# CITY ENGINEERING COLLEGE

**Doddakallasandra, Kanakapura Road, Bengaluru 560062**

## Department of Artificial Intelligence &Machine Learning

## Circular

**This is to notify that 3rd Internals of 8th semester will be conducted on 18/04/2024**

**10.30am-12.00pm -18AI81-Neural Networks and Deep Learning**

**2.30pm-4.00pm-18AI824- Modern Information Retrieval**

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# Department Of Artificial Intelligence & Machine Learning

## 8th Semester 3rd IA Time Table
## 18/04/2024

| 18/04/2024 | 10.30am-12.00pm | 2.30pm-4.00pm |
|---|---|---|
| subject code | 18AI81 | 18AI824 |

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| Department Of Artificial Intelligence | | | |
|---|---|---|---|
| 8th SEM 3RD IA FACULTY DUTY ALLOTMENT | | | |
| Sl.No | NAME OF THE FACULTY | 18-04-2024 Thursday | 18-04-2024 Thursday |
| | | 10.30am-12:00PM | 2:30PM-4:00PM |
| 1 | Ms.Vindhya | - | C201 |

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## Department Of Artificial Intelligence & Machine Learning

### 8th Semester 3rd IA Attendance
### 18/04/2024

| SL. NO | USN | NAME OF THE STUDENT | Signature |
|---|---|---|---|
| | | | |
| 1 | 1CE20AI001 | ABDUL FAHEEM | |
| 2 | 1CE20AI002 | HAJIRA AHMED | |
| 3 | 1CE20AI003 | KEDAR JOSHI | |
| 4 | 1CE20AI004 | KOKILA K R | |
| 5 | 1CE20AI006 | SHARON ZIPPORAH SEBASTIAN | |
| 6 | 1CE20AI007 | SHARONA SAM | |
| 7 | 1CE20AI008 | SUHAS GAJANANA | |
| 8 | 1CE20AI009 | SYEDA ALIYAH BAKSHI | |

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| 1 | C | E | 2 | 0 | A | I | 0 | 0 | |
|---|---|---|---|---|---|---|---|---|---|

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## Doddakallasandra, Bangalore:560062

## Department of Artificial Intelligence and Machine Learning

### INTERNAL TEST 2

Course: Modern Information Retrieval | Course Code: 18AI824 | Sem : VIII Sem

Max. Marks : 50 | Date: 18/04/2024 | Time: 2:30 PM to 4 PM

**Answer any five full questions choosing any one from each part.**

| Q # | Question | Marks | CO | BT |
|---|---|---|---|---|
| | PART A | | | |
| 1 | What is a query language in the context of information retrieval? Briefly discuss the key components of a query language for information retrieval systems. | 10 M | CO3 | L1 |
| | OR | | | |
| 2 | Illustrate Word Sense Disambiguation (WSD)? With an example, explain the various techniques to handle WSD | 10 M | CO3 | L2 |
| | PART B | | | |
| 3 | Explain: i) 4 types of keyword-based querying ii) Single-word queries, context queries, and Boolean queries with examples | 10 M | CO3 | L2 |
| | OR | | | |
| 4 | Explain the three uses of user relevance feedback and differentiate between Global and local analysis. | 10 M | CO3 | L2 |
| | | | | |
| 5 | Classify 3 main structural queries and explain in detail about fixed structure and hierarchical structure | 10 M | CO3 | L2 |
| | OR | | | |
| 6 | Explain Query expansion system reweighting for the vector model & term reweighting for the probability model. | 10 M | CO3 | L2 |
| | PART D | | | |
| 7 | What are text operations? Explain with a neat diagram document the preprocessing stages. | 10 M | CO4 | L1 |
| | OR | | | |
| 8 | Explain brief about Query expansion based on similarity thesaurus and explain pattern-matching words, prefixes, suffixes, substrings,and regular expressions. | 10 M | CO4 | L2 |
| | PART E | | | |
| 9 | i) What is an Index and list how the efficiency of an Information retrieval System depends on indexing.<br>ii) With a neat diagram example explain in detail the Inverted Index(Basic) | 10 M | CO4 | L2 |
| | OR | | | |
| 10 | Outline with a neat diagram example explain in detail the Full Inverted Index | 10 M | CO4 | L2 |

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DEPARTMENT OF ARTIFICIAL INTELLIGENCE

AND MACHINE LEARNING ENGINEERING

**SCHEME FOR EVALUATION**

**CIE TEST –I**

**SEMESTER &SECTION: VIII** Modern Information Retrieval

**Subject Code: 18AI824**

| Q. No | Details of the Answer | Marks Distribution | Total marks |
|---|---|---|---|
| 1 | What is a query language in the context of information retrieval? Briefly discuss the key components of a query language for information retrieval systems.<br><br>• Text retrieval systems can answer various types of queries depending on the retrieval model adopted.<br><br>• Full-text systems may not answer the same queries as those based on keyword ranking or hypertext models.<br><br>• Some query languages are not intended for final users and can be used by higher-level software packages to query databases or CD-ROM archives.<br><br>• Most query languages use content and syntax to find relevant documents, but may fail to find relevant answers. Techniques to enhance query usefulness include expanding words to synonyms, using a thesaurus, and removing stopwords.<br><br>• The retrieval unit, which can be a file, document, web page, paragraph, or other structural unit, is another aspect of the system's approach. | Each 5 marks | 10 |

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| | | | |
|---|---|---|---|
| 2. | **Illustrate Word Sense Disambiguation (WSD)? With an example, explain the various techniques to handle WSD**<br><br>Word Sense Disambiguation (WSD) is the process of determining the correct meaningor sense of a word based on the context in which it appears. In the context of Information Retrieval (IR), WSD is important because it helps improve the accuracy of search results by ensuring that the retrieved documents are relevant to the user's query.<br><br>• **Machine Translation**<br>• **Information Retrieval (IR**<br>• **Text Mining and Information Extraction (IE**<br>• **Lexicography** - WSD | Definition 2 marks<br><br>Explanation<br>8 marks | 10 marks |
| 3. | **Explain i) 4 types of keyword-based querying ii) Single-word queries, context queries, and Boolean queries with examples**<br><br>Single-word queries<br><br>Text retrieval systems typically search for words, which are long sequences of letters. Most models allow us to view text in this perspective and search words, with some models also allowing for internal division into letters.<br><br>The set of words retrieved can be used for word-treating purposes, such as thesaurus expansion or ranking purposes. Words carry significant meaning in natural language, so many models are structured around words.<br><br>Word queries result in documents containing at least one word of the query, and ranked based on similarity to the query. Common statistics on word occurrences are used to support ranking.<br><br>Context queries<br>Phrase is a sequence of single-word queries. An occurrence of the phrase is a sequence of words. For instance, it is possible to search for the word 'enhance,' and then for the word 'retrieval.' | Each 2 marks and Examples 2 marks | 10 marks |

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| | | | |
|---|---|---|---|
| | Boolean queries<br>The oldest (and still heavily used) form of combining keyword queries is to use Boolean operators. A Boolean query has a syntax composed of atoms (i.e., basic queries) that retrieve documents, and of Boolean operators that work on their operands (which are sets of documents) and deliver sets of documents. | | |
| 4. | **Explain the three uses of user relevance feedback and differentiate between Global and local analysis.**<br><br>Differentiation between Global and local<br><br>The main idea consists of selecting important terms, or expressions, attached to the documents that have been identified as relevant by the user, and of enhancing the importance of these terms in a new query formulation.<br><br>(a) expand queries with the vector model, (b) reweight query terms with the probabilistic model, and (c) reweight query terms with a variant of the probabilistic model. | 2marks<br><br>8 marks | 10 marks |
| 5. | **Classify 3 main structural queries and explain in detail about fixed structure and hierarchical structure**<br><br>1. Expanding the original query with new terms,<br>2. And reweighting the terms in the expanded query.<br>everal of approaches available for improving the initial query formulation through query expansion and term reweighting. These approaches are grouped in three categories:<br>1. Approaches based on feedback information from the user;<br>2. Approaches based on information derived from the set of documents initially retrieved (called the local set of documents);<br><br>**Fixed structure** | Each 3 marks definition 1 mark | 10 marks |

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**Hierarchical structure**

6. **.Explain Query expansion system reweighting for the vector model & term reweighting for the probability model.**

, Dr: set of relevant documents, as identified by the user, among the retrieved documents;
Dn: set of non-relevant documents among the retrieved documents; Cr: set of relevant documents among all documents in the collection;
|Dr|, |Dn|, |Cr|: number of documents in the sets Dr, Dn, Crrespectively;
α, β, γ : tuning constants.
Consider first the unrealistic situation in which the complete set Cr of relevant documents to a given query q is known in advance.

Model explanation 4 marks each

10 marks

$$\vec{q}_{opt} = \frac{1}{|C_r|} \sum_{\forall \vec{d}_j \in C_r} \vec{d}_j - \frac{1}{N - |C_r|} \sum_{\forall \vec{d}_j \notin C_r} \vec{d}_j \quad [2]$$

$$\textit{Standard\_Rochio}: \quad \vec{q}_m = \alpha \vec{q} + \frac{\beta}{|D_r|} \sum_{\forall \vec{d}_j \in D_r} \vec{d}_j - \frac{\gamma}{|D_n|} \sum_{\forall \vec{d}_j \in D_n} \vec{d}_j$$

$$\textit{Ide\_Regular}: \quad \vec{q}_m = \alpha \vec{q} + \beta \sum_{\forall \vec{d}_j \in D_r} \vec{d}_j - \gamma \sum_{\forall \vec{d}_j \in D_n} \vec{d}_j$$

$$\textit{Ide\_Dec\_Hi}: \quad \vec{q}_m = \alpha \vec{q} + \beta \sum_{\forall \vec{d}_j \in D_r} \vec{d}_j - \gamma \; max_{non\text{-}relevant}(\vec{d}_j)$$

Term **Reweighting** for the Probabilistic Model

$$sim(d_j, q) \alpha \sum_{i=1}^{t} w_{i,q} \, w_{i,j} \left( \log \frac{P(k_i|R)}{1 - P(k_i|R)} + \log \frac{1 - P(k_i|\overline{R})}{P(k_i|\overline{R})} \right) \quad [2]$$

7. **What are text operations? Explain with a neat diagram document the preprocessing stages.**

Diagram 2 marks

10

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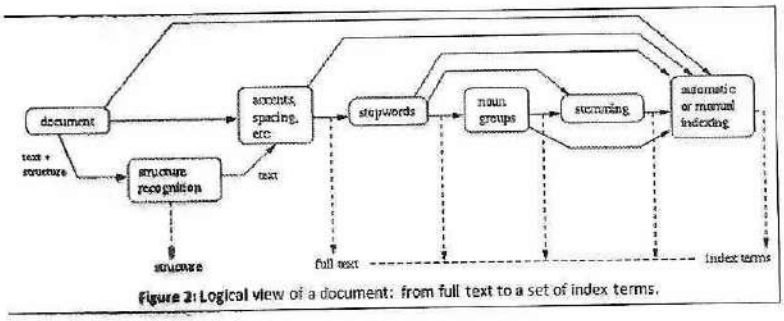
| | | | |
|---|---|---|---|
| | Document Preprocessing<br>Document preprocessing is a procedure which can be divided mainly into five text operations (or transformations) (as shown in figure 2):<br><br>1. Lexical analysis<br>2. Elimination of stop words.<br>3. Stemming of the remaining<br>4. Selection of index terms<br>5. Construction of term categorization<br><br>  <br><br>Figure 2: Logical view of a document: from full text to a set of index terms. | Each step – 2 marks | |
| 8. | **Explain brief about Query expansion based on similarity thesaurus and explain pattern-matching words, prefixes, suffixes, substrings,and regular expressions.**<br><br>Pattern Matching:<br>• **Words**<br>• **Prefixes**<br>• **Suffixes A string** which must form the termination of a text **word. For instance**, given the suffix `tars' all the documents **containing words** such as 'computers.' testers, painters,' etc. **are retrieved.**<br>• **Substrings**<br>• **Ranges**<br>• **Regular expressions** some text retrieval systems allow **searching for** regular expressions. | Each 2 marks | 10 |
| 9. | **i) What is an Index and list how the efficiency of an Information retrieval System depends on indexing. With a neat diagram example explain in detail the Inverted Index(Basic)** | | |

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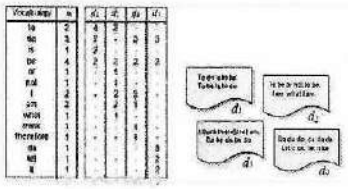
| | | | |
|---|---|---|---|
| | **Index is** a data structure built from the text to speed up the searches.<br>In the context of an information retrieval system that uses an index, the efficiency of the system can be measured<br>• **Indexing time**<br>• **Indexing space:**<br>• **Index storage:**<br>• **Query latency:**<br>**Query throughput:**<br><br>**Inverted Index**<br><br>  | Diagram-2marks<br><br>Each -2 marks | |
| 10 | **Outline with a neat diagram example explain in detail the Full Inverted index** | Diagram-2marks<br><br>Each -2 marks | |

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RGPVNOTES

| Vocabulary | $n_i$ | Occurrences as full inverted lists |
|---|---|---|
| to | 2 | [1,4,[1,4,6,9]],[2,2,[1,5]] |
| do | 3 | [1,2,[2,10]],[3,3,[6,8,10]],[4,3,[1,2,3]] |
| is | 1 | [1,2,[3,8]] |
| be | 4 | [1,2,[5,7]],[2,2,[2,6]],[3,2,[7,9]],[4,2,[9,12]] |
| or | 1 | [2,1,[3]] |
| not | 1 | [2,1,[4]] |
| I | 2 | [2,2,[7,10]],[3,2,[1,4]] |
| am | 2 | [2,2,[8,11]],[3,1,[5]] |
| what | 1 | [2,1,[9]] |
| think | 1 | [3,1,[2]] |
| therefore | 1 | [3,1,[3]] |
| da | 1 | [4,3,[4,5,6]] |
| let | 1 | [4,2,[7,10]] |
| it | 1 | [4,2,[8,11]] |

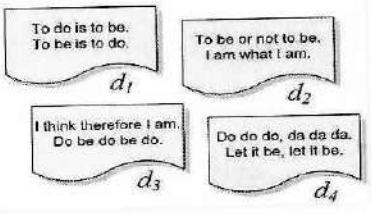


**Figure 5:** Full Inverted Index

The **space required for** the vocabulary is rather small Heaps' law: the **vocabulary grows** as O(nβ), where

- **n is the collection** size.
- **β is a collection**-dependent

The **occurrences demand** much more space the extra space will be **O(n) and is around.**

- **40% of the text** size

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Branch : AI Semester : 8

| Sl NO. | USN | 18AI824 |
|---|---|---|
| 1 | 1CE20AI001 | 37 |
| 2 | 1CE20AI002 | 40 |
| 3 | 1CE20AI003 | 40 |
| 4 | 1CE20AI004 | 40 |
| 5 | 1CE20AI006 | 38 |
| 6 | 1CE20AI007 | 38 |
| 7 | 1CE20AI008 | 40 |
| 8 | 1CE20AI009 | 40 |

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Ph: 080 - 22560313 Mob: 98804 11365

**NAAC ACCREDITED**

## INTERNAL ASSESSMENT BOOK

Name : Kokila. K. R USN 1CE20AI004

Branch AI & ML Semester VIII Section

Sub Code: 18AI842 Subject: Modern Information Ritrival

| Sl. No. | Particulars | Date | Page No. | Max. Marks | Marks Awarded | Signature of Staff Incharge |
|---|---|---|---|---|---|---|
| 1. | Test - 1 | 27/3/24 | 2-15 | 50 | 50 | 28/3/24 |
| 2. | Test - 2 | 18/4/24 | 16-26 | 50 | 50 | 18/4/24 |
| 3. | Test - 3 | 8/05/24 | 27-36 | 50 | 50 | 3/5/24 |
| | | | | | | |
| | | | | | | |

30/30 + 10/10 = 40/40.

