MST 2 Papers

45+

A+

Total No. of Questions: 6

Total No. of Printed Pages: 3

Enrollment No. EN21CS304013

MEDI-CAPS UNIVERSITY
Knowledge is Power

Faculty of Engineering
End Sem Examination Dec-2023
CS3CO40 Software Engineering

Programme: B.Tech. Branch/Specialisation: CSE All

uration: 3 Hrs. **Maximum Marks: 60**

ote: All questions are compulsory. Internal choices, if any, are indicated. Answers of 1 (MCQs) should be written in full instead of only a, b, c or d. Assume suitable data if cessary. Notations and symbols have their usual meaning.

Q.1 i. Which one is not one of the fundamental activities in a software process? **1**

(a) Software Specification (b) Software Development
(c) Software cost negotiation (d) Software validation

ii. Component based software engineering is not characterised with- **1**

(a) Reduced cost and risks (b) Faster Delivery
(c) Reuse Oriented (d) Large amount of developed code

iii. SRS must include characteristics except- **1**

(a) Scope of the software product
(b) User characteristics
(c) Functional and non functional requirements
(d) Programming logics and algorithm

iv. Which one of the following is not a step of requirement engineering? **1**

(a) Elicitation (b) Design (c) Analysis (d) Documentation

v. In Design phase, which is the primary area of concern- **1**

(a) Architecture (b) Data
(c) Interface (d) All of these

vi. Which architectural style goal is to achieve Integrity? **1**

(a) Data Flow Architecture
(b) Call and Return Architecture
(c) Data Centered Architectures
(d) None of these

P.T.O

...imp. features

vii. Among which testing category Alpha testing and Beta testing falls- 1
(a) Regression Testing (b) Unit Testing
(c) Acceptance Testing (d) Integration Testing

viii. Who identifies, documents, and verifies that corrections have been made to the software? 1
(a) Project manager (b) Project team
(c) SQA group (d) All of these

ix. Software Metrics helps to- 1
(a) Improve the process (b) Assess quality
(c) Control the project (d) All of these

x. Software development cost does not include- 1
(a) Quality control cost (b) End user training cost
(c) Maintenance cost (d) Marketing cost

i. Define Software engineering and its objectives. 2

ii. Justify that- Programs that are developed using evolutionary development are likely to be difficult to maintain. 3

iii. How does a spiral model represent a process suitable to represent a real time problem. 5

iv. Discuss the advantages and disadvantages of waterfall model, spiral model and component based development model. 5

Attempt any two:

i. Differentiate functional and non-functional requirements 5

ii. What is Requirement elicitation? Also define all the requirement elicitation techniques. 5

iii. Draw the Data flow diagram (level 0, level 1 and level 2) of an online food delivery system. 5

i. What is the role of architectural design in SDLC. Classify various architecture styles. 3

ii. Explain software configuration management with suitable example. 7

iii. Describe all the software design principles in detail. 7

i. Explain about test cases. What are the best practices for writing test cases. 4

ii.	Differentiate Validation and Verification with the help of suitable example.	6
iii.	Explain various black box and white box testing technique.	6

Attempt any two:

i.	Write a short note on COCOMO Model.	5
ii.	Write a short note on Process and Product metrics.	5
iii.	Explain size oriented and function oriented metrics.	5

******

Which of ..

Total No. of Questions: 3

Enrollment No. EN21C830

Faculty of Engineering

Mid Sem I Examination Sep. - 2023

OE00018 Python Essentials

Programme: B.Tech. Branch/Special

Duration: 1.5 Hrs. Maximum

Note: All questions are compulsory. Internal choices, if any, are indicated. Answ (MCQs) should be written in full instead of only a, b, c or d. Assume suita necessary. Notations and symbols have their usual meaning.

			Marks	BL	CO	
Q.1	i.	Who developed Python Programming Language? a) Wick van Rossum b) Rasmus Lerdorf c) Guido van Rossum d) Niene Stom	1	BL1	CO1	P
	ii.	Which of the following precedence order is correct in Python? a) Parentheses, Exponential, Multiplication, Division, Addition, Subtraction b) Multiplication, Division, Addition, Subtraction, Parentheses, Exponential c) Division, Multiplication, Addition, Subtraction, Parentheses, Exponential d) Exponential, Parentheses, Multiplication, Division, Addition, Subtraction	1	BL1	CO1	P
	iii.	What do we use to define a block of code in Python language? a) Key b) Brackets c) Indentation d) None of these	1	BL1	CO1	PO
	iv.	Which keyword is used for function in Python language? a) Function b) def c) Fun d) Define prototype	1	BL2	CO2	PO

imp. features

l No. of Questions: 3

Enrollment No. EN21CS304037

Faculty of Engineering

Mid Sem II Examination November - 2023

OE00018 Python Essential

gramme: B.Tech. Branch

ation: 1.5 Hrs. Ma

		Marks	Bl
i.	Which Statements read ten characters froma file (file object is 'f'). a. f.read() b.f.read(10) c. f.reads(10) d. None of the mentioned above	1	BL
ii.	Readline() method returns ----- a. String b. List c. Tuple d. None of the mentioned above	1	BL
iii.	What does single-level inheritance mean? a. A single subclass derives from a single superclass b. Multiple base classes inherit a single derived class c. A single superclass inherits from multiple subclasses d. None of the mentioned above	1	BL
iv.	The assignment of more than one function to a particular operator is ____ a. Operator over-assignment b. Operator overriding c. Operator overloading d. Operator instance	1	BL

ii.

file-object.read([n])
" " readline([n])
" " readlines([n])

v.	Which of the following is the correct extension of the Python file? a. python b. py c. p d. pl	1	BL 2	CO 4	
vi.	All classes have a function called? a. __init__() b. __init__ c. init d. init()	1	BL 3	CO 4	1-7, 8-12
2 i.	Describe the different access modes of the files with an example	5	BL 2	CO 3	1-5, 8-12
ii.	Write Python Program to Count the Occurrences of Each Word and Also Count the Number of Words in a "quotes.txt" File	7	BL 2	CO 3	1-5, 8-12
iii.	Discuss the following methods associated with the file object a) read() b) readline() c) readlines() d) tell() e) seek() f) write()	7	BL 3	CO 3	1-5 ,8-12
3 i.	Discuss inheritance in Python programming language.	5	BL 3	CO 4	1-7, 8-12
ii.	Write Python Program to Demonstrate Multiple Inheritance with Method Overriding	7	BL 3	CO 4	1-7 ,8-12
iii.	Write Python program to demonstrate the Overriding of the Base Class method in the Derived Class.	7	BL 4	CO 4	1-7, 8-12

read is positioned at beginning of file
→ Read only (r) : only text file for reading
if file not exist, it raises I/O error
Read & write (r+) : for read & write
↳ beginning of file
Append & read (a+) : for read & write. file is created if it doesn't exist
↳ end of file is handle
write only (w) : only writing. create file if file not exist
write and read (w+)
↳ handle : beginning

imp. features

v. Which of the following is not a ch
dynamic programming?
a. Overlapping sub p
b. Optimal sub
c. Recu
d

have a limited capacity
kilograms. You want
ou, each with its
value of th
s weig

Total No. of Questions: 3

Enrollment No. EN21CS3

MEDI-CAPS UNIVERSITY
Knowledge is Power

Faculty of Engineering

Mid Sem II Examination April -2023

CS3CO13 Design Analysis & Algorithm

Programme: B.Tech. Branch/Specialisat

Duration: 1.5Hrs. **Maximum**

Note: All questions are compulsory. Internal choices, if any, are indicated. Ans (MCQs) should be written in full instead of only a, b, c or d. Assume suitable data Notations and symbols have their usual meaning.

