



**Department of Computer Engineering**  
**A.Y. 2022-23 (Even Semester)**  
**Continuous Assessment: Term Test – I**

**SET - I**

**Max. Marks: 25**

**Duration: 1 Hr.**

**Class: T.Y. B. Tech.**

**Semester: VI**

**Course: Advance Algorithm**

**Course Code: DJ19CEC602**

**Program: Computer Engineering**

**Instructions:**

- (1) Write Set no on the answer sheet at the top.
- (2) Question Number 1 is Compulsory.
- (3) Attempt any THREE out of remaining questions.

<b>Q. No.</b>	<b>Question Description</b>	<b>Marks</b>
Q.1	Discuss significance of Randomized approach in Game Tree.	04
Q.2	Perform Amortized Analysis of Dynamic Tables using <b>Potential method.</b>	07
Q.3	Give complexity analysis of Randomized Quick Sort algorithm. (Give detailed derivation)	07
Q.4	What is a Black Depth of Red-Black Tree? Give suitable example. Delete node “10” from the following Red-Black Tree (show all the steps of deletion)	07
Q.4	Insert given elements in the Treap (Show Treap structure after each insertion) (10), (20), (30), (40), (50), (60), (70)	07

Shri Vile Parle Kelavani Mandal's  
**DWARKADAS J. SANGHVI COLLEGE OF ENGINEERING**

(Autonomous College Affiliated to the University of Mumbai)  
NAAC Accredited with "A" Grade (CGPA : 3.18)



Compute the priority of above nodes using pseudocode given below:

Priority = [ element ] mod [ (element/3) ]

Is above constructed Treap is skewed data structure?

\*\*\*\*\* All the best \*\*\*\*\*



**Department of Computer Engineering**  
**A.Y. 2022-23 (Even Semester)**  
**Continuous Assessment: Term Test – II**

**Max. Marks: 25**

**Class: T.Y. B. Tech.**

**Course: Advance Algorithm**

**Program: Computer Engineering**

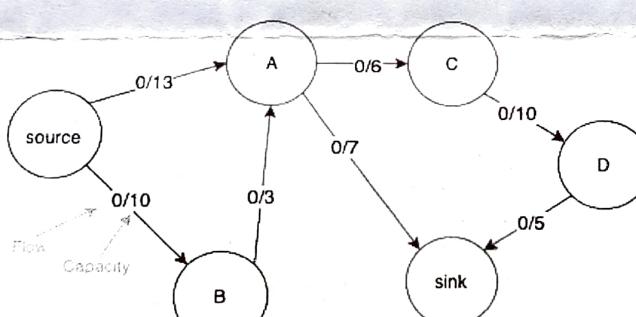
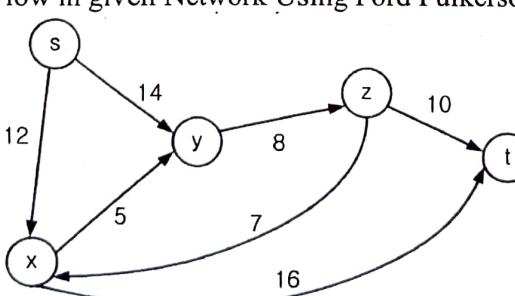
**Duration: 1 Hr.**

**Semester: VI**

**Course Code: DJ19CEC602**

**Instructions:**

- (1) Question Number 1 is Compulsory.
- (2) Attempt any THREE out of remaining questions.

<b>Q. No.</b>	<b>Question Description</b>	<b>CO</b>	<b>Blooms Taxonomy</b>	<b>Marks</b>
Q.1	List and explain Line Segment Properties in brief.	CO2	Understand	<b>04</b>
Q.2	Create a Balanced KD Tree for given data points: (4, 72, 239), (29, 2, 312), (336, 45, 3), (42, 41, 64), (5, 40, 148), (453, 43, 2), (5, 32, 92), (23, 94, 45), (56, 2, 61), (553, 40, 6)	CO2	Apply	<b>07</b>
Q.3	Find Maximum Flow for given network using Push Relabel algorithm.  	CO1, CO2	Apply	<b>07</b>
Q.4	Find Max-Flow in given Network Using Ford Fulkerson algorithm.   A flow network	CO2	Understand, Apply	<b>07</b>

P.T.O.