## CERTIFICATE

This is to certify that Mr.//Ms. Kokila. K. R bearing USN 1CE20AI004 has satisfactorily completed the course of Internal assessment prescribed by the Vivesvaraya Technological University for Semester VIII Branch AI & ML for the academic year 20 ..... 20 .....

| MARKS AWARDED | Test Marks | Assignment Marks | Final I A Marks |
|---|---|---|---|
| Maximum | 30 | 10 | 40 |
| Obtained | 30 | 10 | 40 |

Kokila
Signature of Student

Signature of Staff Incharge

Signature of H.O.D

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**NAAC ACCREDITED**

## INTERNAL ASSESSMENT BOOK

Name: Syeda Aliyah Bakshi USN 1CE20AI009

Branch AI and ML Semester 8 Section B

Sub Code: 18AI842 Subject: Modern Information Retrieval

| Sl. No. | Particulars | Date | Page No. | Max. Marks | Marks Awarded | Signature of Staff Incharge |
|---|---|---|---|---|---|---|
| 1. | Test - 1 | 27/3/24 | 1-15 | 50 | 50 | 27/3/24 |
| 2. | Test - 2 | 18/4/24 | 16-28 | 50 | 49 | 18/4/24 |
| 3. | Test - 3 | 8/5/24 | 29-40 | 50 | 50 | 8/5/24 |
| | | | | | | |
| | | | | | | |

$\frac{30}{30} + \frac{10}{10} = \frac{40}{40}$

## CERTIFICATE

This is to certify that ~~Mr./~~Ms. Syeda Aliyah Bakshi bearing USN 1CE20AI009 has satisfactorily completed the course of Internal assessment prescribed by the Visvesvaraya Technological University for Semester 8 Branch AI & ML for the academic year 20 ..... 20 .....

| MARKS AWARDED | | | |
|---|---|---|---|
| | Test Marks | Assignment Marks | Final I A Marks |
| Maximum | 30 | 10 | 40 |
| Obtained | 30 | 10 | 40 |

Aliyah
Signature of Student

Signature of Staff Incharge

Signature of H.O.D

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**NAAC ACCREDITED**

## INTERNAL ASSESSMENT BOOK

Name : Suhas Gajanana USN 1CE20AI008

Branch AI ML Semester 8 Section ,

Sub Code: 18AI8042 Subject: Modern Information Retrieval

| Sl. No. | Particulars | Date | Page No. | Max. Marks | Marks Awarded | Signature of Staff Incharge |
|---|---|---|---|---|---|---|
| 1. | Test - 1 | 27/3/24 | 1-14 | 50 | 50 | 27/3/24 |
| 2. | Test - 2 | 18/4/24 | 15-24 | 50 | 50 | 18/4/24 |
| 3. | Test - 3 | 8/5/24 | 25-34 | 50 | 50 | 8/5/24 |
| | | | | | | |
| | | | | | | |

30/30 × 10/10 - 40/40

## CERTIFICATE

This is to certify that Mr./Ms. Suhas Gajanana. bearing USN 1CE20AI008 has satisfactorily completed the course of Internal assessment prescribed by the Vivesvaraya Technological University for Semester 8 Branch AI & ML for the academic year 2023-2024.

| MARKS AWARDED | Test Marks | Assignment Marks | Final I A Marks |
|---|---|---|---|
| Maximum | 30 | 10 | 40 |
| Obtained | 30 | 10 | 40 |

Signature of Student | Signature of Staff Incharge | Signature of H.O.D

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## Department of Computer Science and Engineering

### Circular

This is to notify that 3rd Internals of 8th semester will be conducted on 18/04/2024

10.30am-12.00pm -18CS81 (Internet of Things)

2.30pm-4.00pm-18CS822 (Storage Area Network)

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## Department of Computer Science and Engineering

### 8th semester 3rd Internal Time Table

| 18/04/2024 | 10.30am-12.00pm | 2.30pm-4.00pm |
|---|---|---|
| Subject Code | 18CS81 | 18CS822 |

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| Department Of Computer Science and Engineering | | | |
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| 8th SEM 3RD IA FACULTY DUTY ALLOTMENT | | | |
| Sl.No | NAME OF THE FACULTY | 18-04-2024 Thursday | 18-04-2024 Thursday |
| | | 10.30am-12:00PM | 2:30PM-4:00PM |
| 1 | Mrs. Shruthi B S | C201 | ----- |
| 2 | Mrs. Swetha A | C202 | ------ |
| 3 | Mrs. Vibhavi R N | C203 | ------ |
| 4 | Ms. Shravya S | ------ | C201 |
| 5 | Mr. John Peter | ----- | C202 |
| 6 | Mrs. Nayana R K | ------ | C203 |

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# CITY ENGIINEERIING COLLEGE

Doddakallasandra, Bangalore – 560 062

## Room Allotment for 2nd Internal Test_ UG – 8 th Semester _ 18th April 2024

## ROOM NO:- CS-401

| Seat No. | 8 SEM CS A USN | Seat No. | 8 SEM CS A USN | Seat No. | 8 SEM CS A USN | Seat No. | 8 SEM CS A USN | Seat No. | 8 SEM CS A USN | Seat No. | 8 SEM CS A USN |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1CE20CS001 | 2 | 1CE20CS007 | 13 | 1CE20CS013 | 14 | 1CE20CS021 | 25 | 1CE20CS029 | 26 | 1CE20CS033 |
| 3 | 1CE20CS002 | 4 | 1CE20CS008 | 15 | 1CE20CS014 | 16 | 1CE20CS024 | 27 | 1CE20CS030 | 28 | 1CE20CS034 |
| 5 | 1CE20CS003 | 6 | 1CE20CS009 | 17 | 1CE20CS016 | 18 | 1CE20CS025 | 29 | 1CE20CS031 | 30 | 1CE20CS035 |
| 7 | 1CE20CS004 | 8 | 1CE20CS010 | 19 | 1CE20CS017 | 20 | 1CE20CS026 | | | | |
| 9 | 1CE20CS005 | 10 | 1CE20CS011 | 21 | 1CE20CS018 | 22 | 1CE20CS027 | | | | |
| 11 | 1CE20CS006 | 12 | 1CE20CS012 | 23 | 1CE20CS019 | 24 | 1CE20CS028 | | | | |

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## ROOM NO:- CS-402

| Seat No. | 8 SEM CS A USN | Seat No. | 8 SEM CS A USN | Seat No. | 8 SEM CS B USN | Seat No. | 8 SEM CS B USN | Seat No. | 8 SEM CS B USN | Seat No. | 8 SEM CS B USN |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1CE20CS036 | 2 | 1CE20CS062 | 13 | 1CE20CS015 | 14 | 1CE20CS045 | 25 | 1CE20CS052 | 26 | 1CE20CS055 |
| 3 | 1CE20CS037 | 4 | 1CE20CS069 | 15 | 1CE20CS032 | 16 | 1CE20CS046 | 27 | 1CE20CS053 | 28 | 1CE20CS056 |
| 5 | 1CE20CS038 | 6 | 1CE20CS071 | 17 | 1CE20CS041 | 18 | 1CE20CS048 | 29 | 1CE20CS054 | 30 | 1CE20CS057 |
| 7 | 1CE20CS039 | 8 | 1CE20CS079 | 19 | 1CE20CS042 | 20 | 1CE20CS049 | | | | |
| 9 | 1CE20CS040 | 10 | 1CE20CS081 | 21 | 1CE20CS043 | 22 | 1CE20CS050 | | | | |
| 11 | 1CE20CS047 | 12 | 1CE20CS085 | 23 | 1CE20CS044 | 24 | 1CE20CS051 | | | | |

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# ROOM NO:- CS-403

| Seat No. | 8 SEM CS B USN | Seat No. | 8 SEM CS B USN | Seat No. | 8 SEM CS B USN | Seat No. | 8 SEM CS B USN | Seat No. | 8 SEM CS B USN |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1CE20CS058 | 2 | 1CE20CS066 | 13 | 1CE20CS075 | 14 | 1CE20CS083 | 25 | 1CE20CS090 |
| 3 | 1CE20CS059 | 4 | 1CE20CS068 | 15 | 1CE20CS076 | 16 | 1CE20CS084 | 26 | 1CE20CS091 |
| 5 | 1CE20CS060 | 6 | 1CE20CS070 | 17 | 1CE20CS077 | 18 | 1CE20CS086 | 27 | 1CE20CS036 |
| 7 | 1CE20CS061 | 8 | 1CE20CS072 | 19 | 1CE20CS078 | 20 | 1CE20CS087 | | |
| 9 | 1CE20CS063 | 10 | 1CE20CS073 | 21 | 1CE20CS080 | 22 | 1CE20CS088 | | |
| 11 | 1CE20CS065 | 12 | 1CE20CS074 | 23 | 1CE20CS082 | 24 | 1CE20CS089 | | |

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CITY ENGINEERING COLLEGE Bengaluru

Principal

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# CITY ENGINEERING COLLEGE

## COMPUTER SCIENCE & ENGINEERING

**VIII SEMESTER- SECTION: A** | **III INTERNAL TEST**

## ROOM No:C-401

| Sl. No. | USN | DATE/SUBJECT CODES | |
|---|---|---|---|
| | | 18-04-2024 | |
| | | Morning | Afternoon |
| | | 18 ** 81 | 18 ** 82* |
| 1 | 1CE20CS001 | | |
| 2 | 1CE20CS002 | | |
| 3 | 1CE20CS003 | | |
| 4 | 1CE20CS004 | | |
| 5 | 1CE20CS005 | | |
| 6 | 1CE20CS006 | | |
| 7 | 1CE20CS007 | | |
| 8 | 1CE20CS008 | Absent | |
| 9 | 1CE20CS009 | | |
| 10 | 1CE20CS010 | Absent. | |
| 11 | 1CE20CS011 | | |
| 12 | 1CE20CS012 | | |
| 13 | 1CE20CS013 | | |
| 14 | 1CE20CS014 | | |
| 15 | 1CE20CS016 | | |
| 16 | 1CE20CS017 | | |
| 17 | 1CE20CS018 | | |
| 18 | 1CE20CS019 | | |
| 19 | 1CE20CS021 | | |
| 20 | 1CE20CS024 | | |
| 21 | 1CE20CS025 | | |
| 22 | 1CE20CS026 | | |
| 23 | 1CE20CS027 | | |
| 24 | 1CE20CS028 | | |
| 25 | 1CE20CS029 | | |
| 26 | 1CE20CS030 | | |
| 27 | 1CE20CS031 | | |
| 28 | 1CE20CS033 | | |
| 29 | 1CE20CS034 | | |
| 30 | 1CE20CS035 | | |
| | No. of Students Present | 29 | 22 |
| | No. of Students Absent | 2 | 8 |
| | Staff Signature | | |

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# CITY ENGINEERING COLLEGE

## COMPUTER SCIENCE & ENGINEERING

VIII SEMESTER- SECTION: B | III INTERNAL TEST

## ROOM No:C-402

| Sl No. | USN | DATE/SUBJECT CODES 18-04-2024 Morning 18 ** 81 | Afternoon 18 ** 82* |
|---|---|---|---|
| 1 | 1CE20CS036 | Maleema | Maleema |
| 2 | 1CE20CS037 | [illegible] | [illegible] |
| 3 | 1CE20CS038 | [illegible] | |
| 4 | 1CE20CS039 | Jyothi | Jyothi |
| 5 | 1CE20CS040 | Dhanya | Dhanya |
| 6 | 1CE20CS047 | Adhithi | Adhithi |
| 7 | 1CE20CS062 | | |
| 8 | 1CE20CS069 | Snehal | |
| 9 | 1CE20CS071 | | |
| 10 | 1CE20CS079 | [illegible] | |
| 11 | 1CE20CS015 | Present | |
| 12 | 1CE20CS032 | [illegible] | [illegible] |
| 13 | 1CE20CS041 | Kasiba Afrien | Kasiba Afrien |
| 14 | 1CE20CS042 | Karrin | |
| 15 | 1CE20CS043 | [illegible] | [illegible] |
| 16 | 1CE20CS044 | Krupashree G | Krupashree G |
| 17 | 1CE20CS045 | Kumaraswamy P | |
| 18 | 1CE20CS046 | | |
| 19 | 1CE20CS048 | Manasa P | |
| 20 | 1CE20CS049 | | |
| 21 | 1CE20CS050 | | |
| 22 | 1CE20CS051 | | |
| 23 | 1CE20CS052 | | |
| 24 | 1CE20CS053 | Nalaki | Nalaki |
| 25 | 1CE20CS054 | | |
| 26 | 1CE20CS055 | Nimmi | |
| 27 | 1CE20CS056 | [illegible] | [illegible] |
| 28 | 1CE20CS057 | pooja's | pooja's |
| | No. of Students Present | | |
| | No. of Students Absent | 8 | ~~16~~ 16 |
| | Staff Signature | Pangatha D | [illegible] |