			Marks	BL
Q.1	i.	Given items as {value,weight} pairs {{40,20},{30,10},{20,5}}. The capacity of knapsack=20. Find the maximum value output assuming items to be divisible. a) 60 b) 80 c) 100 d) 40	1	BL3
	ii.	Dijkstra algorithm is also called the ..... shortest path problem. a) Multiple source b) Single source c) Single-destination d) Multiple destination	1	BL1
	iii.	Which of the following is true about Huffman Coding. a) In Huffman coding, no code is prefix of any other code. b) Huffman Codes may not be optimal lossless codes in some cases c) Huffman coding may become lossy in some cases d) None of these	1	BL1
	iv.	Floyd Warshall's Algorithm is used for solving a) All pair shortest path problems b) Single Source shortest path problems c) Network flow problems d) Sorting problems	1	BL1

v. Which of the following problems is NOT solved using dynamic programming? 1 BL1 CO

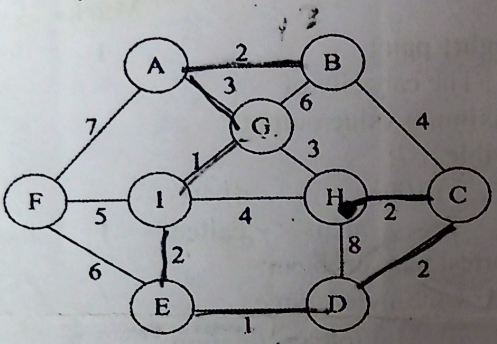
a) 0/1 knapsack problem
b) Matrix chain multiplication problem
c) Edit distance problem
d) Fractional knapsack problem

vi. Bellmann ford algorithm provides solution for _____ problems. 1 BL1 CO

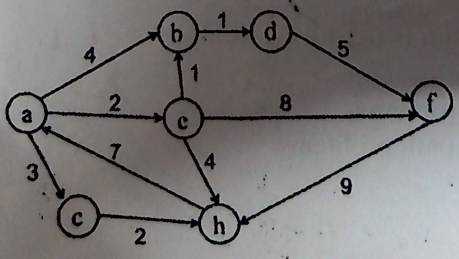
a) All pair shortest path b) Sorting
c) Network flow d) Single source shortest path

Attempt any two questions

i. For the given graph find the Minimum Spanning Tree by Prim's Method (Start at vertex H) 6 BL3



ii. Suppose we run Dijkstra's single source shortest-path algorithm on the following edge-directed weighted graph with vertex a as the source. In what order do the nodes get included into the set of vertices for which the shortest path distances are finalized? 6 BL3



iii. A file contains the following characters with the frequencies as shown. If Huffman Coding is used for data compression, determine- **6** **BL3**

a) Huffman Code for each character

b) Length of Huffman encoded message (in bits)

Character	A	E	I	O	U	S	T
Frequencies	10	15	12	3	4	13	1

Attempt any two questions

i. Find Longest common sub sequences of the following sequences: **6** **BL2**

X=< A, B, C,B,D,A,B >

Y=<B,D,C,A,B,A >

ii. Let A1,A2,A3 and A4 be four matrices of dimensions10x5,5x20,20x10 and 10x5 respectively. The minimum number of scalar multiplications required to find the product A1 A2 A3 A4 using matrix chain multiplication method? **6** **BL3**

iii. For the given set of items and knapsack capacity = 5 kg, find the optimal solution for the 0/1 knapsack problem making use of dynamic programming approach. **6** **BL3**

Consider: n = 4 ,w = 5 kg)

(w1, w2, w3, w4) = (2, 3, 4, 5)

(b1, b2, b3, b4) = (3, 4, 5, 6)

******

ii. You are planning a [4]
backpack that can acking trip and y
to carry some imum weight
own weight sible ite

(3) 30 < Pirat

10	30	80	90	44

11

Total No. of Questions: 3

(4) 90 > Pirat

Enrollment No. EN21CS3

MEDI-CAPS UNIVERSITY Knowledge is Power

Faculty of Engineering

Mid Sem-II Examination November-2023

CS3C042 Design and Analysis of Algorithm → 10

Programme: B.Tech. Branch/Specializati

(5) average Pirat

Duration: 1.5 Hrs. **Maximum M**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answe (MCQs) should be written in full instead of only a, b, c or d. Assume suitable data if r Notations and symbols have their usual meaning.

			Marks	BL	CO
Q.1	i.	In Huffman coding, which characters are assigned shorter codes? a. Characters with high frequencies b. Characters with low frequencies c. Characters with equal frequencies d. All characters are assigned the same code length.	1	01	3
	ii.	In the Fractional Knapsack problem, what is the key parameter used to decide which item to select next? a. Total value of the item b. Total weight of the item c. Value-to-weight ratio of the item d. Total capacity of the knapsack	1	01	3
	iii.	In a connected graph with 'n' nodes, how many edges does a spanning tree have? a. n b. n - 1 c. n + 1 d. n(n-1)/2	1	01	3
	iv.	In matrix chain multiplication, which value is computed to find the optimal parameterization? a. The product of all matrices in the chain. b. The maximum element of the matrices. c. The minimum number of scalar multiplications. d. The determinant of the first matrix in the chain.	1	01	4

tc

ignore utilization

...a limited capacity W kilograms. You want ... visible items with you, ... to maximi... 6

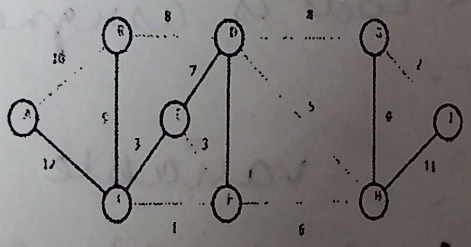
v. Which of the following is not a characteristic of dynamic programming? 1 01
a. Overlapping sub problem
b. Optimal substructure
c. Recursion
d. Divide and conquer

vi. In multistage graphs, what do the stages represent? 1 01
a. Different algorithms
b. Different colours assigned to nodes
c. Different layers or phases of a process
d. Different data structures

Q.2 i. What is a Greedy Algorithm? 2 01

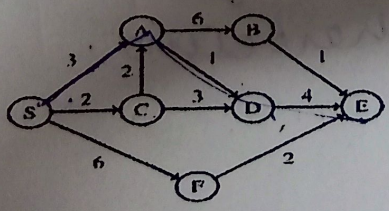
ii. Given are some symbols and their frequencies: A: 1/20; B: 2/20; C: 2/20; D: 4/20; E: 4/20; F: 7/20. Show a tree that Huffman algorithm can produce for these symbols and frequencies. 3 02

iii. Consider the following graph 7 01



From this graph find MST By using Prim's Algorithm with algorithm.