Shri Vile Parle Kelavani Mandal's  
**DWARKADAS J. SANGHVI COLLEGE OF ENGINEERING**  
(Autonomous College Affiliated to the University of Mumbai)  
NAAC Accredited with "A" Grade (CGPA : 3.18)



Q.5	What is Convex Hull? Run the Graham Scan algorithm to compute the Convex Hull of given points:				CO1, CO2	Understand, Apply	07
-----	--	--	--	--	-------------	----------------------	----

All the best



**Department of Computer Engineering**

**A.Y. 2022-23 (Even Semester)**

**Continuous Assessment: Term Test – I**

**Max. Marks: 25**

**Class: TE (A & B)**

**Course: Software Engineering**

**Program: Computer Engineering**

**Duration: 1 Hr.**

**Semester: VI**

**Course Code: DJ19CEC601**

**Date: 27/03/2023**

**Instructions: (If any)**

- (1) Please solve questions in order with clear and dark ink pens
- (2) Draw figures wherever required

<b>Q.No.</b>	<b>Question Description</b>	<b>Marks</b>
Q.1 (a)	Explain advantages and disadvantages of prototype model. In which scenarios is the prototype model suitable?	08
	OR	
Q.1 (a)	Explain the Scrum Model. Justify which feature of Scrum model do you find useful?	08
Q.2 (a)	i. Draw the diagram of Function Point Estimation model. ii. Compute the function point value for a project with the following information domain characteristics:  Number of user inputs: 7 Number of user outputs: 10 Number of user inquiries: 6 Number of files: 17 Number of external interfaces: 4  Assume average complexity for the domain values and low complexity for all the other attributes.	02 04
	OR	

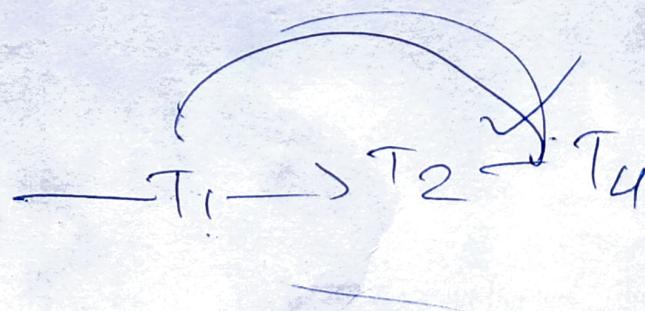


Shri Vile Parle Kelavani Mandal's  
**DWARKADAS J. SANGHVI COLLEGE OF ENGINEERING**  
 (Autonomous College Affiliated to the University of Mumbai)  
 NAAC Accredited with "A" Grade (CGPA : 3.18)



	i. Explain Work Breakdown Structure. ii. For the following tasks, draw the task network diagram and find the critical path.	02 04																																	
Q.2 (a)	<table border="1"> <thead> <tr> <th>Task</th><th>T1</th><th>T2</th><th>T3</th><th>T4</th><th>T5</th><th>T6</th><th>T7</th><th>T8</th><th>T9</th><th>T10</th></tr> </thead> <tbody> <tr> <td>Duration (in days)</td><td>10</td><td>15</td><td>15</td><td>7</td><td>20</td><td>5</td><td>4</td><td>8</td><td>10</td><td>12</td></tr> <tr> <td>Dependency</td><td>-</td><td>T1</td><td>T1</td><td>T1, T2</td><td>T1</td><td>T4, T5</td><td>T6</td><td>T7</td><td>T6, T8</td><td>T9</td></tr> </tbody> </table>	Task	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	Duration (in days)	10	15	15	7	20	5	4	8	10	12	Dependency	-	T1	T1	T1, T2	T1	T4, T5	T6	T7	T6, T8	T9	
Task	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10																									
Duration (in days)	10	15	15	7	20	5	4	8	10	12																									
Dependency	-	T1	T1	T1, T2	T1	T4, T5	T6	T7	T6, T8	T9																									
Q.2 (b)	Explain any 2 design principles in detail.	03																																	
Q.3	Explain the steps of requirements engineering process in brief.	08																																	
	<b>OR</b>																																		
Q.3	Explain the elements of analysis model with suitable diagram.	08																																	