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## COMPUTER SCIENCE & ENGINEERING

**VIII SEMESTER- SECTION: B** | **III INTERNAL TEST**

## ROOM No:C-403

| Sl No. | USN | DATE/SUBJECT CODES | |
|---|---|---|---|
| | | 18-04-2024 | |
| | | Morning | Afternoon |
| | | 18 ** 81 | 18 ** 82* |
| 1 | 1CE20CS058 | Pavan K.R | Pavan K.R. |
| 2 | 1CE20CS059 | | |
| 3 | 1CE20CS060 | Pushkar | |
| 4 | 1CE20CS061 | | |
| 5 | 1CE20CS063 | | |
| 6 | 1CE20CS065 | | |
| 7 | 1CE20CS066 | | |
| 8 | 1CE20CS068 | Shoba H.N | |
| 9 | 1CE20CS070 | Ronam | |
| 10 | 1CE20CS072 | | |
| 11 | 1CE20CS073 | | |
| 12 | 1CE20CS074 | | |
| 13 | 1CE20CS075 | Swati | Swati |
| 14 | 1CE20CS076 | | |
| 15 | 1CE20CS077 | | |
| 16 | 1CE20CS078 | Alia | Alia |
| 17 | 1CE20CS080 | | |
| 18 | 1CE20CS082 | Hari | Hari |
| 19 | 1CE20CS083 | | |
| 20 | 1CE20CS084 | Vaishnavi.K | Vaishnavi.K |
| 21 | 1CE20CS086 | | |
| 22 | 1CE20CS087 | | |
| 23 | 1CE20CS088 | | |
| 24 | 1CE20CS089 | Yashashree | |
| 25 | 1CE20CS090 | | Yashas |
| 26 | 1CE20CS091 | | |
| 27 | 1CE19CS036 | | |
| | No. of Students Present | | |
| | No. of Students Absent | | |
| | Staff Signature | Managa.G | |

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USN | 1 | C | E | | | | | | | |

COURSECODE:18CS822

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*KanakapuraRoad,Doddakallasandra,Bengaluru-560062*

## THIRD INTERNAL TEST

rogramme:CS/IS
ourse Name:Storage Area Networks
em:VIII A&B
uration:1½Hrs

Date:08/05/2024
Time:2:30PM–4:00PM

*Note:Answer any FIVE questions choosing at least ONE from each part*

MAX MARKS:50

*Part –A*

| | | CO'S | BT'S |
|---|---|---|---|
| Describe Backup and restore operations. | 10 | CO1 | BT1 |
| *OR* | | | |
| Discuss different backup topologies. | 10 | CO1 | BT1 |

*Part– B*

| | | | |
|---|---|---|---|
| Mention Major Local replication technologies. Explain network based local replication | 10 | CO1 | BT1, BT2 |
| *OR* | | | |
| A) Discuss flushing the file system buffer.<br>B) Explain the uses of local replicas. | 5<br>5 | CO1 | BT1,BT3 |

*Part-C*

| | | | |
|---|---|---|---|
| Explain host based remote replication with neat diagram. | 10 | CO2 | BT1, BT2 |
| *OR* | | | |
| A) Difference between synchronous and asynchronous remote replication modes.<br>B) Explain FCSCAN security architecture with a neat diagram. | 5<br>5 | CO2 | BT2, BT3 |

*Part-D*

| | | | |
|---|---|---|---|
| Explain storage security domains. | 10 | CO2 | BT2, BT3 |
| *OR* | | | |
| What is remote replication? Explain storage array based remote replication. | 10 | CO2 | BT1, BT2 |

*Part-E*

| | | | |
|---|---|---|---|
| Write a note on i) Assets ii) Threats iii) Vulnerability | 10 | CO2 | BT2, BT3 |
| *OR* | | | |
| Explain storage array based local replication in detail. | 10 | CO2 | BT3, BT4 |

**omsTaxonomyLevels(BTL):**
- Remembering the concepts**BT2**-Understanding**BT3** –Applying**BT4** –Analyzing**BT5**-Evaluating

**rseOutcomes(CO's):**
: Understand the techniques and summarize the concepts
: Investigate the concepts and apply the same

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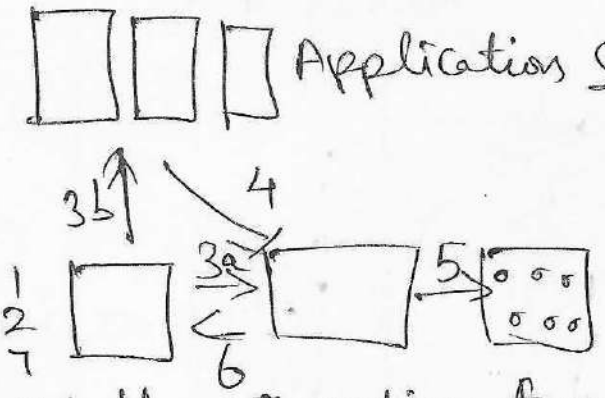
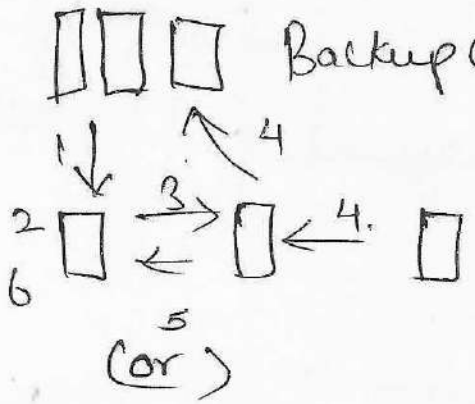
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

SCHEME FOR EVALUATION

CIE TEST – III

SEMESTER &SECTION: VIII & A, B. DATE: 8.05.2024

| Q. No | Details of the Answer | Marks Distribution | Total marks |
|---|---|---|---|
| 1. | Backup and restore operations. | | |
| |   | 5 | 10 |
| | Listing out the operations carried out in Backup. | | |
| | Restoration | | |
| |   | 5. | |
| | (or) | | |
| 1. | Backup Topologies. | | |
| | i Direct attached backup | | |

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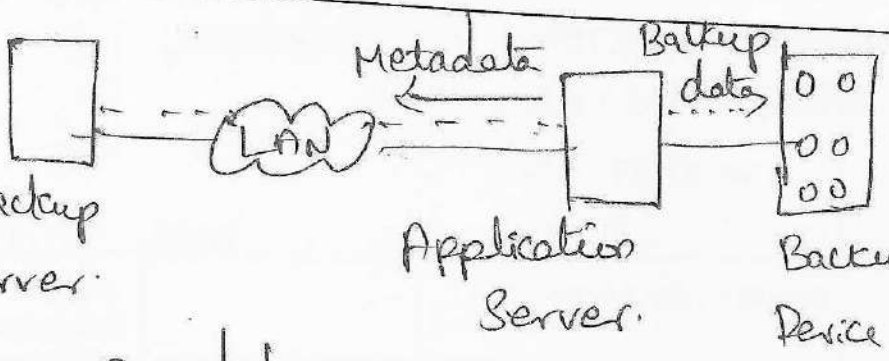
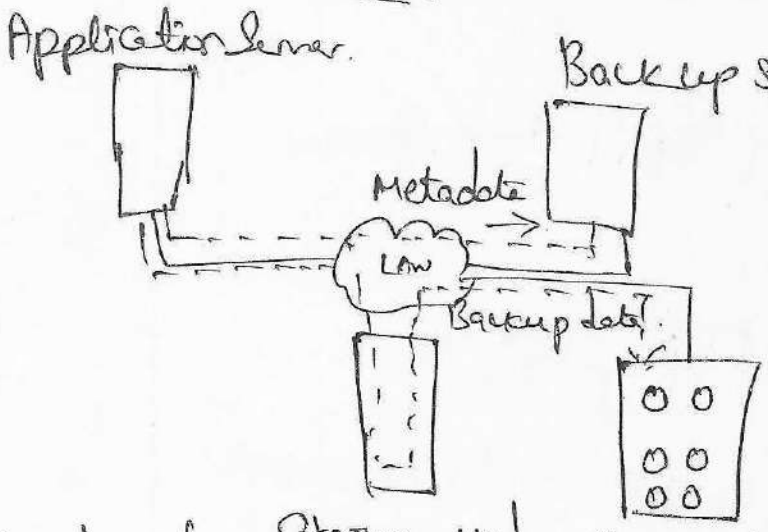
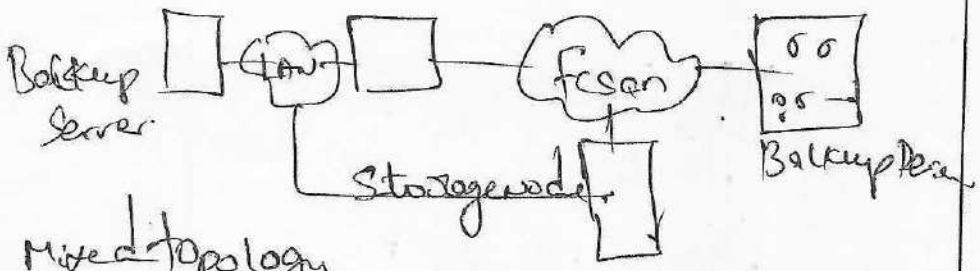
| Q. No | Details of the Answer | Marks Distribution | Total marks |
|---|---|---|---|



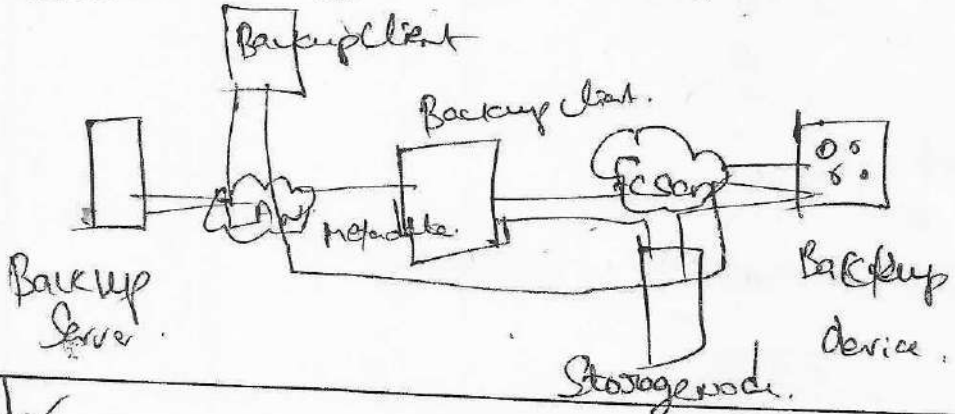

ii, LAN Based backup.




iii, SAN based backup.




iv, Mixed topology




10.

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Q No 3

4.

| Q. No | Details of the Answer | Marks Distribution | Total marks |
|---|---|---|---|
| 3. | Major Local Replication technologies.<br>1. Snapshot Replication.<br>2. Mirroring<br>3. ASynchronous Replication.<br>4. Cloning. | 3 | |
| | Network based local Replication involves Replicating data b/w Storage Slm over a nlw within a LAN or SAN.<br>1. Storage Array Based.<br>2. Host Based.<br>3. File Based.<br>4. Block Level. | 5 | 10. |
| | (or). | | |
| 4. A) | Flushing the Slm buffer refers to. Data held in memory buffer by the file Slm is committed to disk. | Explanation (5) | |
| B. | Uses of Local Replicas<br>1. Alternative Saurce for backup.<br>2. Fast recovery.<br>3. Testing platform.<br>4. Data migration<br>5. Data Support. | 5 | 10. |

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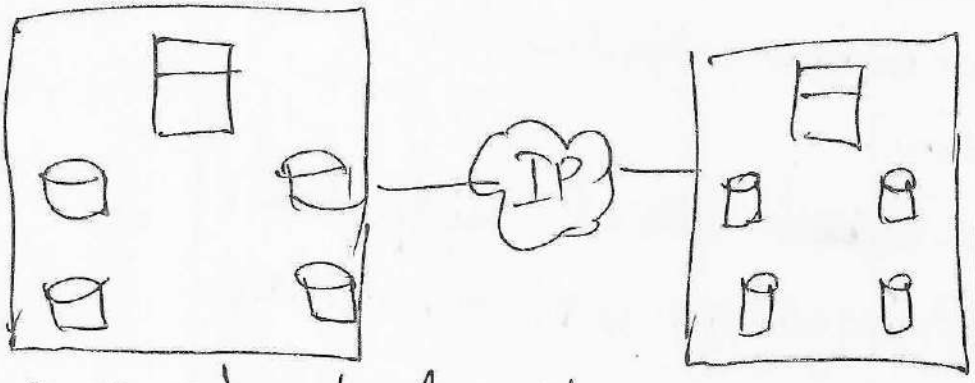
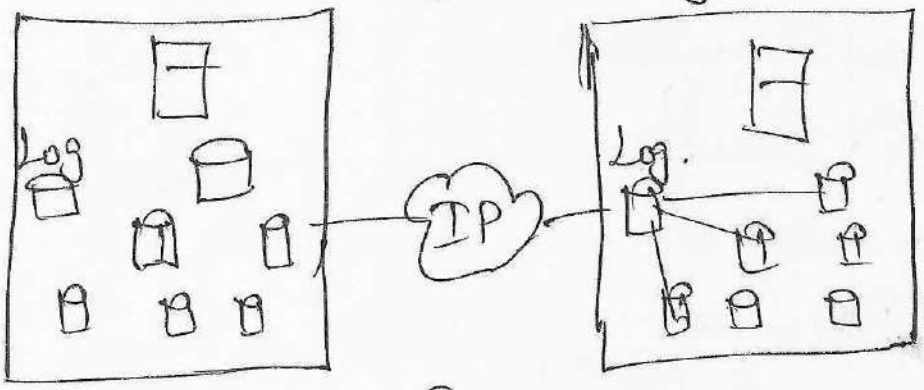
| Q. No | Details of the Answer | Marks Distribution | Total marks |
|---|---|---|---|
| 5. | Host Based Remote Replication.<br>→ LVM-Based Remote Replication<br>  <br><br>→ Host based log Shipping.<br>  <br> | 5<br>5 | 10. |
| | (Or) | | |
| 6. | A. Synchronous: A write must be Committed to the source and the target prior to acknowledging write Complete to the production host.<br>Asynchronous: A write is Committed to the source and immediately acknowledged to the host.<br>B. FCSCAN.<br>Multiple Integrated layers for Security with Architecture diagram | 5<br>5 | 10 |