OR iv. Consider the following graph 7 01



Apply Dijkstra's Algorithm to find the shortest path from S to E with algorithm.

6+B

Total No. of Questions: 3

Enrollment No...S

MEDI-CAPS UNIVERSITY
Knowledge is Power

Faculty of Engineering

Mid Sem-I Examination September-202

CS3CO42 Design and Analysis of Algorit

Programme: B.Tech Branc

Duration: 1.5 Hrs.

Note: All questions are compulsory. Internal choices, if any, are in (MCQs) should be written in full instead of only a, b, c or d. Assume s Notations and symbols have their usual meaning.

			Marks	B
Q.1	i.	Time Complexity of Insertion sort is (a) linear (b) Quadratic (c) Cubic (d) Exponential	1	Bl
	ii.	This algorithm scans the list by swapping the entries whenever pair of adjacent keys are out of desired order. (a) Insertion sort. (b) Bubble sort. (c) Shell sort. (d) Quick sort.	1	Bl
	iii.	The O-Notation provides an asymptotic (a) Upper Bound (b) Lower Bound (c) Light Bound (d) None of These	1	Bl
	iv.	On which algorithm is heap sort based on? (a) Fibonacci heap (b) Binary tree (c) Priority queue (d) FIFO	1	Bl
	v.	Average case time complexity of Quick sort is _____ (a) Θ (nlogn) (b) O(logn) (c) O(nlogn) (d) Θ(logn)	1	Bl

[4]

e planning a backpacking trip and you have a limited capacity 6
k that can carry a maximum weight of W kilograms. You want
some essential and indivisible items with you, each with its
t and value. Your goal is to maximize the total value of the
can carry in your backpack without exceeding its weight

3 kg, Value - $150
Veight - 2 kg, Value - $100
Weight - 1.5 kg, Value - $80
eight - 1 kg, Val...

Type of Computational complexity that discribes time required to execute algo.

	vi.	The time complexity of binary search in best, worst cases for an array of size N is (a) N, N2 (b) 1, Log N (c) Log N, N2 (d) 1, N log N	1	BL01	C02	PO01, 02, 03, 04	PSO01, 02, 03, 04

Amt of time taken by an algo to produce result as a function

Q.2	i.	Describe the time complexity.	2	BL01	C01	PO01, 02, 03, 04	PSO01, 02, 03, 04
	ii.	If $f(n) = 5n^2+3n+2$ then prove that f(n) is $O(n^2)$	3	BL02	C01	PO01, 02, 03, 04	PSO01, 02, 03, 04
	iii.	What is performance Analysis? How we do performance Analysis?	7	BL01	C01	PO01, 02, 03, 04	PSO01, 02, 03, 04
OR	iv.	Solve the following recurrence relations by using Master's theorem i) $T(n) = 4T(n/2) + n$ ii) $T(n) = 2T(n/2) + n \log n$	7	BL02	C01	PO01, 02, 03, 04	PSO01, 02, 03, 04
Q.3	i.	How merge sort is related to Divide and Conquer? Explain.	2	BL01	C02	PO01, 02, 03, 04	PSO01, 02, 03, 04
	ii.	Define Greedy method.	2	BL01	C02	PO01, 02, 03, 04	PSO01 02, 03, 04
	iii.	Define recurrence equation for merge sort using substitute method	8	BL02	C02	PO01, 02, 03, 04	PSO01 02, 03, 04
OR	iv.	Show the various steps involved in the quick sorting of (23, 67, 12, 78, 33, 28, 97, 10, 6, 87, 39)	8	BL02	C02	PO01, 02, 03, 04	PSO01 02, 03, 04

Merge sort uses D/C as it uses recursive algo to achieve results. D/C breaks down big problem into smaller, manageable pieces. It then solves them recursively & puts their sol^n together to solve orginal problem.

Total No. of Questions: 6

Total No. of Printed P

Enrollment No. EN.21.CS.20121...

MEDI-CAPS UNIVERSITY
Knowledge is Power

Faculty of Engineering
End Sem Examination Dec-2023
CS3CO42 Design & Analysis of Algorithms

Programme: B.Tech. **Branch/Specialisation:** CS

Duration: 3 Hrs. **Maximum Mar**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answ Q.1 (MCQs) should be written in full instead of only a, b, c or d. Assume suitable necessary. Notations and symbols have their usual meaning.

Q.1 i. In asymptotic notation, which notation describes the lower bound of algorithm's running time?
(a) Θ-notation (b) O-notation (c) Ω-notation (d) β-notation

ii. Which of the following quadratic sorting techniques has the worst-ca time complexity of O(n^2), making it inefficient for large datasets?
(a) Merge Sort (b) Quick Sort
(c) Heap Sort (d) None of these

iii. In the divide and conquer sorting technique, which algorithm uses pivot element to partition the array into two subarrays and th recursively sorts those subarrays?
(a) Bubble Sort (b) Quick Sort
(c) Merge Sort (d) Insertion Sort

iv. What is the time complexity of Strassen's matrix multiplicati algorithm for multiplying two n × n matrices?
(a) O(n^2.81) (b) O(n^2)
(c) O(n^3) (d) O(n log n)

v. In Huffman coding, what is the fundamental principle used to enco data efficiently?
(a) Arithmetic coding
(b) Run-length encoding
(c) Burrows-wheeler transform
(d) Prefix coding

vi. What is the time complexity of Dijkstra's algorithm when implement with a binary heap for priority queue?
(a) O(V log V) (b) O((V + E) log V)
(c) O(E + V log V) (d) O(V^2)

- un imp. features

Management skills applies to managers at 1 BL1 CO2 PO2

[3]

ii. Describe the steps involved in the heap sort algorithm. Include the processes of building the initial max heap, swapping elements, and maintaining the heap property. Provide the algorithmic implementation and analyze its time complexity. 8

iii. Consider an unsorted array of integers that needs to be sorted using the quicksort algorithm. The array to be sorted is {5, 2, 9, 1, 5, 6, 13, 4, 21, 10}. Apply the QuickSort algorithm to sort the given array step by step, showing the partitioning process at each step. Calculate the time complexity of the QuickSort algorithm for the given array considering the number of comparisons and swaps made during the sorting process. 8

i. Explicate the concept of greedy technique in algorithm design and clarify when it is appropriate to use greedy techniques in problem-solving. Provide reasoning for your answer and illustrate your explanation with a relevant example. 3

ii. You are given a set of characters and their frequencies: 7

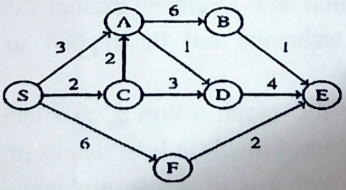
Character	Frequency
A	5
B	9
C	12
D	13
E	16
F	45

Show the step-by-step process of constructing the Huffman tree, including merging nodes and updating frequencies.