\*\*\*\*\* All the best \*\*\*\*\*





Shri Vile Parle Kelavani Mandal's

**DWARKADAS J. SANGHVI COLLEGE OF ENGINEERING**

(Autonomous College Affiliated to the University of Mumbai)

NAAC Accredited with "A" Grade (CGPA : 3.18)



### Department of Computer Engineering

**A.Y. 2022-23 (Even Semester)**

#### **Continuous Assessment: Term Test – II**

<b>Max. Marks:</b> 25	<b>Duration:</b> 1 Hr.
<b>Class:</b> TE (A & B)	<b>Semester:</b> VI
<b>Course:</b> Software Engineering	<b>Course Code:</b> DJ19CEC601
<b>Program:</b> Computer Engineering	<b>Date:</b> 24/04/2023
<b>Instructions: (If any)</b>	
(1) Please solve questions in order with clear and dark ink pens (2) Draw figures wherever required	

Q.No.	Question Description	CO	Blooms Taxonomy	Marks
1	<p>For the following unit code, draw flow graph, identify independent paths and compute the cyclomatic complexity by all three formulas.</p> <pre>function getDiscountedPrice(price, discountPercent, isMember, isPromoActive) {   let discountedPrice = price;    if (discountPercent &gt; 0) {     discountedPrice = discountedPrice * (1 - discountPercent / 100);   }    if (isMember) {     discountedPrice = discountedPrice * 0.9;   }    if (isPromoActive) {     if (discountedPrice &gt; 100)     {       discountedPrice = discountedPrice - 10;     }     else {       discountedPrice = discountedPrice * 0.95;     }   }    return discountedPrice; }</pre>	CO5	Apply	4
1b	<p>Explain the different types of system testing?</p> <p>OR</p> <p>Explain Control structure testing.</p>	CO5	Understand	5



Shri Vile Parle Kelavani Mandal's  
**DWARKADAS J. SANGHVI COLLEGE OF ENGINEERING**  
(Autonomous College Affiliated to the University of Mumbai)  
NAAC Accredited with "A" Grade (CGPA : 3.18)



2	Explain the steps in Building a Risk table.  OR  Explain the features of a SCM repository.			8
3	Explain DevOps Toolchain.  OR  Explain Docker Architecture.			8



**Department of Computer Engineering**  
**A.Y. 2022-23 (Even Semester)**  
**Continuous Assessment: Term Test – I**

**Max. Marks: 25**

**Class: TE A**

Course: Information Security

Program: Third Year B.Tech. in Computer Engineering

**Duration: 1 Hr.**

**Semester: VI**

Course Code: DJ19CEC603

**Instructions:**

1. All questions are compulsory.
2. Check for internal options.
3. Assume suitable data wherever required.

Q.No.	Question Description	Marks								
Q.1	a) Explain in details key generation techniques in DES Algorithm.  OR b) Convert following plain text into cipher text using playfair techniques. Plain Text : DWARKADAS Key : SHAH	05								
Q.2	a) Convert Plain Text (PT) into cipher text (CT) using RSA : P=17, Q=13, Find e, d and CT if PT is 12	05								
Q.3	a) Discuss the key expansion process of AES 128 algorithm. Generate word w4,w5 from given word w0,w1,w3 w0={23,12,34,C2} w1={ 42,51,A2, D1} w3={31,E2,12,00} Rconst: { 01,00,00,00} S Box (w3) <table border="1"><tr><td>31</td><td>E2</td><td>12</td><td>00</td></tr><tr><td>A1</td><td>76</td><td>21</td><td>42</td></tr></table>	31	E2	12	00	A1	76	21	42	10
31	E2	12	00							
A1	76	21	42							
Q.4	a) Discuss in details about following security services I)Authentication II ) Non repudiation. OR b) Explain in details about various threats to data/information delivery over transit.	05								

