests to resources is referred to as _____ [CO2] 1
- (a) load performing
 - (b) load scheduling
 - (c) load balancing
 - (d) all of the mentioned
- 1-e. S3 Stands for _____ [CO3] 1
- (a) Simple Storage Service
 - (b) Software Storage Service
 - (c) **Software Sampling Service**
 - (d) Cant Say
- 1-f. Salesforce is example of _____ [CO3] 1
- (a) IAAS
 - (b) PAAS
 - (c) SAAS
 - (d) None of these
- 1-g. Edge computing architecture comprises of [CO4] 1
- (a) locations of the servers
 - (b) wireless base stations in a network.
 - (c) Both A and B
 - (d) None
- 1-h. Existing testbed systems have no mechanism for ensuring the RTT between [CO4] 1
- (a) Docker container
 - (b) Normal Container
 - (c) RDS
 - (d) S3
- 1-i. Which OS optimisation code size of AWS IoT OTA (Example generated with GCC for ARM Cortex-M) for ota.c is [CO5] 1
- (a) 9.5 k

(b) 9.8 k

(c) 7.5 k

(d) 8.5 k

- 1-j. In Edge computing OTA stands for _____ [CO5] 1
- (a) Over to Air
- (b) Over the Air
- (c) Open to Air
- (d) Open the Asset

2. Attempt all parts:-

- 2.a. List 4 EC2 Instances types. [CO1] 2
- 2.b. REST stands for _____ [CO2] 2
- 2.c. Give any 2 examples of IAAS and PAAS. [CO3] 2
- 2.d. What is Agent in edge computing. [CO4] 2
- 2.e. Explain the purpose of OTA. [CO5] 2

SECTION B

30

3. Answer any five of the following:-

- 3-a. What are the key differences between parallel computing and distributed computing. [CO1] 6
- 3-b. Explain the term On demand computing with example. [CO1] 6
- 3-c. Explain publish-subscribe model in cloud computing. [CO2] 6
- 3-d. What do you mean by service-oriented architecture? [CO2] 6
- 3.e. Why we need hybrid cloud. Explain in detail. [CO3] 6
- 3.f. Justify, How LAN & WAN technologies helps in edge computing architecture. [CO4] 6
- 3.g. Compare Edge and fog computing. [CO5] 6

SECTION C

50

4. Answer any one of the following:-

- 4-a. How evolution of cloud computing took place. Explain in detail. [CO1] 10
- 4-b. List any 5 Characteristics of cloud computing. How elasticity impact on cloud. [CO1] 10

5. Answer any one of the following:-

- 5-a. Discuss about various types of virtualization. [CO2] 10

5-b. Compare SOA with traditional system architecture. [CO2] 10

6. Answer any one of the following:-

6-a. Write Short Note of [CO3] 10

a. RDS

b. EBS

6-b. Compare in between different cloud deployment models. [CO3] 10

7. Answer any one of the following:-

7-a. Explain the mechanism of launching an edge testbed. [CO4] 10

7-b. Draw the components of edge computing layered architecture. [CO4] 10

8. Answer any one of the following:-

8-a. How complex event processing takes place in edge computing, Explain. [CO5] 10

8-b. Mention some of the real time data streaming applications and explain it's working principle. [CO5] 10

2022-23 Jan_June