Calculate the Huffman codes for each character in the final tree.

Calculate the average encoding length of the characters in the resulting Huffman tree.

iii. Consider the following graph representation: 7



Apply Dijkstra's algorithm to find the shortest paths from the source node S to all other nodes in the graph. Show the step-by-step process, including the initialization, updating of distances, and selection of nodes. Provide the final shortest paths and their respective distances.

i. Explain the steps involved in multistage graph in dynamic programming and provide suitable example to illustrate each step. 4

P.T.O.

[4]

ii. You are planning a backpacking trip and you have a limited capacity backpack that can carry a maximum weight of W kilograms. You want to carry some essential and indivisible items with you, each with its own weight and value. Your goal is to maximize the total value of the items you can carry in your backpack without exceeding its weight capacity. **6**

Items:

Tent: Weight - 3 kg, Value - $150

Sleeping Bag: Weight - 2 kg, Value - $100

Cooking Stove: Weight - 1.5 kg, Value - $80

Water Purifier: Weight - 1 kg, Value - $50

Food Supplies (for the entire trip): Weight - 5 kg, Value - $200

First Aid Kit: Weight - 0.5 kg, Value - $30

Backpack Capacity: W = 8 kg

Using the 0/1 Knapsack problem solving technique, determine the optimal selection of items to carry in your backpack to maximize the total value. Provide a list of selected items and the total value that can be carried within the given weight capacity.

iii. Consider two sequences of characters: Sequence A with elements {A, B, C, D, E, F} and Sequence B with elements {B, D, F, G}. Determine the Longest Common Subsequence (LCS) of these sequences using dynamic programming. Provide the LCS and explain the steps you took to find it. **6**

6 Attempt any two:

i. Provide a step-by-step explanation of the branch and bound algorithms, highlighting its key components and strategies. Illustrate your explanation with a suitable example, demonstrating how this algorithm design technique can be applied to solve a specific optimization problem. **5**

ii. Discuss the graph coloring problem in the context of real-world applications. Provide at least two examples of practical scenarios where graph coloring is used as a problem-solving technique. Describe how graph coloring algorithms can be employed to solve these real-world problems effectively. **5**

iii. Compare and contrast NP-Complete problems and NP-Hard problems. Provide examples of problems that belong to each of these classes and explain why they are categorized as NP-Complete or NP-Hard. **5**

******

I DK

P: Planning
O: Organising
S: staffing
D: directing
C: coordinating
O:
R: Reporting
B: Budgeting

· 7 principles given by Lu
· explains desi

Total No. of Questions: 3

Enrollment No. EN21C

Faculty of Engineering

Mid Sem -I Examination September -2023

EN3HS04 Fundamentals of Management, Economics & Acco

Programme: B. Tech Branch/Specializat

Duration: 1.5 Hrs. Maximu

Note: All questions are compulsory. Internal choices, if any, are indicated. A MCQs) should be written in full instead of only a, b, c or d. Assume s necessary. Notations and symbols have their usual meaning.

			Marks	Bl.	CO
Q.1	i.	_____ is known as "the father of scientific management." (a) Fredrick W. Taylor (b) Henry Fayol (c) Robert Owen (d) None of these	1	BL1	CO1
	ii.	Management is _____ in order to create a surplus. (a) An art (b) A science (c) Both A & B (d) None of these	1	BL1	CO1
	iii.	The three essential managerial skills includes _____ . (a) Technical,Human,Organizational (b) Human, Leadership, Conceptual (c) Technical, Interpersonal, Motivating (d) Technical, Human,Conceptu	1	BL1	CO1
	iv.	In the marketing process, the first step is to- (a) Develop a research plan (b) Define research objectives (c) Both A & B (d) Implement a research plan	1	BL1	CO2

· 10 Ques

Total No. of Questions: 6

45+

Total No. of Printed Pages:2

Enrollment No. EN21CS304041

MEDI-CAPS UNIVERSITY
Knowledge is Power

Faculty of Engineering
End Sem Examination Dec-2023
EN3HS04 Fundamentals of Management, Economics & Accountancy

Programme: B.Tech. Branch/Specialisation: All

Duration: 3 Hrs. **Maximum Marks: 60**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d. Assume suitable data if necessary. Notations and symbols have their usual meaning.

Q.1 i. Management deals with _____. 1

(a) Internal environment (b) External environment
(c) Both (a) and (b) (d) None of these

ii. The most significant management skills are _____. 1

(a) Technical, Human and conceptual
(b) Technical, behavioural and Conceptual
(c) Systematic, Human and Conceptual
(d) Technical, Human and cognitive

iii. The promotion "P" of marketing is also known as _____. 1

(a) Product Differentiation (b) Distribution
(c) Cost (d) Marketing Communication

iv. The task of any business is to deliver _____ at a profit. 1

(a) Customer needs (b) Customer value
(c) Products and Services (d) Improved quality

v. Who is considered the founder of Microeconomics? 1

(a) Adam Smith (b) John Keynes
(c) Friedrich Hayek (d) Milton Friedman

vi. Goods produced to produce yet other goods is called- 1

(a) Final goods (b) Capital
(c) Investment (d) Resources

vii. Fixed assets are held by business for _____. 1

(a) Converting into cash (b) Generating revenue
(c) Resale (d) None of these

P.T.O.

viii. Cost concept basically recognises _____.
(a) Fair Market value (b) Historical cost
(c) Realisable value (d) Replacement cost

ix. Long term finance is required for _____.
(a) Current assets (b) Fixed assets
(c) Intangible assets (d) None of these

x. _____ is a specific risk factor.
(a) Market risk (b) Inflation risk
(c) Interest rate risk (d) Financial risk

Q.2 i. Define decision making process.
ii. What is the difference between management and administration?
OR iii. Define management. Also explain the five major functions of management.

Q.3 i. What is marketing?
ii. Explain customer relationship management in detail.
OR iii. What is the role of human resource manager in a business organization?