Shri Vile Parle Kelavani Mandal's  
**DWARKADAS J. SANGHVI COLLEGE OF ENGINEERING**

(Autonomous College Affiliated to the University of Mumbai)

NAAC Accredited with "A" Grade (CGPA : 3.18)



**Department of Computer Engineering**  
**Academic Year 2022-2023**

**Term Test – II**

**T.E. (Semester VI) Div-A**

**Course: Information Security (DJ19CEC603)**

**Duration: 1 hour**

**Maximum Marks: 25**

**Instructions:**

1. Draw neat labelled diagrams wherever necessary.
2. Read the questions carefully. Question 1 is compulsory. Solve any three question out of five (Q2 to Q5 )

Q.No.	Question	Max. Marks
1.	a) Discuss in details how man in middle attack is launch on Diffie Hellman techniques. b) Alice and Bob have agreed to use prime no $q=11$ and $(\alpha)=2$ 1) If Alice choose random value if $X_a=4$ ( Private Key), what value Alice send to Bob 2) If Alice received the value 5 from Bob , find out private key of Bob ( $Y_a$ ). 3) Calculate final key $X_1$ and $X_2$ of Alice and Bob.	[10]
2.	Explain in details SHA1 Hashing Techniques.	[05]
3.	Discuss the process of Ticket generation and Ticket grant in Kerberos system.	[05]
4.	Explain various attacks on RSA digital signature scheme.	[05]
5.	Explain in details various services offered by digital signature.	[05]

----- All the Best -----



### Department of Computer Engineering

**A.Y. 2022-23 (Even Semester)**

#### **Continuous Assessment: Term Test – I**

**Max. Marks: 25**

**Duration: 1 Hr.**

**Class: T.Y. B. Tech. (A & B Division)**

**Semester: VI**

**Course: Big Data Infrastructure**

**Course Code: DJ19CEEC6011**

**Program: T.Y. B. Tech. in Computer Engineering**

**Date: 28/03/2023 (11:00 am – 12:00 noon)**

**Instructions:**

(1) All questions are compulsory.

(2) Assume suitable data wherever required, but clearly state it.

<b>Q. No.</b>	<b>Question Description</b>	<b>Marks</b>																
Q.1	<p>Consider the following database table:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;"><b>Id</b></th><th style="text-align: center;"><b>Name</b></th><th style="text-align: center;"><b>Branch</b></th><th style="text-align: center;"><b>Mobile</b></th></tr> </thead> <tbody> <tr> <td style="text-align: center;">101</td><td style="text-align: center;">Darsheel</td><td style="text-align: center;">Computer</td><td style="text-align: center;">9876502314</td></tr> <tr> <td style="text-align: center;">102</td><td style="text-align: center;">Ayush</td><td style="text-align: center;">Mechanical</td><td style="text-align: center;">9932416578</td></tr> <tr> <td style="text-align: center;">103</td><td style="text-align: center;">Yash</td><td style="text-align: center;">Computer</td><td style="text-align: center;">9810324576</td></tr> </tbody> </table> <p>i. Create the following table in Hive with transactional property = true and partitions.  ii. Insert the following values in the table.  iii. Display the count of students with respect to branch.  iv. Update the name to “Yashvi” where ID =103.  v. Alter the table to add new column “CGPA” with float datatype.</p>	<b>Id</b>	<b>Name</b>	<b>Branch</b>	<b>Mobile</b>	101	Darsheel	Computer	9876502314	102	Ayush	Mechanical	9932416578	103	Yash	Computer	9810324576	10
<b>Id</b>	<b>Name</b>	<b>Branch</b>	<b>Mobile</b>															
101	Darsheel	Computer	9876502314															
102	Ayush	Mechanical	9932416578															
103	Yash	Computer	9810324576															
Q.2	<p>Define Big Data. List and discuss types of Big Data.</p> <p style="text-align: center;"><b>OR</b></p> <p>Define Big Data. List and discuss the 5V's of Big Data.</p>	05																
Q.3	<p>Apply MapReduce on the following document to count the frequency of words. Show all the phases properly.</p> <div style="border: 1px solid black; padding: 10px; width: fit-content; margin: auto;"> <p>The quick brown fox</p> <p>The fox ate the mouse</p> <p>Now how brown cow</p> </div> <p style="text-align: center;"><b>OR</b></p> <p>Write the HDFS commands for the following with suitable example:</p> <p>i. To display recursively the contents in the directory.  ii. To copy files/folders from local file system to HDFS store.  iii. To copy files/folders from HDFS store to local file system.  iv. To give the size of each file in directory.  v. To change the replication factor of a file/directory in HDFS.</p>	05																
Q.4	<p>Explain the core components of Hadoop.</p> <p style="text-align: center;"><b>OR</b></p> <p>State the advantages and limitations of Hadoop.</p>	05																



