BE VIIth Sem R-19 CScheme CSE(IOT) QRcode.10067483

Duration: 3 hrs

[Max Marks: 80]

(11)

N.B. : (1) Question No 1 is Compulsory.
(2) Attempt any three questions out of the remaining five.
(3) All questions carry equal marks.
(4) Assume suitable data, if required and state it clearly.

			Marks
Q1.		Attempt any four	
	a.	Discuss the difference between data leakage and data drift. How can each be prevented in preprocessing?	5
	b.	Explain the concept of "Merkle proof" and how it verifies data integrity?	5
	c.	Describe at least three methods for handling outliers in a dataset.	5
	d.	What is blockchain? Explain the different characteristics of the blockchain.	5
	e.	Difference between shallow and deep neural networks.	5
Q2.	a.	How is consensus helpful in blockchain? Explain any three consensus protocols along with suitable examples.	10
	b.	What is Bayes Theorem? Describe the Naïve Bayes Classifier with a suitable example.	10
Q3.	a.	How does the K-means algorithm work? Explain the steps involved in K-means clustering..	10
	b	Describe the concept of decentralization in blockchain. Why is it an important feature of cryptocurrencies.	10
Q4	a.	How do you handle imbalanced datasets? Describe at least two methods for dealing with imbalance.	10
	b.	Compare and contrast Proof of Work (PoW) with Proof of Stake (PoS) in terms of energy consumption and scalability.	10
Q5	a.	What is a block cipher, What are the advantages and disadvantages of symmetric encryption?	10
	b.	Draw and explain blockchain layer. How do Layer 1 and Layer 2 blockchains differ in terms of decentralization, security, and scalability?	10
Q6		Write short note on (any 4)	20
	a.	Ethereum Virtual Machine (EVM)	
	b.	Decentralized Autonomous Organization	
	c.	Recurrent neural network (RNN) in TensorFlow	
	d.	Ridge and Lasso Regression	
	e.	Gaussian Naive Bayes	

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QP code: 10067692

BE sem VII CSE (IOT) R-19 C scheme

(Time: 3 Hours)   (Total Marks: 80)

N.B. 1. Question **No. 1 compuisory**.
     2. Attempt **any three** out of **remaining five** questions.
     3. Figures to the right indicate full marks.
     4. Draw neat diagram wherever necessary.

Q1		Attempt any **Four** of the following:	
	a.	Compare edge computing architecture and traditional cloud architecture.	5
	b.	State the benefits of implementing machine learning models at the edge?	5
	c.	Define edge caching. How does it enhance application performance?	5
	d	How does fog computing address data privacy and security issues in comparison to cloud computing?	5
	e.	What are the key considerations for deploying middleware in a cloud environment?	5
Q2		Attempt the following:	
	a	Describe how localised security features like encryption and access restrictions can be built into edge devices.	10
	b	Explain the role of frameworks in edge computing. How do they assist in application development and deployment?	10
Q3		Attempt the following:	
	a	Discuss the advantages of using containerization in edge computing applications. How do containers improve deployment and scalability?	10
	b	Describe the levels of an edge computing architecture and their respective functions.	10
Q4		Attempt the following:	
	a	What are the common techniques used for model selection? Explain their advantages and disadvantages.	10
	b	What are the key components of collaborative edge learning frameworks? Explain their roles.	10
Q5		Attempt the following:	
	a	Explain how edge caching alleviates network congestion?	10
	b	Explain the role of middleware in fog computing. How does it support application development and management in a distributed environment?	10
Q6		Write short note on	
	a	Edge computing in the healthcare sector.	10
	b	Fog computing to enhance smart grid technologies.	10

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BE VIIth Sem R-19 cScheme CSE (IOT)

QPCode: 10055703

Duration: 3 hours

Max. Marks: 80

N.B.: 1) Question No.1 is compulsory.
    2) Attempt any THREE questions out of remaining FIVE questions.
    3) Figures to the right indicates full marks.
    4) Assume suitable data if necessary.

Q1		**20**
a	What is Cybercrime? Who are Cybercriminals? Explain.	
b	How Cybercrimes differs from most terrestrial crimes?	
c	What are different Security Risks for Organizations?	
d	Outline the challenges for securing data in business perspective.	

Q.2		
a	What are illegal activities observed in Cyber Cafe? What are safety and security measures while using the computer in Cyber Cafe?	**10**
b	What is digital evidence? Where one can find it.	**10**

Q.3		
a	Explain different types of Cybercrimes.	**10**
b	What are basic security precautions to be taken to safeguard Laptops and Wireless devices? Explain.	**10**

Q.4		
a	Explain Steps for SQL Injection attack. How to prevent SQL Injection attacks?	**10**
b	Discuss steps involved in planning of cyberattacks by criminal.	**10**

Q.5		
a	What is vishing attack? How it works? How to protect from vishing attack?	**10**
b	What is e-commerce? Discuss types of e-commerce.	**10**

Q.6	**Write short notes on any FOUR**	**20**
a	Cyberstalking and harassment	
b	HIPAA	
c	Buffer overflow attack	
d	Botnets	
e	DOS attack	
f	Mobile/Cell Phone attacks	

QPcode: 10054862

BE sem VII CSE (I.OT) R-19 Cscheme

14/12/24

Time: 3hrs

[Max Marks: 80]

N.B: (1) Question No 1 is compulsory.
(2) Attempt any three questions out of the remaining five.
(3) All questions carry equal marks.
(4) Assume suitable data, if required and state it clearly.

Q1. Answer the following [20]

  a. Outline the key security considerations in IoT system architecture.

  b. Delve into integrating security measures within Agile development practices.

  c. Explore the privacy concerns of IoT and outline the associated challenges.

  d. How can enterprise IoT effectively track Lots?

Q2a. Illustrate the concept of attack trees by providing an example [10]

Q2b. Describe the process of managing cryptographic keys in the context of IoT security [10]

Q3a. Elaborate on the identity lifecycle of an IoT device. [10]

Q3b. Describe the architecture of Public Key Infrastructure (PKI) as it applies to IoT. [10]

Q4a. Outline the principles and components involved in implementing Global Cold Chain Management within enterprise IoT. [10]

Q4b. How does the IoT security lifecycle address implementation and integration processes to ensure a robust security framework? [10]

Q5a. How do compliance standards provide support for IoT, and what specific aspects of IoT do these standards typically address? [10]

Q5b. How are cryptographic controls integrated into IoT communication and messaging protocols to ensure secure data transmission? [10]

Q6a. Define IoT Privacy Impact Assessment (PIA) and outline Privacy by Design (PbD) principles. [10]

Q6b. Discuss integrating safety and security design into Agile development for a robust system.

[10]

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