Q.4 i. Write any three differences between micro and macroeconomics.
ii. State and explain the law of variable proportion.
OR iii. Describe in detail various types of market structure.

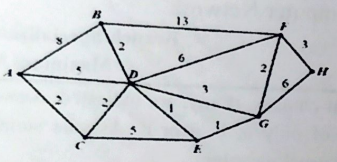
Q.5 i. What is cost accounting?
ii. Explain break even analysis with an example.
OR iii. Explain the classification of cost in detail.

Q.6 i. Define financial management.
ii. Explain profit maximization and wealth maximization in detail.
OR iii. Explain investment decision and financing decision.

******

- It works as dialog controller. Allows system to communicate in either half duplex or full duplex mode of comm^n

Q.2 i. What is Routing algorithm? Explain flooding. 2 BL2 CO3 PO1
ii. Define Count to infinity problem with example. 3 BL3 CO3 PO1
iii Explain the dijkstra algorithm and find the shortest path from node A to H 7 BL5 CO3 PO1



authen^n | author^n

OR iv Explain the following terms 7 BL1 CO1 PO1
a. Traffic shaping
b. Link State routing.

Q.3 i. What is Authentication and Authorization? 2 BL2 CO4 PO1
ii. Define the main function of session layer. 2 BL1 CO4 PO1
iii Draw and explain TCP header format in detail. 8 BL4 CO4 PO4
OR iv Write short note on- (2 mark each) 8 BL3 CO4 PO4
a Process to process delivery
b. User Datagram Protocol
c.TCP flow control
d.TCP Congestion Control

- 5th layer of OSI model
- establish, Maintain, sync, terminate sessions

******

- Presents 2 users to simultaneously access same op^n
- Creates comm^n channels called sessions b/w devices
- Looks for up & running servers on another network.
- Using IP packets to address & receive ether network packets
- token mgmt, authentica^n, author^n

P.T.

...estions: 6

Total No. of Pr

Enrollment No....EN2...

Faculty of Engineering

...End Sem Examination Dec-202...

Visits & Marks all key nodes in a graph

	v.	Which of the following algorithm is generally used CSP search algorithm? a) Breadth-first search algorithm b) Depth-first search algorithm c) Hill-climbing search algorithm d) None of the mentioned	1	BL1	CO2	PO1
	vi.	Which of the following is not an application of artificial intelligence? a) Face recognition system b) Chatbots c) LIDAR d) DBMS	1	BL1	CO2	PO1
Q.2	i.	Explain Artificial Intelligence.?	2	BL2	CO1	PO1
	ii.	Explain BFS algorithm with an example?	3	BL3	CO1	PO1
	iii.	Write difference between BFS & DFS?	7	BL2	CO1	PO1
OR	iv.	What is the Production System? Explain Production System characteristics.?	7	BL2	CO1	PO1
Q.3	i.	What is heuristic search explain with an example?	2	BL2	CO2	PO2
	ii.	Explain Best first Search?	2	BL3	CO2	PO2
	iii.	Explain A* and Hill Climbing algorithm with example?	8	BL3	CO2	PO3
OR	iv.	What is meant by CSP (Constraint Satisfaction problem)? explain briefly by taking an example.	8	BL3	CO2	PO2

******

- Rlp among attributes: any imp rlp that exist among obj
- ~~Rlp among attributes~~
- Imp. attributed: any imp attribute so that it occurs in almost every problem.
- set of objects:
- finding is structure

al No. of Questions: 6

Total No. of Printed Pages:3

Enrollment No.... EN21CS3047041

Faculty of Engineering
End Sem Examination Dec-2023
CS3EA10 Artificial Intelligence

Decision tree: Inductive
• specific examples → general rules
• used to predict continuous dependent variables
Goal: Categorize

Total No. of Questions: 3

Enrollment No.

Faculty of Engineering
Mid Sem- II Examination November -2023
CS3EA10 Artificial Intelligence

Programme: B.Tech — **Branch/Specialization: CSE**

Duration: 1.5 Hrs. — **Maximum Marks: 30**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d. Assume suitable data if necessary. Notations and symbols have their usual meaning.

			Marks	BL	CO	PO	PSO
Q.1	i.	Knowledge and reasoning also play a crucial role in dealing with _____ environments a) Completely Observable b) Partially Observable c) Neither Completely nor Partially Observable d) Only Completely and Partially Observable	1	BL 1	CO 3	PO 1	
	ii.	A knowledge representation system should have the following properties. i. Representation Adequacy ii. Inferential Adequacy iii. Inferential Efficiency a) i and ii only b) ii and iii only c) i and iii only d) i, ii and iii	1	BL 1	CO 3	PO 1	
	iii.	Any instance in which two different objects are compared is a ... type of knowledge. a) inheritable b) relational c) inferential d) procedural	1	BL 1	CO 3	PO 1	
	iv.	A Hybrid Bayesian network contains a) Both discrete and continuous variables b) Only Discrete variables c) Only Discontinuous variable d) Both Discrete and Discontinuous variable	1	BL 1	CO 4	PO 1	
	v.	Which is true for Decision theory? a) Decision Theory = Probability theory + utility theory	1	BL 1	CO 4	PO 1	

not suitable for large trees

discrete: small changes result in large results

root node: specific test on single attribute

leaf node: indicates value of target att.

edge: split of 1 attribute

path: sequence of test to make final dec.

internal nodes: test

drawn upside down.

Total No. of Questions: 6

Total No. of Printed Pages:3

Enrollment No.....EN21CS304041

MEDI-CAPS UNIVERSITY

Faculty of Engineering
End Sem Examination Dec-2023

f l w - R - : * starts with initial facts, slow, data driven asks many ques, tests all rules all data avail.

Bottom up

Blw - R - : goal driven, top down, data is acquired on demand

b) Decision Theory = Inference theory + utility theory
c) Decision Theory = Uncertainty + utility theory
d) Decision Theory = Probability theory + preference

vi. A process that is repeated, evaluated, and refined is called ___ ___ ___ — 1 — BL 1, CO 4, PO 1

a) diagnostic b) descriptive
c) interpretive d) iterative

Act : actions
Pic. produces PP : objects
AA : Modifies of acⁿ
PA : modifies of PP

Q.2 i. Write various knowledge representation issues to provide the solution of any of two issues? — 2 — BL 2, CO 3, PO 2

ii. What is script? Construct a script for going to a bank to withdraw money. — 2 — BL 2, CO 3, PO 2

iii. Explain the resolution algorithm used for reasoning under predicate logic with an example? — 3 — BL 3, CO 3, PO 2

iv. Consider the following sentences: — 5 — BL 2, CO 3, PO 3
1. John likes all kinds of food
2.Apples are food. Chicken is food
3.Anything anyone eats and isn't killed by is food
3.Bill eats peanuts and is still alive
4.Sue eats everything Bill eats.
Translate these sentences into formulas in predicate logic.