### Department of Computer Engineering

A.Y. 2022-23 (Even Semester)

#### Continuous Assessment: Term Test – II

**Max. Marks: 25**

**Duration: 1 Hr.**

**Class: T.Y. B. Tech.**

**Semester: VI**

**Course: Big Data Infrastructure**

**Course Code: DJ19CEEC6011**

**Program: T.Y. B. Tech. in Computer Engineering**

**Date: 25/04/2023 (11:00 – 12:00 am)**

**Instructions:**

(1) All questions are compulsory.

(2) Assume suitable data wherever required, but clearly state it.

Q. No.	Question Description	CO	Blooms Taxonomy	Marks																				
Q.1	<p>Consider the following collection “Student”:</p> <table border="1"> <thead> <tr> <th>ID</th><th>Name</th><th>Branch</th><th>Admission_Year</th><th>Semester</th></tr> </thead> <tbody> <tr> <td>1001</td><td>Vinit</td><td>Computer</td><td>2020</td><td>4</td></tr> <tr> <td>4506</td><td>Mandar</td><td>Mechanical</td><td>2021</td><td>6</td></tr> <tr> <td>3201</td><td>Avani</td><td>Computer</td><td>2022</td><td>8</td></tr> </tbody> </table> <p>(a) Create a collection named “Student”. (1 Mark)  (b) Insert all the documents as shown in the collection in a <b>single statement</b>. (2 Marks)  (c) Update the Student “Mandar” and set Branch = Computer: (2 Marks)</p>	ID	Name	Branch	Admission_Year	Semester	1001	Vinit	Computer	2020	4	4506	Mandar	Mechanical	2021	6	3201	Avani	Computer	2022	8	CO5	Apply	05
ID	Name	Branch	Admission_Year	Semester																				
1001	Vinit	Computer	2020	4																				
4506	Mandar	Mechanical	2021	6																				
3201	Avani	Computer	2022	8																				
Q.2	<p>Explain different types of schedulers supported by Apache Spark.</p> <p style="text-align: center;"><b>OR</b></p> <p>Explain RDD with its features, advantages and imitations.</p>	CO4	Understand	05																				
Q.3	<p>Compare SQL Vs NoSQL.</p> <p style="text-align: center;"><b>OR</b></p> <p>Compare MongoDB Vs RDBMS.</p>	CO5	Understand	05																				
Q.4	<p>Explain the Cluster Architecture of Apache Kafka. Also explain the workflow of Kafka.</p> <p style="text-align: center;"><b>OR</b></p> <p>Explain the Cluster Architecture of Apache Storm. Also explain the workflow of Storm.</p>	CO6	Understand	10																				



**Department of Computer Engineering**

A.Y. 2022-23 (Even Semester)

**Continuous Assessment: Term Test – I**

<b>Max. Marks: 25</b>	<b>Duration: 1 Hr.</b>
<b>Class: Third Year B.Tech (A &amp; B)</b>	<b>Semester: VI</b>
<b>Course: Machine Learning</b>	<b>Course Code: DJ19CEEC6021</b>
<b>Program: Computer Engineering</b>	
<b>Instructions: All Questions are Compulsory</b>	