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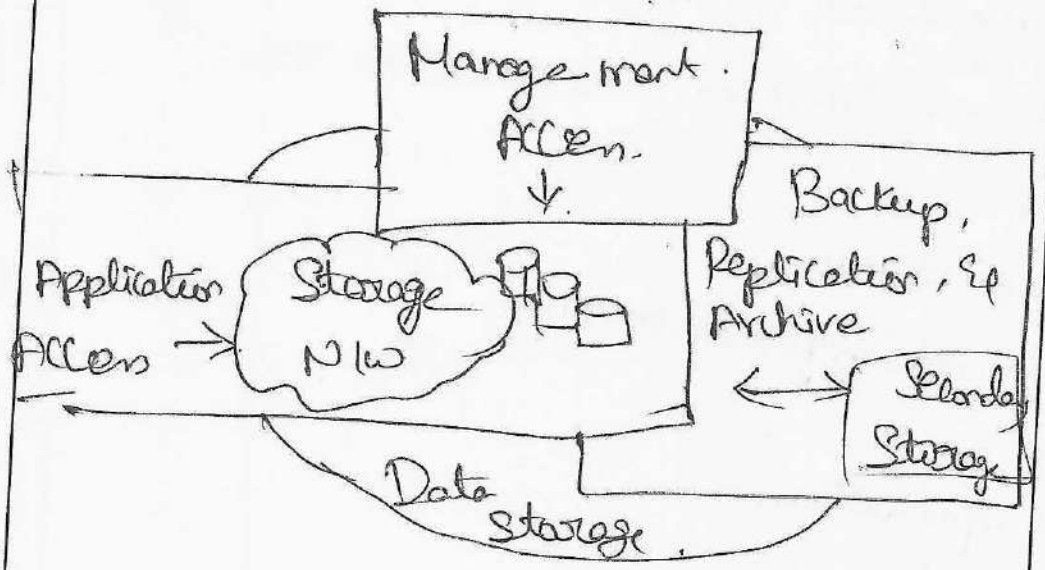
| Q. No | Details of the Answer | Marks Distribution | Total marks |
|---|---|---|---|
| 7. | Storage Security Domains.   | 10 | 10. |
| | (or). | | |
| 8. | Remote Replication. Replicas of information assets at the remote sites organization mitigate the risks. | 3. | |
| | Storage Array Based Remote Replication i) Synchronous Replication Mode ii) ASynchronous Replication mode iii) Disk Buffered Replication mode. | 7 | 10. |

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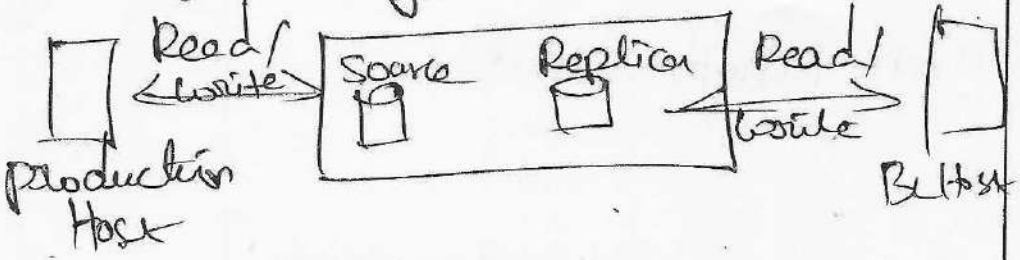
| Q. No | Details of the Answer | Marks Distribution | Total marks |
|---|---|---|---|
| 9. | i, Assets.<br>Information, Hw, Sw and other infra Structure Components are Assets. | 3 | |
| | ii, Threats.<br>Passive Attack,<br>Data modification Attack.<br>Dos.<br>Repudiation. | 4 | 10. |
| | iii, Vulnerability.<br>Potential Attacks.<br>Defense in depth.<br>Layered approach to security. | 3 | |
| | (or) | | |
| 10. | Storage Array based local Replication<br>  <br> | 5. | 10. |
| | i, Full Volume Mirroring. | 5 | |
| | ii, Pointer Based full Volume Replication | | |

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HOD

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Kanakapura Main Rd, Doddakallasandra, Bangalore 560 061
Email: cityengineering123@gmail.com Website: www.cityengineeringcollege.ac.in
Ph: 080 - 22660833 Mob: 98804 [illegible]365

NAAC ACCREDITED

## INTERNAL ASSESSMENT BOOK

Name: Benitta Hathsiyal X USN: 1CE20CS019

Branch: CSE Semester: VIII th Section: A

Sub Code: 18CS822 Subject: SAN

| Sl. No | Particulars | Date | Page No. | Max. Marks | Marks Awarded | Signature of Staff Incharge |
|---|---|---|---|---|---|---|
| 1. | Test - 1 | 26/03/24 | 01 - 14 | 50 | 48 | 27/3/24 |
| 2. | Test - 2 | 18/04/24 | 15 - 28 | 50 | 50 | |
| 3. | Test - 3 | 08/05/24 | 29 - 43 | 50 | 50 | |
| | | | | | | |
| | | | | | | |

## CERTIFICATE

This is to certify that Mr./Ms. Benitta Hathsiyal - X bearing USN 1CE20CS019 has satisfactorily completed the course of Internal assessment prescribed by the Visvesvaraya Technological University for Semester VIII th Branch CSE for the academic year 2023-2024

| MARKS AWARDED | Test Marks | Assignment Marks | Final I.A Marks |
|---|---|---|---|
| Maximum | 30 | 10 | 40 |
| Obtained | 30 | 10 | 40 |

Signature of Student | Signature of Staff Incharge | Signature of H.O.D

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CITY ENGINEERING COLLEGE, BANGALORE

Branch : CS Semester : 8

| Sl NO. | USN | 18CS822 |
|---|---|---|
| 1 | 1CE19CS036 | 32 |
| 2 | 1CE20CS001 | 33 |
| 3 | 1CE20CS002 | 39 |
| 4 | 1CE20CS003 | 36 |
| 5 | 1CE20CS004 | 33 |
| 6 | 1CE20CS005 | 39 |
| 7 | 1CE20CS006 | 37 |
| 8 | 1CE20CS007 | 40 |
| 9 | 1CE20CS008 | 33 |
| 10 | 1CE20CS009 | 30 |
| 11 | 1CE20CS010 | 38 |
| 12 | 1CE20CS011 | 35 |
| 13 | 1CE20CS012 | 38 |
| 14 | 1CE20CS013 | 40 |
| 15 | 1CE20CS014 | 38 |
| 16 | 1CE20CS015 | 37 |
| 17 | 1CE20CS016 | 40 |
| 18 | 1CE20CS017 | 39 |
| 19 | 1CE20CS018 | 40 |
| 20 | 1CE20CS019 | 40 |
| 21 | 1CE20CS021 | 38 |
| 22 | 1CE20CS024 | 39 |
| 23 | 1CE20CS025 | 40 |
| 24 | 1CE20CS026 | 40 |
| 25 | 1CE20CS027 | 35 |
| 26 | 1CE20CS028 | 40 |
| 27 | 1CE20CS029 | 35 |
| 28 | 1CE20CS030 | 40 |
| 29 | 1CE20CS031 | 38 |
| 30 | 1CE20CS032 | 31 |
| 31 | 1CE20CS033 | 34 |
| 32 | 1CE20CS034 | 35 |
| 33 | 1CE20CS035 | 34 |
| 34 | 1CE20CS036 | 38 |
| 35 | 1CE20CS037 | 40 |
| 36 | 1CE20CS038 | 37 |

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| Sl NO. | USN | 18CS822 |
|---|---|---|
| 37 | 1CE20CS039 | 38 |
| 38 | 1CE20CS040 | 39 |
| 39 | 1CE20CS041 | 30 |
| 40 | 1CE20CS042 | 32 |
| 41 | 1CE20CS043 | 37 |
| 42 | 1CE20CS044 | 39 |
| 43 | 1CE20CS045 | 37 |
| 44 | 1CE20CS046 | 38 |
| 45 | 1CE20CS047 | 38 |
| 46 | 1CE20CS048 | 38 |
| 47 | 1CE20CS049 | 23 |
| 48 | 1CE20CS050 | 23 |
| 49 | 1CE20CS051 | 40 |
| 50 | 1CE20CS052 | 30 |
| 51 | 1CE20CS053 | 40 |
| 52 | 1CE20CS054 | 40 |
| 53 | 1CE20CS055 | 38 |
| 54 | 1CE20CS056 | 35 |
| 55 | 1CE20CS057 | 38 |
| 56 | 1CE20CS058 | 38 |
| 57 | 1CE20CS059 | 27 |
| 58 | 1CE20CS060 | 29 |
| 59 | 1CE20CS061 | 25 |
| 60 | 1CE20CS062 | 32 |
| 61 | 1CE20CS063 | 39 |
| 62 | 1CE20CS065 | 33 |
| 63 | 1CE20CS066 | 23 |
| 64 | 1CE20CS068 | 35 |
| 65 | 1CE20CS069 | 40 |
| 66 | 1CE20CS070 | 34 |
| 67 | 1CE20CS071 | 38 |
| 68 | 1CE20CS072 | 35 |
| 69 | 1CE20CS073 | 30 |
| 70 | 1CE20CS074 | 30 |
| 71 | 1CE20CS075 | 38 |
| 72 | 1CE20CS076 | 26 |
| 73 | 1CE20CS077 | 25 |
| 74 | 1CE20CS078 | 38 |
| 75 | 1CE20CS079 | 39 |

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| Sl NO. | USN | 18CS822 |
|---|---|---|
| 76 | 1CE20CS080 | 37 |
| 77 | 1CE20CS081 | 37 |
| 78 | 1CE20CS082 | 39 |
| 79 | 1CE20CS083 | 34 |
| 80 | 1CE20CS084 | 38 |
| 81 | 1CE20CS085 | 40 |
| 82 | 1CE20CS086 | 36 |
| 83 | 1CE20CS087 | 33 |
| 84 | 1CE20CS088 | 22 |
| 85 | 1CE20CS089 | 35 |
| 86 | 1CE20CS090 | 40 |
| 87 | 1CE20CS091 | 32 |

verified
May

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# CITY ENGINEERING COLLEGE

Doddakallasandra, Kanakapura Road, Bengaluru 560062

## Department of Electronics and Communication Engineering

## Circular

This is to notify that 3rd Internals of 8th semester will be conducted on 18TH and 19TH APRIL 2024

10.30am-12.00pm -18EC81 (Internet of Things)

10.30pm-12.00pm-18EC821 (Network security)

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# CITY ENGINEERING COLLEGE

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## Department of Electronics and Communication Engineering

### 8th semester 3rd Internal Time Table

| DATE | 10.30am-12.00pm | SUBJECT |
|---|---|---|
| 18/04/2024 | 18EC81 | Internet of Things |
| 19/04/2024 | 18EC822 | Network security |
| | | |

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| Department Of ELECTRONICSandCOMMUNICATION Engineering | | | |
|---|---|---|---|
| 8th SEM 3RD IA ROOM ALLOTMENT | | | |
| Sl.No | 8 EC 'A' | 18-04-2024 Thursday | 19-04-2024 FRIDAY |
| | | 10.30am-12:00PM | 10:30PM-12:00PM |
| | USN | A103 | A103 |
| 1 | 1CE20 EC 001 | A103 | A103 |
| 2 | 1CE20 EC **002** | A103 | A103 |
| 3 | 1CE20 EC 003 | A103 | A103 |
| 4 | 1CE21EC 400 | A103 | A103 |
| 5 | **1CE21EC401** | A103 | A103 |

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| Department Of ELECTRONICS andcOMMUNICATION Engineering | | | |
|---|---|---|---|
| 8th SEM 3RD IA FACULTY DUTY ALLOTMENT | | | |
| Sl.No | NAME OF THE FACULTY | 18-04-2024 Thursday | 19-04-2024 FRIDAY |
| | | 10.30am-12:00PM | 10:30PM-12:00PM |
| 1 | Dr shaini Prasad | A103 | |
| 2 | Shylaja | | A103 |

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Email: cityengineering123@gmail.com Website: www.cityengineeringcollege.ac.in
Ph: 080 - 22560313 Mob: 98804 11365

NAAC ACCREDITED

## INTERNAL ASSESSMENT BOOK

Name : KEERTHI A USN 1CE20EC002

Branch ELECTRONICS AND COMMUNICATION Semester VIII Section A

Sub Code: 18EC821 Subject: NETWORK SECURITY

| Sl. No. | Particulars | Date | Page No. | Max. Marks | Marks Awarded | Signature of Staff Incharge |
|---|---|---|---|---|---|---|
| 1. | Test - 1 | 26/03/24 | 1-8 | 40/30 | 36/27 | |
| 2. | Test - 2 | 25/04/24 | 9-14 | 40/30 | 34/26 | |
| 3. | Test - 3 | 04/05/24 | 15-22 | 40/30 | 38/29 | |
| | | | | | 108/82 | |
| | | | | | | |

## CERTIFICATE

This is to certify that Mr.//Ms. KEERTHI A bearing USN 1CE20EC002 has satisfactorily completed the course of Internal assessment prescribed by the Vivesvaraya Technological University for Semester VIII Branch EC for the academic year 2023 2024

| MARKS AWARDED | | | |
|---|---|---|---|
| | Test Marks | Assignment Marks | Final I A Marks |
| Maximum | 30 | 10 | 40 |
| Obtained | 27 | 10 | 37 |

Signature of Student

Signature of Staff Incharge 7/5/24.

Signature of H.O.D

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# Visvesvaraya Technological University

## IA / CIE Report June / July 2024 Examination.

CITY ENGINEERING COLLEGE, BANGALORE

Branch : EC Scheme : 2018 Semester : 8

| Sl NO. | USN | 18EC81 | 18EC821 | 18ECP83 | 18ECS84 | 18ECI85 | STUDENT SIGNATURE |
|---|---|---|---|---|---|---|---|
| 1 | 1CE20EC001 | 33 | 37 | 34 | 86 | 35 | |
| 2 | 1CE20EC002 | 35 | 37 | 38 | 95 | 36 | |
| 3 | 1CE20EC003 | 23 | 26 | 28 | 81 | 26 | |
| 4 | 1CE21EC400 | 23 | 23 | 26 | 78 | 25 | |
| 5 | 1CE21EC401 | 36 | 36 | 38 | 96 | 35 | |
| --x-- | Faculty Signature | | | | | | ----XXXXXXX---- |

* - values are either optional subjects or the faculty has not yet entered the marks
TH - Theory part of CIE Marks (IPCC)
PR - Practical part of CIE Marks (IPCC)
T - Total CIE Marks (IPCC)

**HOD**
**Seal and Signature**

Professor & Head
Dept. of Electronics & Communication Engineering
City Engineering College,
Doddakallasandra, Kanakapura Main Rd
Bangalore-560 061.