outlook
rainy
humidity
sunny
overcast
windy
yes
false
true
yes
no

OR v. What is conceptual dependency? give conceptual dependency representation for - — 5 — BL 2, CO 3, PO 2
a. John is doctor
b. While going home I saw a snake
c. John took the book from Mary

Yes
None

Q.3 i. What is uncertain knowledge and reasoning? — 2 — BL 2, CO 4, PO 2

ii. Explain Bayes theorem with an example? — 4 — BL 2, CO 4, PO 2

Yes

iii. Differentiate monotonic and nonmonotonic reasoning? — 6 — BL 2, CO 4, PO 2

OR iv. Differentiate forward and backward reasoning ? — 6 — BL 2, CO 4, PO 2

******

adv: Inexpensive to construct
fast at classifying unknown records
removes unimp. features

l No. of Questions: 6 *Total No. of Printed Pages:3*

Enrollment No....EN21CS3 04041

Faculty of Engineering
End Sem Examination Dec-2023
CS3EA10 Artificial Intelligence

Programme: B.Tech. Branch/Specialisation: CSE All

tion: 3 Hrs. **Maximum Marks: 60**

All questions are compulsory. Internal choices, if any, are indicated. Answers of MCQs) should be written in full instead of only a, b, c or d. Assume suitable data if sary. Notations and symbols have their usual meaning.

i. Which is true regarding BFS (Breadth First Search)? **1**
(a) BFS will get trapped exploring a single path
(b) The entire tree so far been generated must be stored in BFS
(c) BFS is not guaranteed to find a solution, if exists
(d) BFS is nothing but Binary First Search

ii. What is Artificial intelligence? **1**
(a) Putting your intelligence into Computer
(b) Programming with your own intelligence
(c) Making a Machine intelligent
(d) Playing a Game

iii. Best-First search can be implemented using the following data structure. **1**
(a) Queue (b) Stack
(c) Priority Queue (d) Circular Queue

iv. Heuristic function h(n) is- **1**
(a) Lowest path cost
(b) Cheapest path from root to goal node
(c) Estimated cost of cheapest path from root to goal node
(d) Average path cost

v. Knowledge may be- **1**
I. Declarative II. Procedural III. Non-procedural
(a) Only I above (b) Only II above
(c) Only III above (d) Both I and II above

P.T.O

vi. Translate the given statement into First-order logic. 1
"For every a, if a is a poet, then a is a writer"
(a) ∃ a poet (a). writer (a). (b) ∀ a poet (a). writer (a).
(c) All of these (d) None of these

vii. Primitive in probabilistic reason are: 1
(a) Nominal variable (b) Random variable
(c) Continuous variable (d) Discrete variable

viii. Bayes' theorem can be derived- 1
(a) Calculate the value of P(B|A) with the knowledge of P(B)
(b) The Marginal probability
(c) The conditional probability
(d) Using product rule and conditional probability of event A with known event B

ix. Which of the following is the general algorithm that can be applied on a game tree for deciding win or lose? 1
(a) DFS/BFS Search Algorithms
(b) MIN/MAX Algorithms
(c) Greedy Search Algorithms
(d) Heuristic Search Algorithms

x. The initial value of alpha is? 1
(a) Negative Infinity (b) 0
(c) Positive Infinity (d) 1

2 i. Discuss production systems. (2)

ii. Write down the steps of problem solving by searching. (2)

iii. Discuss the characteristics of AI problem. Can Towers of Hanoi problem be considered as AI problem? Justify your answer with suitable example.

iv. Illustrate the working of Breadth First Search. (4)

i. Define heuristic function. Give an example. (2)

ii. What is Greedy Best First Search? Explain with an example the different stages of Greedy Best First search.

iii. What is A* search? Explain various stages of A* search with an example. (6)

i. Difference between predicate and propositional logic. 4
ii. Illustrate the use of first order logic to represent knowledge. 6
iii. Explain in detail about forward & backward chaining algorithm with example. 6

i. State the Baye's rule equation. 2
ii. Differentiate between following: 2
(a) Forward vs Backward Reasoning 2
(b) Monotonic and Non-Monotonic Reasoning
iii. What is entropy? What is its significance in the decision tree learning? Explain decision tree learning algorithm. 6
iv. Define uncertain knowledge, prior probability and conditional probability. How it is useful for decision making under uncertainty about knowledge? Explain the method of performing exact inference in Bayesian networks briefly. 6

Attempt any two:
i. Explain with algorithm and example: 5
(a) Minimax algorithm
(b) Alpha-Beta Pruning
ii. Explain how the problem of 8-puzzle can be solved with the help of heuristics. 5
iii. Define the term robotics. Write down the hardware component of robot and its path planning algorithms in certain and uncertain domain. 5

******

→ Portable : can run on linux, mac, win
· HLL : human readable lang.
· easy to learn & use : short syntax & code
· Dynamic : variable declaration is not nec

v. >>>"javatpoint"[5:] What will be the output of this code? — 1 — BL2 — CO2 — PO2
(a) javatpoint
(b) java
(c) point
(d) None of these

· OOP : Abstrac^, encapsule^, inheritance

vi. Which of the following types of loops are not supported in Python? — 1 — BL2 — CO2 — PO2
(a) for
(b) while
(c) do-while
(d) None of the above

Q.2 i. What is Python? — 2 — BL1 — CO1 — PO1
ii. What is the difference between a Mutable datatype and an Immutable data type? — 2 — BL1 — CO1 — PO1
iii. What are the Key features of Python?. — 3 — BL1 — CO1 — PO1
iv. What distinguishes lists from tuples? — 5 — BL1 — CO1 — PO2
OR v. Explain Python operators. — 5 — BL1 — CO1 — PO2

↑ floor

Q.3 i. What is the difference between / and // in Python? — 2 — BL2 — CO2 — PO1

↳ floor

ii. What is List Comprehension? Give an Example. — 4 — BL2 — CO2 — PO1
iii. What is a String in Python? Write a program to reverse a string. — 6 — BL2 — CO2 — PO2
OR iv. Explain the following: str(),globals(),ascii(),vars(),eval(),exec() — 6 — BL2 — CO2 — PO3

****

→ high level, general prog^ing lang., us
to develop websites & S/W, task aut
data analysis, data visualizaⁿ.
· easy to learn.
· OOP
· features : encapsⁿ, polym. inheri

Q.3	i.	What is the primary objective of Matrix Chain Multiplication Problem?	2	01	4	01 .02 .03 .04	01 .02 .03 .04
	ii.	What are the differences between Dynamic programming and divide and conquer?	3	01	4	01 .02 .03 .04	01 .02 .03 .04
	iii.	Find the optimal solution for the 0/1 knapsack problem making use of dynamic programming approach. Consider- n = 4 w = 5 kg (w1, w2, w3, w4) = (2, 3, 4, 5) (P1, P2, P3, P4) = (3, 4, 5, 6)	7	02	4	01 .02 .03 .04	01 .02 .03 .04
OR	iv.	Given two sequences: X = "ABCBDAB" and Y = "BDCAB," calculate the length of the longest common subsequence (LCS) and provide one possible LCS sequence.	7	02	4	01 .02 .03 .04	01 .02 .03 .04

*****

Huffmann with example. a greedy tech.
. Lossless data compression algo
variable length code is assigned to i/p diff char.