<b>Q. No.</b>	<b>Question</b>	<b>Marks</b>																																																																																										
Q.1	Explain the steps in developing machine learning applications.  <b>OR</b>  Explain any four applications of Machine Learning	04  04																																																																																										
Q.2	<table border="1"><thead><tr><th>RID</th><th>age</th><th>income</th><th>student</th><th>credit_rating</th><th>Class: buys_computer</th></tr></thead><tbody><tr><td>1</td><td>youth</td><td>high</td><td>no</td><td>fair</td><td>no</td></tr><tr><td>2</td><td>youth</td><td>high</td><td>no</td><td>excellent</td><td>no</td></tr><tr><td>3</td><td>middle_aged</td><td>high</td><td>no</td><td>fair</td><td>yes</td></tr><tr><td>4</td><td>senior</td><td>medium</td><td>no</td><td>fair</td><td>yes</td></tr><tr><td>5</td><td>senior</td><td>low</td><td>yes</td><td>fair</td><td>yes</td></tr><tr><td>6</td><td>senior</td><td>low</td><td>yes</td><td>excellent</td><td>no</td></tr><tr><td>7</td><td>middle_aged</td><td>low</td><td>yes</td><td>excellent</td><td>yes</td></tr><tr><td>8</td><td>youth</td><td>medium</td><td>no</td><td>fair</td><td>no</td></tr><tr><td>9</td><td>youth</td><td>low</td><td>yes</td><td>fair</td><td>yes</td></tr><tr><td>10</td><td>senior</td><td>medium</td><td>yes</td><td>fair</td><td>yes</td></tr><tr><td>11</td><td>youth</td><td>medium</td><td>yes</td><td>excellent</td><td>yes</td></tr><tr><td>12</td><td>middle_aged</td><td>medium</td><td>no</td><td>excellent</td><td>yes</td></tr><tr><td>13</td><td>middle_aged</td><td>high</td><td>yes</td><td>fair</td><td>yes</td></tr><tr><td>14</td><td>senior</td><td>medium</td><td>no</td><td>excellent</td><td>no</td></tr></tbody></table> Compute the GINI index for the attributes age and income along with the overall collection of training example. Consider the CART algorithm approach while computing GINI index.	RID	age	income	student	credit_rating	Class: buys_computer	1	youth	high	no	fair	no	2	youth	high	no	excellent	no	3	middle_aged	high	no	fair	yes	4	senior	medium	no	fair	yes	5	senior	low	yes	fair	yes	6	senior	low	yes	excellent	no	7	middle_aged	low	yes	excellent	yes	8	youth	medium	no	fair	no	9	youth	low	yes	fair	yes	10	senior	medium	yes	fair	yes	11	youth	medium	yes	excellent	yes	12	middle_aged	medium	no	excellent	yes	13	middle_aged	high	yes	fair	yes	14	senior	medium	no	excellent	no	07
RID	age	income	student	credit_rating	Class: buys_computer																																																																																							
1	youth	high	no	fair	no																																																																																							
2	youth	high	no	excellent	no																																																																																							
3	middle_aged	high	no	fair	yes																																																																																							
4	senior	medium	no	fair	yes																																																																																							
5	senior	low	yes	fair	yes																																																																																							
6	senior	low	yes	excellent	no																																																																																							
7	middle_aged	low	yes	excellent	yes																																																																																							
8	youth	medium	no	fair	no																																																																																							
9	youth	low	yes	fair	yes																																																																																							
10	senior	medium	yes	fair	yes																																																																																							
11	youth	medium	yes	excellent	yes																																																																																							
12	middle_aged	medium	no	excellent	yes																																																																																							
13	middle_aged	high	yes	fair	yes																																																																																							
14	senior	medium	no	excellent	no																																																																																							



**SHRI VILEPARLE KELAVANI MANDAL'S  
DWARKADAS J. SANGHVI COLLEGE OF ENGINEERING**  
(Autonomous College Affiliated to the University of Mumbai)  
NAAC ACCREDITED with "A" GRADE (CGPA : 3.18)



