

## manojmanu609bv@gmail.com >

NPTEL (https://swayam.gov.in/explorer?ncCode=NPTEL) » Edge Computing (course)



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## Course outline

About NPTEL ()

How does an NPTEL online course work? ()

Week 0 ()

Week 1: Cloud and Edge Computing ()

Week 2 : Edge Computing ()

## Week 8: Assignment 8

The due date for submitting this assignment has passed.

Due on 2025-03-19, 23:59 IST.

## Assignment submitted on 2025-03-10, 23:45 IST

- 1) What distinguishes Context as a Service (CaaS) from On-Demand Data Processing **1** point (ODP) in edge computing?
  - ODP processes data in a batch-processing model, while CaaS processes data in real-time.
  - ODP provides pre-installed methods for request/response processing, while CaaS offers customized data provision methods.
  - ODP is exclusively for SaaS providers, while CaaS is exclusively for IaaS providers.
  - ODP focuses on permanent data storage, while CaaS is limited to temporary data analysis

Yes, the answer is correct.

Score: 1

Accepted Answers:

ODP provides pre-installed methods for request/response processing, while CaaS offers customized data provision methods.

2) What is the primary advantage of using GPUs in edge computing?

1 point

- Reducing network latency
- Increasing data storage
- Accelerating machine learning computations
- Simplifying software deployment

Yes, the answer is correct.

Score: 1

Accepted Answers:

Accelerating machine learning computations

Week 3: 3) Which algorithm is used for long-term optimal resource allocation in edge-cloud 1 point Edge systems? Intelligence Genetic Algorithm Markov Decision Process (MDP) Week 4: Linear Regression Edge Naive Bayes Intelligence Yes, the answer is correct. () Score: 1 Accepted Answers: Week 5: Markov Decision Process (MDP) **Mobile Edge** Computing () 4) How does computing acceleration in edge computing improve performance? 1 point Week 6: By using caching to speed up the delivery of multimedia content. Clock By using GPUs and FPGAs for faster computation and flexibility in program deployment. **Synchronizat** ion () By creating dynamic routing paths for data transmission. By optimizing power consumption in IoT devices. Week 7: Yes, the answer is correct. Security and Score: 1 Privacy in Accepted Answers: Edge By using GPUs and FPGAs for faster computation and flexibility in program deployment. Computing () 5) Which task offloading objective focuses on balancing computational loads across 1 point Week 8: servers? **NVF-SDN** and Load Balance Resource Data Variety allocation in Device Mobility **Edge-Cloud** systems () Privacy Preservation Yes, the answer is correct. Lecture 15: Score: 1 Resource Accepted Answers: Allocation in Load Balance Edge-Cloud Systems (unit? 6) What is the primary advantage of using GPUs in edge computing? unit=78&lesso 1 point n=79) Reducing network latency Lecture 16: : Increasing data storage **NVF-SDN**  Simplifying software deployment (unit? unit=78&lesso Accelerating machine learning computations n=80) Yes, the answer is correct. Score: 1 Week 8: Lecture Notes Accepted Answers: (unit? Accelerating machine learning computations unit=78&lesso n=82)7) What is a key feature of networking acceleration in edge computing? 1 point Quiz: Week 8:

**Assignment 8** 

(assessment? name=100)	Edge nodes use network virtualization to enable multiple routing tables and software defined networking (SDN).				
○ Feedback For	Edge nodes rely on GPUs and FPGAs for fast inferencing and computation.				
Week 8 (unit?	Edge nodes enable fast processing by providing caching for content delivery.				
unit=78&lesso	Edge nodes ensure the secure transfer of data streams between IoT devices and the				
n=101)	cloud	and the			
Download Videos ()	Yes, the answer is correct. Score: 1				
<b>-</b>	Accepted Answers:				
Demo ()	Edge nodes use network virtualization to enable multiple routing tables and software defined networking (SDN).				
	8) What does the record list H in edge-cloud computing track?	1 point			
	The total cost of computation				
	The history of resource allocations				
	The number of active users				
	The remaining VMs in each time slot				
	Yes, the answer is correct. Score: 1				
	Accepted Answers:				
	The history of resource allocations				
	9) What is the primary goal of Collaborative Edge-Cloud (CEC) computing?	1 point			
	○ To maximize data redundancy				
	To minimize long-term operation costs while meeting user demands				
	To eliminate the need for public cloud services				
	To improve the security of cloud storage				
	No, the answer is incorrect. Score: 0				
	Accepted Answers:  To eliminate the need for public cloud services				
	10) Which pricing mode in public cloud provides the lowest cost for users with	1 point			
	predictable, long-term demands?				
	On-Demand Instance				
	O Dynamic Pricing				
	Spot Instance				
	Reserved Instance				
	Yes, the answer is correct. Score: 1				
	Accepted Answers:				

Reserved Instance