**PRINCIPAL**
**Seal and Signature**

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USN | 1 | C | E | | | | | | | |

COURSE CODE:18EC821

# CITY ENGINEERING COLLEGE

## FIRST INTERNAL TEST

**Programme: ELECTRONICS AND COMMUNICATION**
**Course : Network Security**
**Sem& Sec: 8 A**
**Duration: 1 ½ hrs.**

**Date:26/03/2024**
**Time: 2:30 PM-4:00 PM**
**Max Marks: 40**

*Note: Answer all Questions selecting any ONE FULL question from each part.*

| Q No | Questions | Marks | CO's | BT'S |
|---|---|---|---|---|
| | **PART-A** | | | |
| 1 | Why a security is needed? Brief.<br>Enumerate the salient features of modern nature of attacks. | 10 | CO1 | L1, L2 |
| | **OR** | | | |
| 2 | Explain the principles of security with necessary diagrams. | 10 | CO1 | L1, L2 |
| | **PART-B** | | | |
| 3 | What are Active attacks? Explain Masquerade, Replay attack, Alteration of messages and Denial of service. | 10 | CO1 | L1, L2 |
| | **OR** | | | |
| 4 | Mention the programs that attack computer systems. Explain Virus and its four phases of lifetime. | 10 | CO1 | L1, L2 |
| | **PART-C** | | | |
| 5 | Highlight the key characteristics of the four generations of anti-virus software. | 10 | CO1 | L1, L2 |
| | **OR** | | | |
| 6 | Tabulate the Web Security Threats, consequences and countermeasures with respect to Integrity, confidentiality, Denial of service and Authentication. | 10 | CO2 | L1, L2 |
| | **PART-D** | | | |
| 7 | Explain with neat figures, the three-level web traffic security approaches. | 10 | CO2 | L1, L2 |
| | **OR** | | | |
| 8 | Describe SSL architecture with SSL protocol stack. | 10 | CO2 | L1, L2 |

Blooms Taxonomy Levels (BTL): *BT1-Remembering* *BT2- Understanding*

Course Outcomes (CO's): CO1: Explain network security services and mechanisms and explain Security concepts

CO2: Understand the concept of transport level security and SSL.

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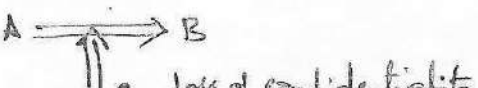
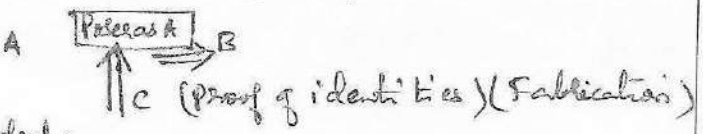
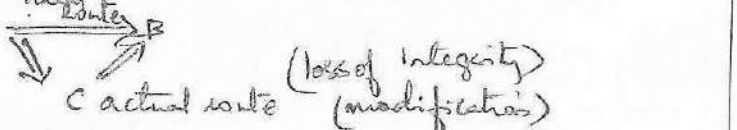
# CITY ENGINEERING COLLEGE
## DEPARTMENT OF ELCECTRONICS & COMMUNICATION ENGINEERING
## SCHEME FOR VALUATION- *2023-24*
### INTERNAL TEST: 01

**Semester & Section:** 8 A **Sub Code:** 18EC821 **Sub Name:** Network Security **Date:** 26-3-24



| Question No. | Details of the Answer | Marks Distribution | Total Marks |
|---|---|---|---|
| 1. | Need of Security<br>- Importance of data<br>- To handle or cover financial & personal data<br>- To authenticate a user.<br>- To encode database info.<br>- To avoid intruder capturing the data | 5 | |
| | Salient features of modern nature of attacks:<br>- Automating attacks<br>- Privacy concerns<br>- Distance no matter | 5 | 10 |
| 2. | Principles of security - confidentiality, Authentication, Integrity & Non-repudiation. | | |
| | Confidentiality - A ⇒ B, C ⇑ loss of confidentiality (interception) | 3 | |
| | Authentication: A [Poser as A] ⇒ B, C ⇑ (proof of identities)(Fabrication) | 3 | |
| | Integrity: A ⇒ B (ideal route), C actual route (loss of integrity) (modification) | 3 | |
| | Non-repudiation - Refusal of info. sent. (denial of doing) | 1 | 10 |
| 3 | Active attacks are modifying the original message or creation of false message. Not an easy way to prevent. | 1 | |
| | Masquerade - Trying to pose as another entity. | 3 | |
| | Replay attack - Modifications & resending | 3 | |
| | Alteration of messages - changes to original data | 3 | 10 |
| | Denial of service - Attempt to prevent legitimate user from accessing services. | | |





Staff [signature] HOD

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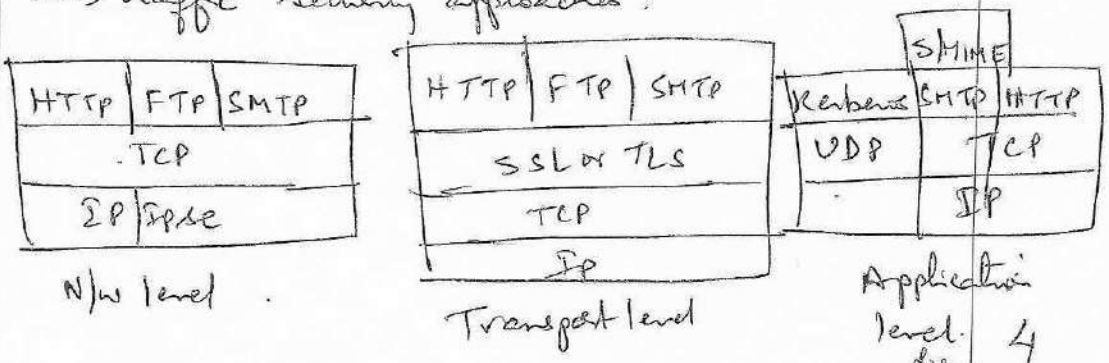
| Question No. | Details of the Answer | Marks Distribution | Total Marks |
|---|---|---|---|
| 7 | Web traffic security approaches :   | Fig 4<br>Explan 6 | 10 |
| 8 | Secure socket layer.<br>architecture.<br>SSL protocol stack<br>explanation | 3<br>3<br>4 | 10 |

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## DEPARTMENT OF INFORMATION SCIENCE & ENGINEERING

## Circular

This is to notify that 3rd Internals of 8th semester will be conducted on 18/04/2024

10.30am-12.00pm -18CS81 (Internet of Things)

2.30pm-4.00pm-18CS822 (Storage Area Network)

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## DEPARTMENT OF INFORMATION SCIENCE & ENGINEERING

### 8th semester 3rd Internal Time Table

| 18/04/2024 | 10.30am-12.00pm | 2.30pm-4.00pm |
|---|---|---|
| Subject Code | 18CS81 | 18CS822 |

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## Department Of Information Science and Engineering

### 8th SEM 3RD IA FACULTY DUTY ALLOTMENT

| Sl.No | NAME OF THE FACULTY | 18-04-2024 Thursday | 18-04-2024 Thursday |
|---|---|---|---|
| | | 10.30am-12:00PM | 2:30PM-4:00PM |
| 1 | Mrs. Shruthi B S | C201 | ----- |
| 2 | Mrs. Swetha A | C202 | ------ |
| 3 | Mrs. Vibhavi R N | C203 | ------ |
| 4 | Ms. Shravya S | ------ | C201 |
| 5 | Mr. John Peter | ----- | C202 |
| 6 | Mrs. Nayana R K | ------ | C203 |

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## Room Allotment for 3rd InternalTest_UG –8thSemester_18thApril2024

# ROOMNO:-CS-203

| SeatNo. | 8SEMISB |
|---|---|
| | USN |
| 1 | 1CE20IS001 |
| 2 | 1CE20IS002 |
| 3 | 1CE20IS003 |
| | |

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## Department of Information Science and Engineering

**VIII SEMESTER - SECTION: B** **III INTERNAL TEST**

**ROOM No: C-203**

| SI No. | USN | Morning | Afternoon |
|---|---|---|---|
| | | 18CS81 | 18CS822 |
| 1 | 1CE201S001 | Aisha Kumari | Aisha Kumari |
| 2 | 1CE201S002 | | |
| 3 | 1CE201S003 | Likith R | Likith R |
| No. of Students Present | | 03 | 03 |
| No. of Students Absent | | — | — |
| Staff Signature | | | |

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USN | 1 | C | E | | | | | | | |

COURSECODE:18CS822

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## THIRD INTERNAL TEST

*Programme:CS/IS*
*Course Name:Storage Area Networks*
*Sem:VIII A&B*
*Duration:1½Hrs*

Date:08/05/2024
Time:2:30PM–4:00PM

MAX MARKS:50

*Note:Answer any FIVE questions choosing at least ONE from each part*

| | | | CO'S | BT'S |
|---|---|---|---|---|
| | ***Part –A*** | | | |
| 1. | Describe Backup and restore operations. | 10 | CO1 | BT1 |
| | ***OR*** | | | |
| 2. | Discuss different backup topologies. | 10 | CO1 | BT1 |
| | ***Part– B*** | | | |
| 3. | Mention Major Local replication technologies. Explain network based local replication | 10 | CO1 | BT1, BT2 |
| | ***OR*** | | | |
| 4. | A) Discuss flushing the file system buffer.<br>B) Explain the uses of local replicas. | 5<br>5 | CO1 | BT1,BT3 |
| | ***Part-C*** | | | |
| 5. | Explain host based remote replication with neat diagram. | 10 | CO2 | BT1, BT2 |
| | ***OR*** | | | |
| 6. | A) Difference between synchronous and asynchronous remote replication modes.<br>B) Explain FCSCAN security architecture with a neat diagram. | 5<br>5 | CO2 | BT2, BT3 |
| | ***Part-D*** | | | |
| 7. | Explain storage security domains. | 10 | CO2 | BT2, BT3 |
| | ***OR*** | | | |
| 8. | What is remote replication? Explain storage array based remote replication. | 10 | CO2 | BT1, BT2 |
| | ***Part-E*** | | | |
| 9. | Write a note on i) Assets ii) Threats iii) Vulnerability | 10 | CO2 | BT2, BT3 |
| | ***OR*** | | | |
| 10. | Explain storage array based local replication in detail. | 10 | CO2 | BT3, BT4 |

BloomsTaxonomyLevels(BTL):
BT1- RememberingtheconceptsBT2-UnderstandingBT3 –ApplyingBT4 –AnalyzingBT5-Evaluating
CourseOutcomes(CO's):
CO1: Understand the techniques and summarize the concepts

CO2: Investigate the concepts and apply the same

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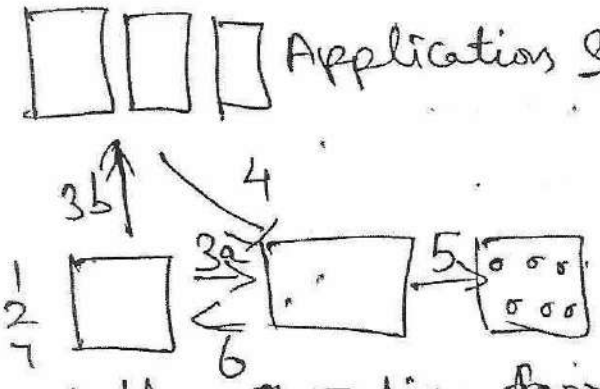
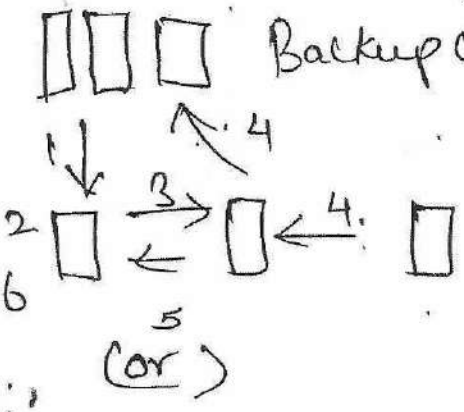
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

## SCHEME FOR EVALUATION

CIE TEST – III

SEMESTER &SECTION: VIII & A, B. DATE: 8.05.2024

| Q. No | Details of the Answer | Marks Distribution | Total marks |
|---|---|---|---|
| 1. | Backup and restore operations. | | |
| |   | 5 | |
| | Listing out the operations carried out in Backup. | | 10 |
| | Restoration | | |
| |   | 5. | |
| | (or) | | |
| 2. | Backup Topologies: | | |
| | 1. Direct attached backup | | |

