



# Vidyavardhini's College of Engineering & Technology

Founder President Late Padmashri H. G. Vartak

Approved by AICTE, DTE Maharashtra and Affiliated to University of Mumbai

NAAC accredited, 4 Programmes Accredited by NBA

**Criteria Number: 2**

**Criteria Name: Teaching, Learning and Evaluation**

**Sub-criteria Number: 2.5**

**Sub-criteria Name: Evaluation Process and Reforms**

2.5.1 Mechanism of internal/ external assessment is transparent and the grievance redressal system is time-bound and efficient

## Supporting Documents

Sr. No.	Document	Link
1	Sample copy of Redressal & Photocopy	<a href="#">Supporting Documents</a>
2	Sample copy of Application for Photocopy/Xerox of Assessed Answer book (College Format) with Student's Marksheet	<a href="#">Supporting Documents</a>
3	Sample copy of Application for the Revaluation of the Assessed Answer book (College Format) with Student's Marksheet	<a href="#">Supporting Documents</a>
4	Sample copy of Application for Photocopy/Xerox of Assessed Answer books (University of Mumbai)	<a href="#">Supporting Documents</a>
5	Sample copy of Application for the Revaluation of the Assessed Answer book (University of Mumbai)	<a href="#">Supporting Documents</a>
6	Academic Calendar (highlighting IA dates)	<a href="#">Supporting Documents</a>
7	Sample copy of Internal Assessment Question paper	<a href="#">Supporting Documents</a>
8	Sample copy of Internal Assessment Solution	<a href="#">Supporting Documents</a>
9	Sample copy of IAMC MoM	<a href="#">Supporting Documents</a>
10	Centralize Assessment Notice	<a href="#">Supporting Documents</a>
11	Sample copy of IA marks with students' sign	<a href="#">Supporting Documents</a>
12	Sample copy of Term work marks with students' sign	<a href="#">Supporting Documents</a>

Details of Candidates applied for Revaluation of Answer Books at Semester III to VI - ~~May~~ <sup>Dec.</sup> 2022

Name of the College : Vidyavardhini's College of Engineering &amp; Technology, Vasai Road.

Branch: AIDS

Sr. No.	Date of Declaration	Seat No.	Name of the student	Subject	Semester	Marks after Revaluation/Photocopy	Remarks
1		213199101	BiranjeSubhash Yash	Engineering Maths-III	III	18	NO CHANGE
2		213449107	Mane Mangesh Madhev	Engineering Maths-III	III	25	Passes the Sem with Condonation
3	20/2/2023	213229105	Chaudhari Kunal K	Discrete structure and graph theory	III	32	Passes the subject
4	"	213219205	Borse Jagruti Sunil	Discrete structure and graph theory	III	32	Passes the subject
5	"	213449107	Mane Mangesh Madhev	discrete structure and graph theory	III	32	Passes the subject
6	"	213639191	Khan Mohammed	Discrete structure and graph theory	III	32	Passes the subject
7		213229105	Chaudhari Kunal K	Digital logic and computer architecture	III	32	Passes the subject
8		213219205	Borse Jagruti Sunil	Digital logic and computer architecture	III	27	change of marks
9		213449107	Mane Mangesh Madhev	Digital logic and computer architecture	III	32	Passes the subject
10	17-2-2023	213229105	Chaudhari Kunal K	Data Structure	III	14	change of marks
11	"	213679101	Shinde Aditya Ravindra	Data Structure	III	33	Passes the Sem.
12	"	213219205	Borse Jagruti Sunil	Data Structure	III	25	change of marks
12-A		213319112	Diwakar Akash S.	Engineering maths-III	III	18	change of marks

13		213569101	Poojary Kunal	Data Structurer	III	32	passes the sem.
14		213269101	Choudhary Suryanarayan	Data Structurer	III	19	No change
15		213229105	Chaudhari Kunal K	Computer Graphics	III	18	Change of marks
16		213679101	Shinde Aditya Ravindra	Computer Graphics	III	38	passes the subject
17		213449107	Mane Mangesh Madhev	Computer Graphics	III	32	passes the subject
18		213599101	Rawat Aryan Singh	Computer Graphics	III	18	change of marks
19		213589101	Raut Parth	Computer Graphics	III	18	change of marks

3

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UNIVERSITY OF MUMBAI

Details of Candidates applied for Revaluation of Answer Books at Semester III to VI - ~~May~~ <sup>Dec.</sup> 2022

Name of the College : Vidyavardhini's College of Engineering & Technology, Vasai Road.

<sup>Sem V</sup>  
Branch: AIDS

Sr. No.	Date of Declaration	Seat No.	Name of the student	Subject	Semester	Marks after Revaluation/Photocop	Remarks
Q.P. (2) 1	17/02/2023	203829201	mulik Diksha	computer Network	V	25	change of marks
2	17/02/2023	203719107	Jawale Chetan Nagesh	Computer Network	V	32	Passes the sem
3	13/03/2023	203909106	Puri ParthMahendra	Statistics for AIDS	V	32	Passes the Sem
3 4	13/03/2023	203949112	Shinde Parthamesh	Statistics for AIDS	V	32	Passes the Sem
5	13/03/2023	203829201	mulik Diksha	—	V	07	change of marks
Q.P. (01) 6	20/2/23	203829201	mulik Diksha	Web computing	V	07	change of marks

UNIVERSITY OF MUMBAI

Details of Candidates applied for Revaluation of Answer Books at Semester III to VI - May-2022

Name of the College : Vidyavardhini's College of Engineering & Technology, Vasai Road.