Q.3	<p>Describe how logistic regression can be used for classification? How do we maximize log likelihood function in logistic regression?</p>	07
Q.4	<p>What are the steps of Principal Component Analysis algorithm? Prove mathematically that the Eigen Vectors point in the direction of greatest variance.</p> <p style="text-align: center;"><b>OR</b></p> <p>Find principal components by applying PCA on the following data.</p>	07



Department of Computer Engineering  
A.Y. 2022-23 (Even Semester)  
Continuous Assessment: Term Test – II

<b>Max. Marks: 25</b>	<b>Duration: 1 Hr.</b>
<b>Class: Third Year B.Tech (A &amp; B)</b>	<b>Semester: VI</b>
<b>Course: Machine Learning</b>	<b>Course Code: DJ19CEEC6021</b>
<b>Program: Computer Engineering</b>	
<b>Instructions: All Questions are Compulsory</b>	

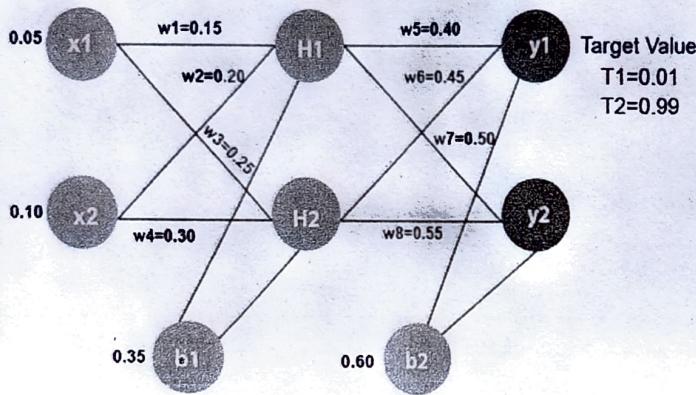
<b>Q. No.</b>	<b>Question</b>	<b>Marks</b>															
Q.1	<p>Apply <b>K means clustering</b> on given data for K=3. Use C1(2), C2(16) as C3(38) as initial cluster centres.</p> <p>Data: 2,4,6,3,31,12,16,15,38,35,14,21,23,25,30</p> <p style="text-align: center;"><b>OR</b></p> <p>Apply <b>K Nearest Neighbor algorithm</b> on the following data and classify the tuple {Interview Score=30, Exam Rank=70}. Assume K=3.</p> <table border="1"><thead><tr><th>Interview Score</th><th>Exam Rank</th><th>Type</th></tr></thead><tbody><tr><td>70</td><td>70</td><td>Not hired</td></tr><tr><td>70</td><td>40</td><td>Hired</td></tr><tr><td>30</td><td>40</td><td>Not hired</td></tr><tr><td>10</td><td>40</td><td>Not hired</td></tr></tbody></table>	Interview Score	Exam Rank	Type	70	70	Not hired	70	40	Hired	30	40	Not hired	10	40	Not hired	05
Interview Score	Exam Rank	Type															
70	70	Not hired															
70	40	Hired															
30	40	Not hired															
10	40	Not hired															
Q.2	a) Describe any five applications of Deep Learning  b) Write a short note on the application of machine learning for image recognition.	05 05															
Q.3	Explain Quadratic Programming solution for finding maximum margin separators in SVM.	10															
	<b>OR</b>																

**SHRI VILEPARLE KELAVANI MANDAL'S**  
**DWARKADAS J. SANGHVI COLLEGE OF ENGINEERING**  
 (Autonomous College Affiliated to the University of Mumbai)  
 NAAC ACCREDITED with "A" GRADE (CGPA : 3.18)

119



Apply EBPTA algorithm on the given example and calculate the new weights after one iteration. Consider the values provided in the diagram as initial values.