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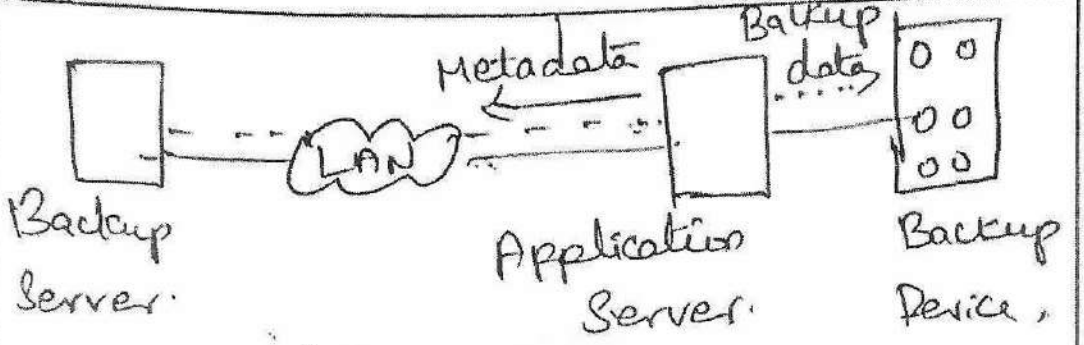
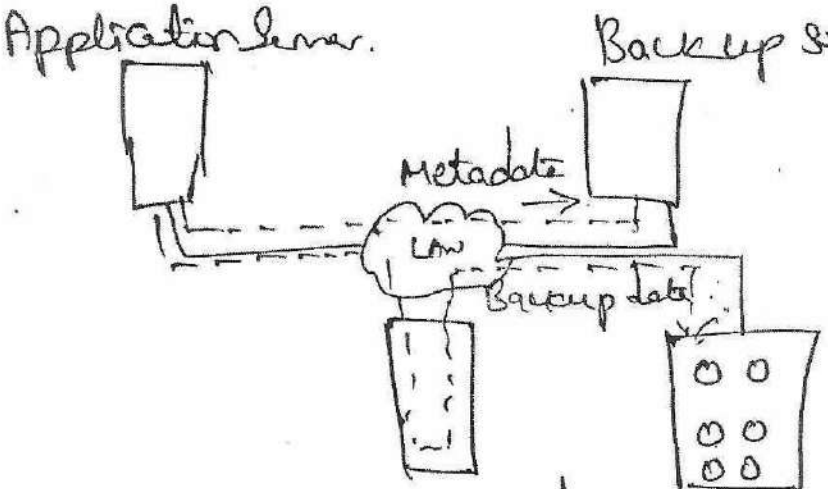
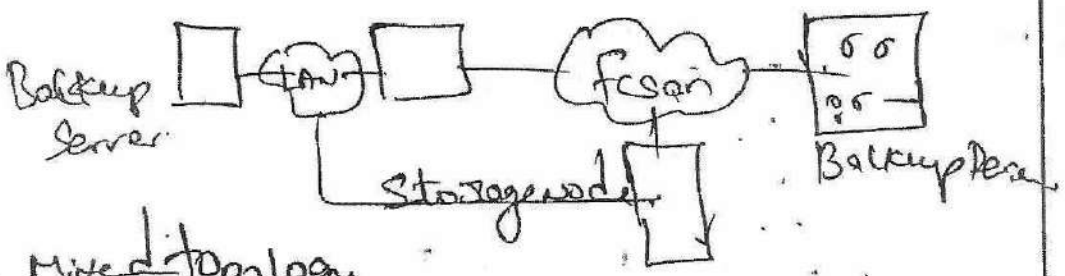
| Q. No | Details of the Answer | Marks Distribution |
|---|---|---|



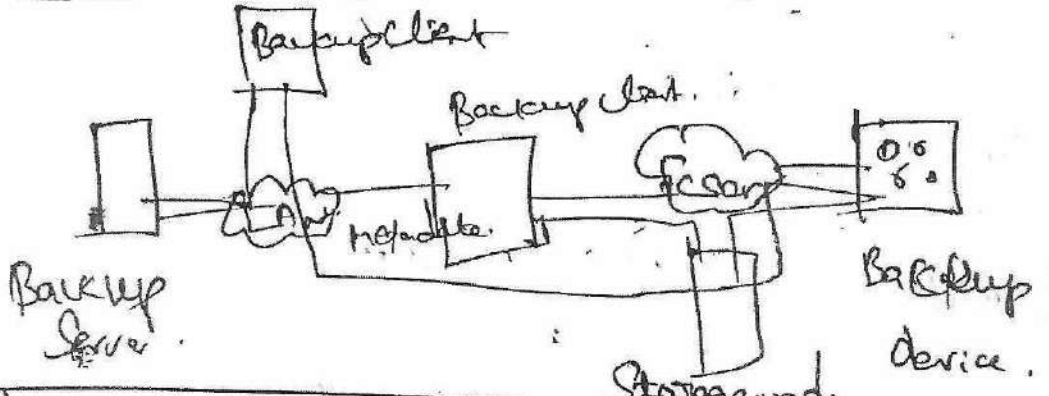

ii, LAN Based backup.




iii, SAN based backup.




iv, Mixed topology

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| Details of the Answer | Marks Distribution | Total marks |
|---|---|---|
| Major Local Replication technologies.<br>1. Snapshot replication.<br>2. Mirroring<br>3. ASynchronous Replication.<br>4. Cloning. | 3 | |
| Network based local Replication involves Replicating data b/w Storage Sys over a N/w with in a LAN or SAN.<br>1. Storage Array Based.<br>2. Host Based.<br>3. File Based.<br>4. Block level. | 2.<br>5 | 10. |
| (or).<br>A) Flushing the Sys buffer refers to. Data held in memory buffer by the file Sys is committed to disk. | Explanation (5) | |
| B. Uses of local Replicas<br>1. Alternative source for backup.<br>2. Fast recovery.<br>3. Testing platform.<br>4. Data migration.<br>5. Decision Support. | 5 | 10. |

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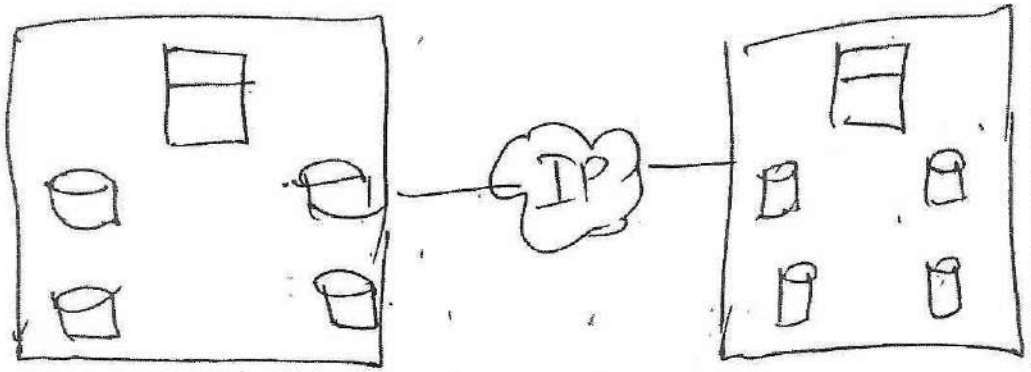
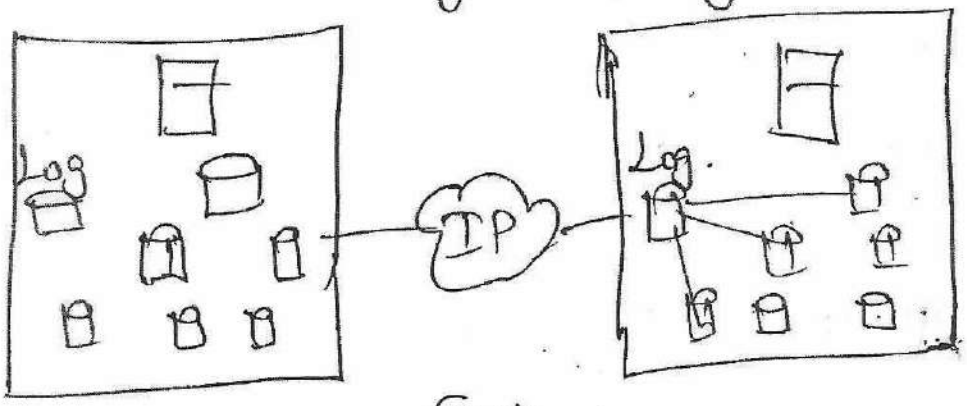
| Q. No | Details of the Answer | Marks Distribution | To ma |
|---|---|---|---|
| 5. | Host Based Remote Replication.<br>→ LVM-Based Remote Replication<br>  <br><br>→ Host based log Shipping.<br>  <br> | 5<br>5 | 10 |
| | (Or) | | |
| 6. | A. Synchronous: A write must be Committed to the source and the target prior to acknowledging write Complete to the production host.<br>Asynchronous: A write is Committed to the source and immediately acknowledged to the host.<br>B. FCSCAN.<br>Multiple Integrated layers for Security with Architecture diagram | 5<br>5 | 10 |

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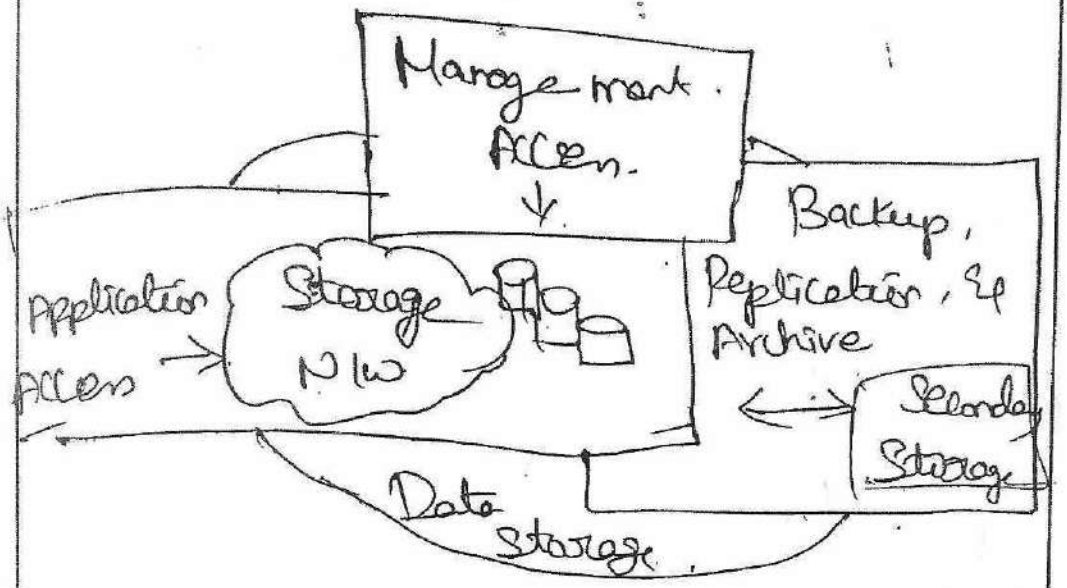
| Q. No | Details of the Answer | Marks Distribution | Total marks |
|---|---|---|---|
| 7. | Storage security Domains.<br>  <br> | 10 | 10 |
| | (or). | | |
| 8. | Remote Replication.<br>Replicas of information assets at the remote sites organization mitigate the risks. | 3 | |
| | Storage Array Based Remote Replication:<br>i) Synchronous Replication Mode<br>ii) ASynchronous Replication mode.<br>iii) Disk Buffered Replication mode. | 7 | 10 |

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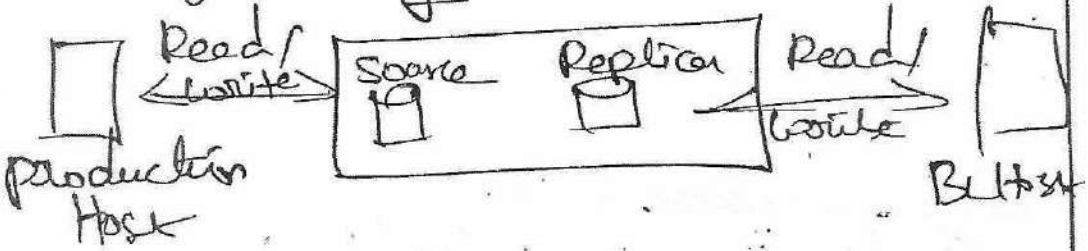
| Q. No | Details of the Answer | Marks Distribution | Total marks |
|---|---|---|---|
| 9. | i) Assets.<br>Information, Hw, Sw and other infrastructure components are Assets. | 3 | |
| | ii) Threats.<br>Passive Attack,<br>Data modification Attack.<br>DoS.<br>Repudiation. | 4 | 10 |
| | iii) Vulnerability.<br>Potential Attacks.<br>Defense indepth.<br>Layered approach to security. | 3 | |
| | (OR) | | |
| 10. | Storage Array based local Replication<br>  <br> | 5 | |
| | i) Full Volume mirroring. | 5 | 10 |
| | ii) Pointer Based full Volume Replication. | | |

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NAAC ACCREDITED

## INTERNAL ASSESSMENT BOOK

Name : Aayusha Kumari USN 1CE20IS001

Branch ISE Semester 8th Section 'B'

Sub Code: 18CS822 Subject: SAN

| Sl. No. | Particulars | Date | Page No. | Max. Marks | Marks Awarded | Signature of Staff Incharge |
|---|---|---|---|---|---|---|
| 1. | Test - 1 | 26/03/24 | | 50 | 46 | V.Jyothi |
| 2. | Test - 2 | 18/04/24 | | 50 | 36 | V.Jyothi |
| 3. | Test - 3 | 8/05/24 | | 50 | 48 | V.Jyothi |
| | | | | | | |
| | | | | | | |

## CERTIFICATE

This is to certify that Mr.//Ms. Aayusha Kumari bearing USN 1CE20IS001 has satisfactorily completed the course of Internal assessment prescribed by the Visvesvaraya Technological University for Semester 8th Branch ISE for the academic year 20 24 - 20 24.

| MARKS AWARDED | Test Marks | Assignment Marks | Final I A Marks |
|---|---|---|---|
| Maximum | 30 | 10 | 40 |
| Obtained | 26 | 10 | 36 |

Signature of Student

V.Jyothi
Signature of Staff Incharge

Signature of H.O.D

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## INTERNAL ASSESSMENT BOOK

*Name:* Amisha Rashminath *USN* 1CE20IS002

*Branch* Information Science & Engineering *Semester* 8th *Section* B

Sub Code: 18CS82 Subject: Storage Area Networks

| Sl. No. | Particulars | Date | Page No. | Max. Marks | Marks Awarded | Signature of Staff Incharge |
|---|---|---|---|---|---|---|
| 1. | Test - 1 | 26/03/2024 | | 50 | 35 | [signature] 1/4/24 |
| 2. | Test - 2 | 18/04/2024 | | 50 | 45 | [signature] 18/4/24 |
| 3. | Test - 3 | 8/5/2024 | | 50 | 45 | [signature] 8/5/24 |
| | | | | | | |
| | | | | | | |

## CERTIFICATE

*This is to certify that Mr.//Ms.* Amisha Rashminath *bearing USN* 1CE20IS002 *has satisfactorily completed the course of Internal assessment prescribed by the Vivesvaraya Technological University for Semester* 8th *Branch* I.S *for the academic year* 2023 20 24

| MARKS AWARDED | Test Marks | Assignment Marks | Final I A Marks |
|---|---|---|---|
| Maximum | 30 | 10 | 40 |
| Obtained | 25 | 10 | 35 |