2 types: fixed | variable

every char. is assigned a binary code using same no. of bits | uses variable no. of bits for encoding characters.

ex: Q ii

vii. What would be the running time of the dynamic programming approach to solve the Longest Common Subsequence (LCS) problem for two strings of lengths m and n respectively? 1

(a) $O(m \times n)$ (b) $O(2^{m+n})$
(c) $O(m+n)$ (d) $O(m \times n \times \min(m,n))$

viii. In dynamic programming, what is the key feature that distinguishes it from other algorithmic techniques like divide and conquer or greedy algorithms? 1

(a) Randomization (b) Recursion (c) Memorization (d) Backtracking

ix. In the context of the N-Queens problem, what is the maximum number of queens that can be placed on an N×N chessboard such that no two queens threaten each other? 1

(a) N (b) 2N−1 (c) N^2 (d) $2^N - 1$

x. In computational complexity theory, a problem is NP-complete when: 1

(a) It is a decision problem, meaning that for any input to the problem, the output is either "yes" or "no".

(b) The correctness of each solution can be verified quickly (namely, in polynomial time) and a brute-force search algorithm can find a solution by trying all possible solutions.

(c) Both (a) & (b)

(d) None of these

Q.2 i. What is the master theorem? How is it used to solve recurrence relations? 2

ii. Explain the differences between Big O, Omega, and Theta notation in the context of asymptotic analysis. Provide examples for each notation. 3

iii. Consider a modified version of the Insertion Sort algorithm called "Reverse Insertion Sort." In this variation, instead of sorting the array in ascending order, the algorithm sorts the array in descending order. Explain the step-by-step process of Reverse Insertion Sort with the help of a detailed example. Also, discuss the time complexity of this modified algorithm and compare it with the standard Insertion Sort algorithm. 5

OR iv. Explain the bubble sort algorithm in detail, covering its working principles, time complexity analysis, and an example demonstrating the sorting process. Also, discuss its advantages and limitations in practical applications. 5

Q.3 i. Explain the concept of a "bucket" in the radix sort algorithm and how it is used to sort elements. 2

c) There is no differe... trained today and tomorrow

v.	Management skills applies to managers at _____. (a) Middle levels in an organization (b) Top levels in an organization (c) Executive levels in an organization (d) All levels in an organization	1	BL1	CO2	PO2	
vi.	The term marketing refers to _____. (a) Advertising, Sales Promotion, Publicity and Public Relational activities (b) A new product needs ideas, Developments, concepts and improvements. (c) Sales Planning, Strategy and Implementation (d) A philosophy that stresses customer value and satisfaction	1	BL1	CO2	PO2	
Q.2 i.	Write difference between management and administration (any two)	2	BL2	CO1	PO 2,PO 3	
ii.	What does POSDCORB stand for?	3	BL2	CO1	PO 2,PO 3	
iii.	How to deal with decision making under condition of uncertainty?	7	BL2	CO1	PO 2,PO 3	
OR iv	What are the three managerial roles suggested by Mintzberg?	7	BL2	CO1	PO3	
Q.3 i.	Define the term Marketing Mix?	2	BL2	CO2	PO3	
ii.	How does COCA COLA use holistic marketing concept.	4	BL3	CO2	PO3	
iii.	What are the functions of Marketing?	6	BL2	CO2	PO3	
OR iv	What are the three biggest challenges to customer relationship management?	6	BL2	CO2	PO3	

******

Total No. of Questions: 3

Enrollment No. EN21CS304039

Faculty of Engineering

Mid Sem-II Examination November-2023

EN3HS04 Fundamentals of Management Economics and Accounting

Programme: B. Tech **Branch/Specialization: CSE**

Duration: 1.5 Hrs. **Maximum Marks: 30**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d. Assume suitable data if necessary. Notations and symbols have their usual meaning.

			Marks	BL	CO	PO	PSO
Q.1	i.	Which of the following is the relation that the law of demand defines? a) Income and price of a commodity b) Price and quantity of a commodity c) Income and quantity demanded d) Quantity demanded and quantity supplied	1	BL01	CO3	PO4,5	
	ii.	What do you mean by a mixed economy? a) Modern and traditional industries b) Public and private sectors c) Foreign and domestic investments d) Commercial and subsistence farming	1	BL01	CO3	PO4,5	
	iii.	Which of the following is included in the National Income of a country? a) Rent b) Interest c) Wages d) Rent, Interest, Wages, Salary, Profits	1	BL01	CO3	PO4,5	
	iv.	Basic objectives of cost accounting is_____. a) tax compliance b) financial audit. c) cost ascertainment. d) profit analysis.	1	BL01	CO4	PO4,5	
	v.	The branch of economics that deals with the allocation of resources is _____. a) Econometrics b) Macroeconomics. c) Microeconomics d) None of these	1	BL01	CO4	PO4,5	

vi.	Time value of money indicates that a) A unit of money obtained today is worth more than a unit of money obtained in future b) A unit of money obtained today is worth less than a unit of money obtained in future c) There is no difference in the value of money obtained today and tomorrow d) None of the above	1	BL01	CO4	PO4.5	
Q.2 i.	What are the phases of business cycle?	2	BL01	CO3	PO4.5	
ii.	Difference between micro and macroeconomics.	3	BL02	CO3	PO4.5	
iii.	Explain price elasticity of demand.	7	BL03	CO3	PO4.5	
OR iv.	Explain the law of Diminishing Marginal utility.	7	BL03	CO3	PO4.5	
Q.3 i.	Write short note on National income with suitable example.	4	BL01	CO3	PO4.5	
ii.	Explain cost accounting and Types of cost.	8	BL01	CO3	PO4.5	
OR iii.	Explain methods and techniques of cost accounting.	8	BL01	CO3	PO4.5	

******

- Impact of glob^n on HRM:
  - → Managing cultural diversity
  - → Diff. in employment laws
  - → Manage virtual employees
  - → Cope with flexible working hours
  - → cope with technology

otal No. of Questions: 3

Enrollment No. EN21CS304039

MEDI-CAPS UNIVERSITY Knowledge is Power

Faculty of Engineering

Mid Sem-II Examination November-2023

CS3CO41 Computer Network

Programme: B.Tech **Branch/Specialization: CSE**

Duration: 1.5Hrs. **Maximum Marks: 30**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d. Assume suitable data if necessary. Notations and symbols have their usual meaning.