10



Shri Vile Parle Kelavani Mandal's  
**DWARKADAS J. SANGHVI COLLEGE OF ENGINEERING**

(Autonomous College Affiliated to the University of Mumbai)  
NAAC Accredited with "A" Grade (CGPA: 3.18)



Academic Year: 2022-23

**Continuous Assessment: Term Test – I**

**Duration: 1 Hour**

**Date: 29-03-2023**

**Course: Environmental Studies**

**T.Y. B. Tech. (Semester: VI)**

**Maximum Marks: 25**

**Time: 9:30-10:30 AM**

**Course Code: DJ19A5**

**Instructions:**

1. Attempt any 5 questions from Q.1 to Q.7
2. Assume suitable data wherever required, but justify it.
3. Figures to the right indicate full marks.
4. Draw neat-labelled diagrams wherever necessary.

<b>Q No.</b>	<b>Question</b>	<b>Max. Marks</b>
1	What are the solutions to depletion of natural resources?	[05]
2	What are the causes of depletion of natural resources?	[05]
3	What are the effects of climate change?	[05]
4	Why does carbon dioxide let heat in, but not out?	[05]
5	What does the Ecological Footprint measure?	[05]
6	What is overshoot?	[05]
7	What is a global hectare?	[05]

\*\*\*\*\*



Academic Year: 2022-23

**Continuous Assessment: Term Test – II**

**Duration: 1 Hour**

**Date: 26-04-2023**

**Course: Environmental Studies (SET-I)**

**T.Y. B. Tech. (Semester: VI)**

**Maximum Marks: 25**

**Time: 9:30 am – 10:30 am**

**Course Code: DJ19A5**

**Instructions:**

1. Attempt any 5 questions from Q.1 to Q.7
2. Assume suitable data wherever required, but justify it.
3. Figures to the right indicate full marks.
4. Draw neat-labelled diagrams wherever necessary.

<b>Q No.</b>	<b>Question</b>	<b>Max. Marks</b>
1	What is energy harvesting?	[05]
2	Explain Wind energy harvesting.	[05]
3	What Are Carbon Credits?	[05]
4	Why should levels of carbon and greenhouse gases in the atmosphere be reduced?	[05]
5	What are the Functions of CPCB?	[05]
6	What are the Powers of SPCB?	[05]
7	What makes a building "green"?	[05]

\*\*\*\*\*



Shri Vile Parle Kelavani Mandal's  
**DWARKADAS J. SANGHVI COLLEGE OF ENGINEERING**

(Autonomous College Affiliated to the University of Mumbai)  
NAAC Accredited with "A" Grade (CGPA : 3.18)



**Department of Computer Engineering**  
**A.Y. 2022-23 (Even Semester)**  
**Continuous Assessment: Term Test – I**

**Max. Marks: 25**

**Duration: 1 Hr.**

**Class: TE A & B**

**Semester: VI**

**Course: Ubiquitous Computing**

**Course Code: DJ19CEHN1C2**

**Program: Department of Computer Engineering**

**Instructions: (If any)**

- (1) All Questions are compulsory.**
- (2) Draw neat, labelled diagrams wherever applicable.**

<b>Q. No.</b>	<b>Question Description</b>	<b>Marks</b>
Q.1 (a)	Justify the need of Ubiquitous systems to be intelligent.	8 .
Q.2 (a)	Explain Service Architecture Models.	9
Q.3 (a)	Compare reflective vs active displays.	8

\*\*\*\*\* All the best \*\*\*\*\*



**Department of Computer Engineering**

**A.Y. 2022-23 (Even Semester)**

**Continuous Assessment: Term Test – 2**

<b>Max. Marks:</b> 25	<b>Duration:</b> 1 Hr.
<b>Class:</b> TE A & B	<b>Semester:</b> VI
<b>Course:</b> Ubiquitous Computing	<b>Course Code:</b> DJ19CEHN1C2
<b>Program:</b> Department of Computer Engineering	
<b>Instructions: (If any)</b>	
(1) All Questions are compulsory. (2) Draw neat, labelled diagrams wherever applicable.	

<b>Q. No.</b>	<b>Question Description</b>	<b>Marks</b>
Q.1 (a)	Compare and contrast sensor-based systems and context aware systems.	9
Q.2 (a)	Explain how smart devices are managed in a Human User-Centred Environment.	8
Q.3 (a)	Explain eco-friendly UbiCom devices.	8

\*\*\*\*\* All the best \*\*\*\*\*