

Code: 20DF24T

M.C.A. II Semester Supplementary Examinations April 2022

Computer Networks

Max. Marks: 60

Time: 3 Hours

Answer all five units by choosing one question from each unit (5 x 12 = 60 Marks)

		Marks	CO	Blooms Level
UNIT-I				
1.	a) Explain about Network software.	6M	CO1	L3
	b) Illustrate the four levels of addressing employed in TCP/IP protocols.	6M	CO1	L4
OR				
2.	a) List what networks are used at your college. Describe the network types, topologies, and switching methods used there.	6M	CO1	L2
	b) List and explain the uses of computer networks	6M	CO1	L1
UNIT-II				
3.	a) One way of detecting errors is to transmit data as a block of n rows of k bits per row and add parity bits to each row and each column. The bit in the lower-right corner is a parity bit that checks its row and its column. Will this scheme detect all single errors? Double errors? Triple errors? Show that this scheme cannot detect some four-bit errors.	6M	CO2	L3
	b) Discuss the Wireless LAN Protocols.	6M	CO2	L2
OR				
4.	a) The wireless LANs that we studied used protocols such as MACA instead of using CSMA/CD. Under what conditions, if any, would it be possible to use CSMA/CD instead? Explain.	6M	CO2	L4
	b) List and explain the different error correcting codes in detail	6M	CO2	L3
UNIT-III				
5.	a) Explain the building and distribution of link state packets in link state routing algorithm.	6M	CO3	L4
	b) Discuss the Network layer design issues.	6M	CO3	L2
OR				
6.	a) List and explain the elements of transport protocols.	6M	CO3	L3
	b) Describe the Internetwork Routing.	6M	CO3	L2
UNIT-IV				
7.	a) The following is a dump of a UDP header in hexadecimal format. CB84000D001C001C, What is the destination port number?	6M	CO4	L4
	b) Compare and contrast the two TCP/IP transport protocols: TCP and UDP, in terms of demultiplexing, reliability and flow control.	6M	CO4	L3
OR				
8.	a) Explain DNS with reference to its components and working.	6M	CO4	L3
	b) List and explain the Elements of Transport Protocols.	6M	CO4	L4
UNIT-V				
9.	a) What are the two categories of encryption/decryption? What are the main differences between the two categories?	6M	CO5	L1
	b) Compare and contrast the DES and RSA	6M	CO5	L3
OR				
10.	a) Compute the bits number 1, 16, 33, and 48 at the output of the first round of the DES Decryption, assuming that the ciphertext block is composed of all ones and the external key is composed of all ones.	6M	CO5	L2
	b) List and explain the advantages and disadvantages of RSA	6M	CO5	L3

END

Hall Ticket Number :

R-20

Code: 20DF22T

M.C.A. II Semester Supplementary Examinations April 2022

Python Programming

Max. Marks: 60

Time: 3 Hours

Answer all five units by choosing one question from each unit (5 x 12 = 60 Marks)

Marks CO Blooms Level

UNIT-I

- 1. a) Discuss briefly about the process of computational problem solving. 6M CO1 L2
- b) What is interactive Python shell? What is the significance of indentation in writing Python programs? 6M CO1 L2

OR

- 2. a) List different operators in Python, in the order of their precedence. 6M CO1 L1
- b) Write a program illustrating the use of numeric literals and string literals? 6M CO1 L2

UNIT-II

- 3. a) Mention the different types of iterative structures allowed in Python. 6M CO1 L2
- b) Differentiate between lists and tuples in Python? 6M CO1 L3

OR

- 4. a) Explain three intrinsic sequence types of Python language with examples? 6M CO1 L2
- b) Demonstrate with code the various operations that can be performed on tuples. 6M CO4 L3

UNIT-III

- 5. a) Describe about variable length arguments with suitable program 6M CO1 L2
- b) Write a Python function that prints all factors of a given number. 6M CO4 L2

OR

- 6. a) What are the different function prototypes? Explain with suitable examples 6M CO1 L2
- b) Write a Python turtle program to draw a blue square of size 200 and the draw a green circle which touches the square on all sides from inside. 6M CO4 L3

UNIT-IV

- 7. a) What is Module in Python? Explain how can you use Modules in your program explain with an example code. 6M CO2 L2
- b) Write a Python code to search a string in the given list. 6M CO2 L3

OR

- 8. a) What happens if except clause is written without any Exception type? Explain with an example. 6M CO3 L2
- b) Give a comparison between lists, tuples, dictionaries and sets 6M CO1 L3

UNIT-V

- 9. a) Demonstrate a recursive factorial function implementation. 6M CO4 L3
- b) Explain the fundamental concepts of object – oriented programming. 6M CO5 L2

OR

- 10. a) Explain MergeSort Recursive Algorithm in Python. 6M CO4 L2
- b) Explain how to implement inheritance in Python 6M CO5 L2

END

Hall Ticket Number :									
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R-20

Code: 20DF23T

M.C.A. II Semester Supplementary Examinations April 2022

Software Engineering

Max. Marks: 60

Time: 3 Hours

Answer all five units by choosing one question from each unit (5 x 12 = 60 Marks)

Marks	CO	Blooms Level
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UNIT-I

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|-------|--|----|---|----|
| 1. a) | List out the general principles of software engineering practice | 6M | 1 | L3 |
| b) | Define webapps? Explain its unique nature? | 6M | 1 | L3 |

OR

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|-------|--|----|---|----|
| 2. a) | Explain the various concepts involved in Agile process | 6M | 1 | L3 |
| b) | Explain in detail on CMMI? | 6M | 1 | L3 |

UNIT-II

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|-------|---|----|---|----|
| 3. a) | Describe Incremental model with an example? | 6M | 2 | L2 |
| b) | Explain the Generic process framework with a neat sketch? | 6M | 2 | L2 |

OR

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|-------|---|----|---|----|
| 4. a) | Explain the structure of Software Requirements Specification. | 6M | 2 | L2 |
| b) | Write short notes on object models | 6M | 2 | L2 |

UNIT-III

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|-------|---|----|---|----|
| 5. a) | Explain the Design Concepts in detail? | 6M | 3 | L3 |
| b) | Explain the various concepts in architectural design decisions? | 6M | 3 | L3 |

OR

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|-------|--|----|---|----|
| 6. a) | Discuss in detail on Object-Oriented design process with an example? | 6M | 3 | L3 |
| b) | Describe the role of Objects and Classes in Object-Oriented Design | 6M | 3 | L3 |

UNIT-IV

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|-------|--|----|---|----|
| 7. a) | Bring out any three differences between verification and validation? | 6M | 4 | L2 |
| b) | Explain automated static analysis? | 6M | 4 | L2 |

OR

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|-------|---|----|---|----|
| 8. a) | Explain in detail on System Testing | 6M | 4 | L2 |
| b) | Discuss in detail on the various elements of software quality assurance | 6M | 4 | L2 |

UNIT-V

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|-------|---|----|---|----|
| 9. a) | Explain in detail on Project Scheduling activities | 6M | 5 | L3 |
| b) | Explain the concepts involved in Risk Management Activities | 6M | 5 | L3 |

OR

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|--------|--|----|---|----|
| 10. a) | Explain the concept of Software Productivity | 6M | 5 | L3 |
| b) | Explain COCOMO II model for software cost estimation with example. | 6M | 5 | L3 |

END