		Marks	BL	CO	PO	PSO
Q.1	i. A subset of a network that includes all the routers but contains no loops is called (a) Spanning Tree (b) Spider Structure (c) Spider Tree (d) None of the above	1	BL1	CO3	PO1	
	ii. In the slow-start algorithm, the size of the congestion window increases _____ until it reaches a threshold. (a) exponentially (b) additively (c) multiplicatively (d) suddenly	1	BL2	CO3	PO3	
	iii Congestion in a network or internetwork occurs because routers and switches are (a) Tables (b) Queue (c) Cross Point (d) None	1	BL2	CO3	PO2	
	iv To use the services of UDP, we need ..... socket addresses. (a) 4 (b) 2 (c) 3 (d) 1	1	BL3	CO4	PO1	
	v. Transport services available to applications in one or another form includes_____ ___ (a) Reliable data transfer (b) Timing (c) Security (d) All of the mentioned	1	BL2	CO4	PO4	
	vi A SYN segment in Three way Handshaking consumes (a) Sequence number (b) Data (c) Bytes (d) none of the above	1	BL2	CO4	PO4	

DHCP: Dynamic Host Config^ protocol
network mgmt protocol used to dynamically assign an IP add. to any device or node so it can communicate using IP.

Total No. of Questions: 3

Enrollment No.....

Faculty of Engineering

Mid Sem-I Examination September-2023

CS3CO41 Computer Network

Programme: B.Tech | Branch/Specialization: CSE

Duration: 1.5Hrs. | **Maximum Marks: 30**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d. Assume suitable data if necessary. Notations and symbols have their usual meaning.

			Marks	BL	CO	PO	PSO
Q.1	i.	The maximum throughput for pure aloha is..... (a) 18.8 (b) 18.4 (c) 36.4 (d) 36.8	1	BL1	CO1	PO2	
	ii.	In slotted aloha, vulnerable time is ..... the frame transmission time. (a) Same as (b) 1 time (c) 2 time (d) 3 time	1	BL1	CO1	PO2	
	iii.	In Carrier Sense Multiple Access (CSMA), if the station senses the medium before trying to use it then the chance of collision can be (a) Increased (b) Highlighted (c) Reduced (d) both b and c	1	BL2	CO1	PO1	
	iv.	Which address prefix range is reserved for IPv4 multicast? (a) 240.0.0.0 – 254.255.255.255 (b) 224.0.0.0 – 239.255.255.255 (c) 169.254.0.0 – 169.254.255.255 (d) 127.0.0.0 – 127.255.255.255	1	BL2	CO2	PO3	
	v.	ICMP is the Companion protocol of which protocol (a) TCP (b) BGP (c) IP (d) ARP	1	BL2	CO2	PO2	
	vi.	An ARP request is normally _____. (a) broadcast (b) multicast (c) unicast (d) none of the above	1	BL2	CO2	PO2	

(1) Lease: time how long the

(2) DHCP Relay: works as comm^ channel b/w client & server.

(3) IP add. Pool: has addresses that can be allocated to devices

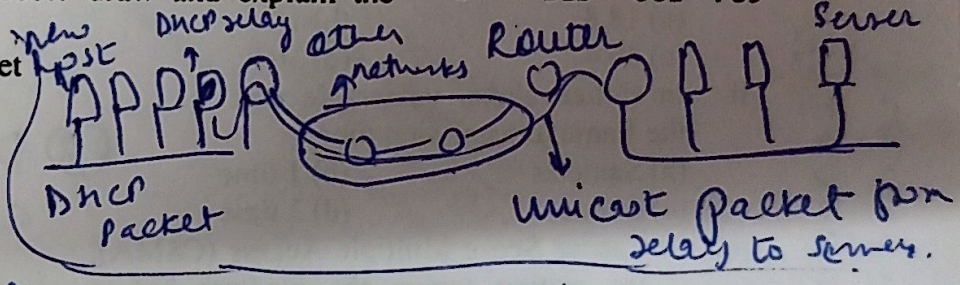
(4) Subnets: small portion of IP network partitioned to keep net. under ctrl

components of DHCP: (1) Server: Holds IP address & config info.
(2) client: receives config^ info from server.

Reassembly: Reverse of segmentation. Protocol data units are put back together in correct order to reassemble a data in original form.

Q.2	i.	What is MAC address?	2	BL2	CO1	PO1
	ii.	Explain the channel allocation technique and its types.	3	BL1,2	CO1	PO2
	iii.	Draw and explain the Ethernet frame format in detail.	7	BL1,2	CO1	PO2
OR	iv.	Explain the CSMA/CD protocol with its working and flowchart.	7	BL4	CO1	PO3
Q.3	i.	Explain Fragmentation and reassembly.	2	BL2	CO2	PO2
	ii.	What is DHCP?	2	BL1	CO2	PO3
	iii.	Given IP address is 200.1.2.0 we want to divide it into 2 subnet Find the: IP address of both subnets, total no of IP address, no of host, range of IP address, DBA, LBA	8	BL5	CO2	PO3
OR	iv.	What is IP protocol? draw and explain the following fields 1. Fragment Offset 2. TTL 3. Total length 4. HLEN	8	BL2	CO2	PO3

• Process of reconstructing original data stream from received segment @ destination.



→ fragmentation: Done by network layer when max size of datagram is greater than max size of data that can be held in frame. i.e process of dividing large data packet in small pieces i.e fragments.

to improve efficiency of data transmission

- helps to reduce impact of large data packets on network performance.
- Increases efficiency
- Better bandwidth utilization

Total No. of Questions: 3

Enrollment No.....

Faculty of Engineering

Mid Sem I Examination September - 2023

CS3EA10 Artificial Intelligence

Programme: B.Tech. Branch/Specialisation: All

Duration: 1.5 Hrs. **Maximum Marks: 30**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d. Assume suitable data if necessary. Notations and symbols have their usual meaning.

			Marks	BL	CO	PO	PSO
Q.1	i.	Who is the inventor of Artificial Intelligence? a) Geoffrey Hinton b) Andrew Ng c) John McCarthy d) Jürgen Schmidhuber	1	BL1	CO1	PO1	
	ii.	What is the goal of Artificial Intelligence? a) To solve artificial problems b) To extract scientific causes c) To explain various sorts of intelligence d) To solve real-world problems	1	BL1	CO1	PO1	
	iii.	Which of the following is the branch of Artificial Intelligence? a) Machine Learning b) Cyber forensics c) Full-Stack Developer d) Network Design	1	BL1	CO1	PO1	
	iv.	Which of the Following problems can be modeled as CSP? a) 8-Puzzle problem b) 8-Queen problem c) Map coloring problem d) All of the mentioned	1	BL1	CO2	PO1	