Amisha Rashminath
*Signature of Student*

[signature]
*Signature of Staff Incharge*

[signature]
*Signature of H.O.D*

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## INTERNAL ASSESSMENT BOOK

Name: Likhith . R . J USN: 1LE20IS003

Branch: ISE Semester: VIII Section: B

Sub Code: 18CS822 Subject: SAN

| Sl. No. | Particulars | Date | Page No. | Max. Marks | Marks Awarded | Signature of Staff Incharge |
|---|---|---|---|---|---|---|
| 1. | Test - 1 | 26-3-24 | | 50 | 50 | [signature] |
| 2. | Test - 2 | 18-4-24 | | 50 | 30 | [signature] |
| 3. | Test - 3 | 8-5-24 | | 50 | 31 | [signature] |
| | | | | | | |
| | | | | | | |

## CERTIFICATE

This is to certify that Mr./~~Ms.~~ Likhith . R . J bearing USN 1LE20IS003 has satisfactorily completed the course of Internal assessment prescribed by the Vivesvaraya Technological University for Semester VIII Branch ISE for the academic year 2023 20 24

| | MARKS AWARDED | | |
|---|---|---|---|
| | Test Marks | Assignment Marks | Final I A Marks |
| Maximum | 30 | 10 | 40 |
| Obtained | 22 | 10 | 32 |

Likhith . R . J
Signature of Student

[signature]
Signature of Staff Incharge

[signature]
Signature of H.O.D

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Branch : IS Semester : 8

| Sl NO. | USN | 18CS822 |
|---|---|---|
| 1 | 1CE20IS001 | 36 |
| 2 | 1CE20IS002 | 35 |
| 3 | 1CE20IS003 | 32 |

Draft, As Entered in VTU CIE Portal on 2024-05-25 11:54:15

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## `Department of Mechanical Engineering

## Circular

**This is to notify that 3rd Internals of 8th semester will be conducted on 10/05/2024**

**10.30am-12.00pm -18ME81 (Energy Engineering)**

**2.30pm-4.00pm-18ME822 (Tribology)**

**HOD**

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## `Department of Mechanical Engineering

### 3rd IA Time Table

| DATE | TIME | SUBJECT CODE |
|---|---|---|
| 10-05-2024 | 10:30-12:30 | 18ME81 |
| 10-05-2024 | 2:30-4:30 | 18ME822 |

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## `Department of Mechanical Engineering

### 8th semester 3rd Internal Duty Allotment

| 10/05/2024 | 10.30am-12.00pm | 2.30pm-4.00pm |
|---|---|---|
| **Faculty Name** | **PROF.ANIL KUMAR R** | **PROF.HARSHA VARDHAN U** |

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## `Department of Mechanical Engineering

### 8th semester 3rd Internal Duty Allotment

| 10/05/2024 | 10.30am-12.00pm | 2.30pm-4.00pm |
|---|---|---|
| Room No | A307 | A307 |

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## Department of Mechanical Engineering

### 8th semester 3rd Internal Attendance

| Sl No | USN | 10.30am-12.00pm | 2.30pm-4.00pm |
|---|---|---|---|
| | | 18ME81 | 18ME822 |
| 1 | 1CE20ME001 | Suhas . B | Suhas . B |
| 2 | 1CE20ME001 | Abhilash. | Abhilash. |
| | No of Absent | — NiL — | — NiL — |

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## INTERNAL ASSESSMENT BOOK

Name: Suhas·B USN 1CE20ME001

Branch Mechanical Semester VIII Section

Sub Code: 18MES1 Subject: Energy Engineering.

| Sl. No. | Particulars | Date | Page No. | Max. Marks | Marks Awarded | Signature of Staff Incharge |
|---|---|---|---|---|---|---|
| 1. | Test - 1 | 26/03/2024 | 1-8 | 50 | 44 | |
| 2. | Test - 2 | 19/04/2024 | 9-16 | 50 | 45 | |
| 3. | Test - 3 | 10/05/2024 | 17-24 | 50 | 46 | |
| | | | | | | |
| | | | | | | |

## CERTIFICATE

This is to certify that Mr./~~Ms.~~ Suhas·B bearing USN 1CE20ME001 has satisfactorily completed the course of Internal assessment prescribed by the Visvesvaraya Technological University for Semester 8th Branch Mechanical for the academic year 20 ..... 20 .....

| MARKS AWARDED | Test Marks | Assignment Marks | Final I A Marks |
|---|---|---|---|
| Maximum | 30 | 10 | 40 |
| Obtained | 27 | 10 | 37 |

Signature of Student

Signature of Staff Incharge

Signature of H.O.D

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USN | | | | | | | | | |

COURSE CODE: 18ME81

# CITY ENGINEERING COLLEGE
## FIRST INTERNAL TEST

PROGRAMME: MECHANICAL ENGINEERING
COURSE NAME: Energy Engineering
SEM: 8TH 'A'
Duration: 1.30 Hrs

DATE: 26/03/2024
TIME: 10:30AM – 12:00PM
MAX MARKS: 50

*Note: Answer any FIVE questions choosing at least one from each Part.*

| Q no. | PART – A | M | CO'S | BT'S |
|---|---|---|---|---|
| 1. | Explain briefly steps involved in coal handling. | 10 | C01 | BT2 |
| | OR | | | |
| 2. | With a neat sketch explain induced draught cooling tower. | 10 | C01 | BT2 |
| | PART – B | | | |
| 3. | With a neat sketch explain the working of Bensen boiler. | 10 | C01 | BT2 |
| | OR | | | |
| 4. | Explain the working of down draft gasifier. | 10 | C02 | BT2 |
| | PART-C | | | |
| 5. | Explain the following 1. Superheater 2, Air preheater | 10 | C01 | BT2 |
| | OR | | | |
| 6. | With a neat sketch explain horizontal and vertical axis wind machines | 10 | C03 | BT2 |
| | PART-D | | | |
| 7. | Explain Induced Draught System. | 10 | C01 | BT2 |
| | OR | | | |
| 8. | With a neat diagram, explain closed cycle Rankine cycle OTEC system. | 05 | C03 | BT2 |
| | PART-E | | | |
| 9. | With a neat sketch explain Pyranometer | 10 | C01 | BT2 |
| | OR | | | |
| 10. | With a neat sketch explain the working of pressurized water reactor. | 06 | C03 | BT2 |

**Blooms Taxonomy Levels (BTL)**

**BT1**- Remembering **BT2**- Understanding **BT3** – Applying **BT4** – Analyzing **BT5**- Evaluating **BT6**- Creating.

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DEPARTMENT OF Mechanical Engineering

SCHEME FOR VALUATION

Internal Test ... 1st

Semester & Section :- 8th & A

Date: 26/03/2024

| Question No. | Details of the answer | Marks Distribution | Total Marks |
|---|---|---|---|
| 1 | Steps involved in coal handling | 10 | 10 |
| 2. | Sketch<br>Explanation | 04<br>06 | 10 |
| 3. | Sketch<br>Explanation | 04<br>06 | 10 |
| 4. | Sketch<br>Explanation | 04<br>06 | 10 |
| 5. | Superheater<br>Air preheater | 05<br>05 | 10 |
| 6. | Horizontal Axis Machine<br>Vertical Axis Machine | 05<br>05 | 10 |
| 7. | Sketch<br>Explanation | 04<br>06 | 10 |
| 8. | Sketch<br>Explanation | 04<br>06 | 10 |

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DEPARTMENT OF Mechanical Engineering

SCHEME FOR VALUATION

Internal Test 1st

Semester & Section 8th & 'A'

Date:

| Question No. | Details of the answer | Marks Distribution | Total Marks |
|---|---|---|---|
| 9 | Sketch | 04 | 10 |
| | Explanation | 06 | |
| 10. | Sketch | 04 | 10 |
| | Explanation | 06 | |

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# Visvesvaraya Technological University

**IA / CIE Report June / July 2024 Examination.**

CITY ENGINEERING COLLEGE, BANGALORE

Branch : ME Scheme : 2018 Semester : 8

| Sl NO. | USN | 18ME81 | 18ME822 | 18MEP83 | 18MES84 | 18MEI85 | STUDENT SIGNATURE |
|---|---|---|---|---|---|---|---|
| 1 | 1CE20ME001 | 37 | 36 | 34 | 80 | 34 | |
| 2 | 1CE20ME002 | 26 | 25 | 24 | 53 | 25 | |
| --x-- | Faculty Signature | | | | | | ----xxxxxxx---- |

* - values are either optional subjects or the faculty has not yet entered the marks
TH - Theory part of CIE Marks (IPCC)
PR - Practical part of CIE Marks (IPCC)
T - Total CIE Marks (IPCC)

HOD
**Seal and Signature**

HEAD OF THE DEPARTMENT
Mechanical Engineering
CITY ENGINEERING COLLEGE
Doddakallasandra, Kanakapura Main Road
BANGALORE - 560 061

**PRINCIPAL**
**Seal and Signature**

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CITY
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07/05/2024

CIRCULAR

**Dear Students of 2nd Semester,**

The college's discipline committee, led by Principal, has decided to confiscate your mobile phones if you are found to have engaged in any kind of malpractice during the internal assessment. This is in an effort to enforce discipline during the assessment process.

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07/05/2024

# 1st INTERNAL ASSESSMENT SCHEDULE - 2nd SEMESTER

| Date | Time | Course Code | | Course |
|---|---|---|---|---|
| 15/05/2024 (Wednesday) | 10.00am – 11.00am | P-CYCLE | BMATS201 | Mathematics-II for CSE Stream |
| | | C-CYCLE | BMATS201/BMATE201/ BMATC201 | Mathematics-II for CSE Stream/Mathematics-II for EESI /Mathematics-II for Civil Engg Stream |
| | 1.00pm-2.00pm | P-CYCLE | BPWSK206 | Professional writing skills in English |
| | | C-CYCLE | BPWSK206 | Professional writing skills in English |
| 16/05/2024 (Thursday) | 10.00am – 11.00am | P-CYCLE | BPHYS202 | Applied Physics for CSE Stream |
| | | C-CYCLE | BCHES202/ BCHEC202/ BCHEE202 | Applied Chemistry for CSE Stream/ Applied Chemistry for Civil Engineering stream/ |
| | 1.00pm-2.00pm | P-CYCLE | BETCK205H | Introduction to Internet of Things (IoT) |
| | | C-CYCLE | BESCK204C | Introduction to Electronics Communication |
| 17/05/2024 (Friday) | 10.00am – 11.00am | P-CYCLE | BESCK204D + Civil Students | Introduction to Mechanical Engineering |
| | | C-CYCLE | -- | -- |
| | 1.00pm-2.00pm | P-CYCLE | BPOPS203 | Principles of Programming Using C |
| | | C-CYCLE | BPLCK205B | Introduction to Python Programming |

*Note: 1. Changed Timings
2. IA for Courses not listed here will be conducted during 2nd IA

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2nd SEMESTER- 1st INTERNAL ASSESSMENT

FACULTY INVIGILATION DUTY ALLOTMENT

08/05/2024

| Sl.No | NAME OF THE FACULTY | Department | 15/05/2024 (Wednesday) | | 16/05/2024 (Thursday) | | 17/05/2024 (Friday) | | Total Number of Duties | Signature |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 10.00am – 11.00am | 1.00pm-2.00pm | 10.00am – 11.00am | 1.00pm-2.00pm | 10.00am – 11.00am | 1.00pm-2.00pm | | |
| 1 | Mrs. Vanitha G R | MAT | | A306 | | A307 | | | 2 | |
| 2 | Mrs. Rekha R | MAT | | A305 | | A306 | | | 2 | |
| 3 | Mrs. Anitha C V | MAT | A3[illegible] | | A305 | | A304 | A305 | 4 | |
| 4 | Miss. Janavi R | MAT | A306 | | A304 | | A303 | A304 | 4 | |
| 5 | Ms. Bhavitha B G | MAT | A305 | | A303 | | A303 | A303 | 4 | |
| 6 | Ms. Meghana D | HS | | A304 | | A305 | | | 2 | |
| 7 | Mrs. Swaroopini B S | HS | A304 | A308 | A107 | | A107 | | 4 | |
| 8 | Mr. Vishvakiran R. C. | ECE | A303 | A302 | A106 | | A106 | | 4 | |
| 9 | Mr. Gopikishan J | ECE | A302 | A107 | A105 | | A105 | | 4 | |
| 10 | Mr. Mahesh Basavaraj | AIML | A107 | A106 | A104 | | A104 | | 4 | |
| 11 | Mr. Harsha Vardhan U | ME | A106 | A105 | A102 | | | A103 | 4 | |
| 12 | Mr. Anil Kumar R | ME | A105 | A104 | | A304 | | A105 | 4 | |

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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 13 | Mrs. Shruthi Naik | ME | A004 | A103 | | A003 | | A104 | 4 | |
| 14 | Mr. Vinay Kumar S N | CV | A103 | A102 | | A102 | | A0 | 4 | |
| 15 | Ms. Spoorthi M | CSE | A102 | A002 | | A001 | | A00 | 4 | |
| 16 | Ms. Monisha G B | CSE | A007 | A008 | | A006 | | | 4 | |
| 17 | Mrs. Nayana R K | ISE | A008 | A005 | | A105 | | | 4 | |
| 18 | Mrs. Nayana H J | ISE | A005 | A004 | | A101 | | | 4 | |
| 19 | Mr. Mathivanan M | ISE | A004 | A006 | | | A307 | | 4 | |
| 20 | Mr. Dinesh | PHY | A003 | | A007 | | A306 | A103 | 4 | |
| 21 | Mr. Sadashiva | CHE | | A307 | A306 | | A309 | A105 | 4 | |

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Doddakallasandra, Bangalore - 560 062

## Room Allotment for 1st Internal Test_ UG - 2 Semester 15/16/17 May 2024

## ROOM NO:- A-307

| Seat No. | II-A USN | Seat No. | | Seat No. | II-A USN | Seat No. | | Seat No. | II-A USN | Seat No. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1CE23AI001 | 2 | | 15 | 1CE23AI008 | 16 | | 29 | 1CE23AI015 | 30 | |
| 3 | 1CE23AI002 | 4 | | 17 | 1CE23AI009 | 18 | | 31 | 1CE23AI016 | 32 | |
| 5 | 1CE23AI003 | 6 | | 19 | 1CE23AI010 | 20 | | 33 | 1CE23AI017 | 34 | |
| 7 | 1CE23AI004 | 8 | | 21 | 1CE23AI011 | 22 | | 35 | 1CE23AI018 | 36 | |
| 9 | 1CE23AI005 | 10 | | 23 | 1CE23AI012 | 24 | | 37 | 1CE23AI019 | 38 | |
| 11 | 1CE23AI006 | 12 | | 25 | 1CE23AI013 | 26 | | 39 | 1CE23AI020 | 40 | |
| 13 | 1CE23AI007 | 14 | | 27 | 1CE23AI014 | 28 | | 41 | 1CE23AI021 | 42 | |

## ROOM NO:- A-306

| Seat No. | II-A USN | Seat No. | | Seat No. | II-A USN | Seat No. | | Seat No. | II-A USN | Seat No. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1CE23AI022 | 2 | | 15 | 1CE23AI029 | 16 | | 29 | 1CE23AI036 | 30 | |
| 3 | 1CE23AI023 | 4 | | 17 | 1CE23AI030 | 18 | | 31 | 1CE23AI037 | 32 | |
| 5 | 1CE23AI024 | 6 | | 19 | 1CE23AI031 | 20 | | 33 | 1CE23AI038 | 34 | |
| 7 | 1CE23AI025 | 8 | | 21 | 1CE23AI032 | 22 | | 35 | 1CE23AI039 | 36 | |
| 9 | 1CE23AI026 | 10 | | 23 | 1CE23AI033 | 24 | | 37 | 1CE23AI040 | 38 | |
| 11 | 1CE23AI027 | 12 | | 25 | 1CE23AI034 | 26 | | 39 | 1CE23AI041 | 40 | |
| 13 | 1CE23AI028 | 14 | | 27 | 1CE23AI035 | 28 | | 41 | 1CE23AI042 | 42 | |



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## ROOM NO:- A-305

| Seat No. | II-A USN | Seat No. | | Seat No. | II-A USN | Seat No. | | Seat No. | II-A USN | Seat No. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1CE23AI043 | 2 | | 15 | 1CE23AI051 | 16 | | 29 | [illegible] | 30 | |
| 3 | 1CE23AI044 | 4 | | 17 | 1CE23AI052 | 18 | | 31 | [illegible] | 32 | |
| 5 | 1CE23AI045 | 6 | | 19 | 1CE23AI053 | 20 | | 33 | 1CE23AI060 | 34 | |
| 7 | 1CE23AI047 | 8 | | 21 | 1CE23AI054 | 22 | | 35 | 1CE23AI061 | 36 | |
| 9 | 1CE23AI048 | 10 | | 23 | 1CE23AI055 | 24 | | 37 | [illegible] | 38 | |
| 11 | 1CE23AI049 | 12 | | 25 | 1CE23AI056 | 26 | | 39 | [illegible] | 40 | |
| 13 | 1CE23AI050 | 14 | | 27 | 1CE23AI057 | 28 | | 41 | | 42 | |

## ROOM NO:- A-304

| Seat No. | II-B USN | Seat No. | | Seat No. | II-B USN | Seat No. | | Seat No. | II-B USN | Seat No. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1CE23IS001 | 2 | | 15 | 1CE23IS009 | 16 | | 29 | [illegible] | 30 | |
| 3 | 1CE23IS002 | 4 | | 17 | 1CE23IS010 | 18 | | 31 | [illegible] | 32 | |
| 5 | 1CE23IS003 | 6 | | 19 | 1CE23IS011 | 20 | | 33 | 1CE23IS018 | 34 | |
| 7 | 1CE23IS004 | 8 | | 21 | 1CE23IS012 | 22 | | 35 | 1CE23IS019 | 36 | |
| 9 | 1CE23IS005 | 10 | | 23 | 1CE23IS013 | 24 | | 37 | [illegible] | 38 | |
| 11 | 1CE23IS006 | 12 | | 25 | 1CE23IS014 | 26 | | 39 | [illegible] | 40 | |
| 13 | 1CE23IS008 | 14 | | 27 | 1CE23IS015 | 28 | | 41 | [illegible] | 42 | |



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# CITY ENGINEERING COLLEGE

**Civil / Electronics and communication engineering**

**II SEMESTER- SECTION: C - Chemistry Cycle - FIRST INTERNAL TEST**

## ROOM No:A-106

| Sl No. | USN | DATE/SUBJECT CODES | |
|---|---|---|---|
| | | 15/5/2024 | |
| | | Morning | Afternoon |
| | | BMATE201/ BMATC201 | BPWSK206 |
| 1 | 1CE23CV001 | AMRUTH-S | Amruth S |
| 2 | 1CE23CV002 | Lavanya.R | Lavanya.R |
| 3 | 1CE23EC001 | Ajay Kumar.R | Ajay Kumar.R |
| 4 | 1CE23EC002 | AB | ABSENT |
| 5 | 1CE23EC003 | [illegible] | [illegible] |
| 6 | 1CE23EC004 | Chirag | Chirag |
| 7 | 1CE23EC005 | Darsh | Darsh |
| 8 | 1CE23EC006 | Joshi.. | Joshi.. |
| 9 | 1CE23EC007 | Devika.M. | Devika.M. |
| 10 | 1CE23EC008 | [illegible] | [illegible] |
| 11 | 1CE23EC009 | [illegible] | [illegible] |
| 12 | 1CE23EC010 | G. Naveen Kumar | G. Naveen Kumar |
| 13 | 1CE23EC011 | AB | AB |
| 14 | 1CE23EC012 | [illegible] AB | Gjoshi |
| 15 | 1CE23EC013 | [illegible] | [illegible] |
| 16 | 1CE23EC014 | Gokul | Gokul |
| 17 | 1CE23EC015 | Harshini | Harshini |
| 18 | 1CE23EC016 | Harshitha.K | Harshitha.K |
| 19 | 1CE23EC017 | Jeevitha | Jeevitha |
| 20 | 1CE23EC018 | [illegible] Jaaf | Jaaf |
| 21 | 1CE23EC019 | [illegible] Kavya | [illegible] |
| | **No. of Students Present** | 19 | 19 |
| | **No. of Students Absent** | 02 | 02 |
| | **Staff Signature** | [illegible] | [illegible] |

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USN | 1 | C | E | | | | | | | |

CITY ENGINEERING COLLEGE

## Department of Chemistry II Semester

Sub: Applied Chemistry for CS Stream — Max. marks:25M
Sub code: BCHES202 — Duration: 1hour (10.00-11.00)
Date: 16/05/2024

## FIRST INTERNAL TEST

Note:- Answer five questions, choosing one from each part.

| Q.No. | Questions | Marks | CO's | L |
|---|---|---|---|---|
| | **Part-A** | | | |
| 1. | Define corrosion? Explain Electrochemical theory of corrosion taking iron as an example? | 5 | CO3 | L2 |
| | OR | | | |
| 2. | Explain polymer electrolyte membrane electrolysis (PEM)? | 5 | CO3 | L2 |
| | **PART-B** | | | |
| 3. | What are photovoltaic cells? Explain the construction working of solar cell/PV cell? | 5 | CO3 | L2 |
| | OR | | | |
| 4. | Write a note on anodization? | 5 | CO3 | L2 |
| | **PART-C** | | | |
| 5. | Define Ion selective electrode? Explain construction and working of Glass electrode? | 5 | CO3 | L3 |
| | OR | | | |
| 6. | Explain the application of conductometry in the estimation of weak acid? | 5 | CO3 | L3 |
| | **PART-D** | | | |
| 7. | EMF of the cell $Ag/AgNO_3$ (0.001M)// $AgNO_3$ (XM)/Ag is 0.0659V at 25°C. Find X | 5 | CO3 | L5 |
| | OR | | | |
| 8. | A thick brass sheet of are 400 inches exposed to moist air. After 2 years of period it was found to experience a weight loss of 375g due to corrosion. If the density of brass is 8.73g/cm$^3$, calculate CPR in mpy & mmpy? | 5 | CO3 | L5 |
| | **PART-E** | | | |
| 9. | Explain the conduction mechanism in polyacetylene through oxidative doping or through reductive doping? | 5 | CO4 | L3 |
| | OR | | | |
| 10. | Define $M_n$, $M_w$. In a polymer sample 100 molwculews have molecular mass $10^3$ g/mol. 200 molecules have molecular mass $10^4$ g/mol and 250 molecules have molecular mass $10^5$ g/mol. Calculate $M_n$, $M_w$. | 5 | CO4 | L5 |

CO3:- Solve the problems in chemistry to describe the methods of engineering processes.
CO4:- Apply the basic concepts of chemistry to explain the chemical properties and processes.

L1-Remembering L2- Understanding L3-Applying L4- Analyzing L5-Evaluating.

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DEPARTMENT OF Chemistry

SCHEME FOR VALUATION

Internal Test I.

Semester & Section: II, A, B. [ AIML & IS ].

Date: 16/05/24.

| Question No. | Details of the answer | Marks Distribution | Total Marks |
|---|---|---|---|
| 1. | Expl. + reactions.<br>Anode :- $Fe \longrightarrow Fe^{2+} + 2e^-$<br>Cathode :-<br>Aerated & neutral, $O_2 + 2H_2O + 4e^- \longrightarrow 4OH^-$<br>Deaerated & neutral, $2H_2O + 2e^- \longrightarrow 2H_2 + OH^-$<br>Deaerated & acidic, $2H^+ + 2e^- \longrightarrow H_2$. | 2+3 | 5M |
| 2. | Anode :- In metal coated on Porous 'c'.<br>Cathode :- Pt metal coated on Porous 'c'<br>Electrolyte :- solid Porous Polymer electrolyte made of NAFION.<br>Anode :- $H_2O \longrightarrow \frac{1}{2}O_2 + 2H^+ + 2e^-$<br>Cathode :- $2H^+ + 2e^- \longrightarrow H_2$.<br>Components + reactions + fig. | 2+2+1. | 5M. |
| 3. | Def + Fig. + $E = h\nu$ + Expl. | 1+1+1+2 | 5M. |
| 4. | Fig + Expl. | 1+4 | 5M. |
| 5. | Def + construction + working.<br>$E_D = \frac{RT}{F}\ln c_2 - \frac{RT}{F}\ln c_1$.<br>$-\frac{RT}{F}\ln c_1 + \frac{RT}{F}\ln c_2$.<br>$E_D = 2 - 0.0591pH$ | 1+2+2. | 5M |

Staff

Raja Sekar
HOD

S Kanan

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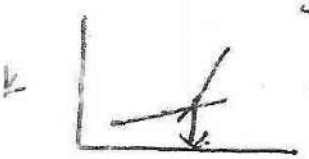
DEPARTMENT OF Chemistry

SCHEME FOR VALUATION

Internal Test I

Semester & Section: II & A,B (ASML & ISE)

Date:

| Question No | Details of the answer | Marks Distribution | Total Marks |
|---|---|---|---|
| | $E_A = L_1 - 0.0591\,pH$. | | |
| 6 | $H_3CCOOH + NaOH \longrightarrow H_3CCOONa + H_2O$  Vol. of NaOH | 1+3+1 | 5M |
| | Rea$^n$ + Expl. + Graph | | |
| 7. | $E = \frac{2.303RT}{nF} \log \frac{C_2}{C_1}$ | 1+1+1+2 | 5M. |
| | $0.0659 = \frac{2.303 \times 8.314 \times 298}{1 \times 96500} \log \frac{(x)}{(0.001)}$ | | |
| | $\frac{6359.35}{5705.8483} = \log x - (-3)$ | | |
| | $1.1145 - 3 = \log x$ | | |
| | $-1.8855 = \log x$; $x = 0.0130\,M$. | | |
| 8. | $CPK = \frac{KW}{PxAxt}$ | $CPR = \frac{87.6 \times 375 \times 1000}{8.73 \times 1400 \times 6.45 \times 2 \times 365 \times 24}$ | |
| | $= \frac{32850000}{8.73 \times 1400 \times 2 \times 365 \times 24}$ | $= \frac{32850000}{394609968}$ | |
| | $= \frac{32850000}{394609968}$ | $= 0.0832\,mmpy$. | |
| | $= 3.2313\,mpy$ | | |

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DEPARTMENT OF Chemistry

SCHEME FOR VALUATION

Internal Test I

Semester & Section: I & A,B (AIML & IS)

Date: 16/5/24

| Question No. | Details of the answer | Marks Distribution | Total Marks |
|---|---|---|---|
| 9 | Speed - Cond. Mech. Using bands. Polarn, bipolarn, soliton, delocalisation of en | 5M. | |
| a. | $\bar{M}_n = \frac{M_1N_1 + M_2N_2 + M_3N_3}{N_1 + N_2 + N_3}$ <br> $= \frac{100\times10^3 + 200\times10^4 + 250\times10^5}{100 + 200 + 250}$ <br> $= \frac{100000 + 2000000 + 25000000}{550}$ <br> $\bar{M}_n = \frac{27100000}{550} = 49272.727$ | 2+1+2 | 5M. |
| | $\bar{M}_w = \frac{N_1M_1^2 + N_2N_2^2 + N_3M_3^2}{N_1M_1 + N_2M_2 + N_3M_3}$ <br> $= \frac{100\times(10^3)^2 + 200\times(10^4)^2 + 250\times(10^5)^2}{27100000}$ <br> $\bar{M}_w = 92.992.6.$ | | |
| | formula + subst + Ans. | | |

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Ph: 080 - 22560313 Mob: 98804 11365

NAAC ACCREDITED

## INTERNAL ASSESSMENT BOOK

Name: Akash. N. Sidral USN 1CE23IS008.

Branch Information Science Semester 2nd Section 'B'

Sub Code: BCHES202 Subject: Chemistry.

| Sl. No. | Particulars | Date | Page No. | Max. Marks | Marks Awarded | Signature of Staff Incharge |
|---|---|---|---|---|---|---|
| 1. | Test - 1 | | 1-1 | 25 | 22 | |
| 2. | Test - 2 | | | 25 | 21. | |
| 3. | Test - 3 | | | | 43/2 | = 21.5 x 0.6. |
| | | | | | | 13 + 10. |
| | | | | | | 1A Asst |

## CERTIFICATE

This is to certify that Sri/Kum Akash. N. Sidral. bearing

USN 1CE23IS008 has satisfactorily completed the course of Internal assessment prescribed

by the Visvesvaraya Technological University for Semester 2nd Branch ISE

for the academic year 2023-2024

| | MARKS AWARDED | | |
|---|---|---|---|
| | Test Marks | Assignment Marks | Final IA Marks |
| Maximum | 15 | 10 | 25 |
| Obtained | 13 | 10 | 23 |

Akash N. Sidral.
Signature of Student

Signature of Staff Incharge

Signature of H.O.D

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