Branch: AIDS

Sr. No.	Date of Declaration	Seat No.	Name of the student	Subject	Semester	Marks after Revaluation/Photocopy	Remarks
1	17/02/2023	203929101	Shah Prasad Mukesh	Microprocessor	IV	32	passes the sem
2							





# University of Mumbai

MUMBAI - 400032

## VIDYAVARDHINI'S COLLEGE OF ENGINEERING & TECHNOLOGY

K. T. Marg, Vasai Road (W), Dist. Palghar - 401202, Maharashtra.

NAME : RAUT HARDIK BHAGVAN CHETNA  
 EXAMINATION : COMPUTER SCIENCE AND ENGINEERING (DATA SCIENCE)  
 SEMESTER - I V (C-SCHEME)  
 HELD IN : MAY 2023  
 SEAT NUMBER : 212948101

COURSE CODE	COURSE TITLE	COURSE CREDITS	GRADE			CREDIT EARNED (C)	GRADE POINTS (G)	C X G
			ESE/PR/OR	IATW	OVERALL			
CSC401	Engineering Mathematics - I V	3	F	E	-	-	-	-
		1	-	O	O	1	10	10
CSC402	Analysis Of Algorithm	3	C	B	C	3	7	21
CSC403	Database Management System	3	C	C	C	3	7	21
CSC404	Operating System	3	B	C	B	3	8	24
CSC405	Microprocessor	3	P	C	E	3	5	15
CSL401	Analysis Of Algorithm Lab	1	O	A	A	1	9	9
CLS402	Database Management System Lab	1	A	O	O	1	10	10
CSL403	Operating System Lab	1	C	O	A	1	9	9
CSL404	Microprocessor Lab	1	-	O	O	1	10	10
CSL405	Skill Base Lab Course: Python Programming	2	-	O	O	2	10	20
CSM401	Mini Project 1 - B	2	O	C	A	2	9	18
<b>TOTAL</b>		<b>24</b>				<b>21</b>		<b>167</b>

REMARK : UnSuccessful

SGPI : --

CGPI : --

RESULT DECLARED ON : **1-0 AUG 2023**

LEGEND : F - Head of failure, - Not Applicable, Ab - Absent,

/ - Female, SGPI -  $\Sigma (cxg) / \Sigma (C)$ , ~ - Dyslexia Benefit



*[Signature]*  
PRINCIPAL

[Click here for summary page](#)

APPLICATION FOR THE REVALUATION OF THE ASSESSED ANSWERBOOKS

To  
The Principal,  
Vidyavrdhini's College of Engineering & Tech,  
Vasai Rd.

PRESENT SEM	DETAILS
Name:	Maitreya Rajaram Khole
Sem. & Branch:	III - Mech
Roll No.:	11 / 210752101

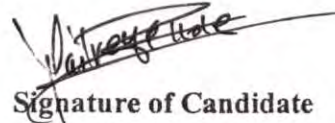
Respected Sir,

I had appeared for the III Semester (C-Scheme) Mechanical branch examinations held in May/Dec.20 23 with Seat No.: 2.

I am remitting herewith a fee of Rs.250/- per subject towards issue of revaluation in respect of Subject/s listed below. Fee of Rs.125/- per subject for SC/ST/DTNT student. (A Copy of caste certificate is mandatory if concession in the fees is claimed).

Sr.No.	Subject	Marks	Fee (Rs.)
1.	Engineering Mathematics - III	20	250
2.	Strength of Materials	17	250
	Total		

Date:

  
Signature of Candidate

Mobile No.: 9028299869

- Kindly refer Exam Section Notice Board for further details
- Kindly attach photocopy of Marksheet





# University of Mumbai

MUMBAI - 400032

## VIDYAVARDHINI'S COLLEGE OF ENGINEERING & TECHNOLOGY

K. T. Marg, Vasai Road (W), Dist. Palghar - 401202, Maharashtra.

NAME : HOLE MAITREYA RAJARAM YOGITA  
EXAMINATION : SECOND YEAR MECHANICAL ENGINEERING SEMESTER III  
(C-SCHEME)  
HELD IN : MAY 2023  
SEAT NUMBER : 210752101

COURSE CODE	COURSE TITLE	COURSE CREDITS	GRADE			CREDIT EARNED (C)	GRADE POINTS (G)	C X G
			ESE/PR/OR	IA/TW	OVERALL			
MEC301	Engineering Mathematics - III	3	F	P	-	--	--	--
		1	-	E	E	1	5	5
MEC302	Strength Of Materials	3	F	P	-	--	--	--
MEC303	Production Processes	4	P	E	P	4	4	16
MEC304	Materials And Metallurgy	3	D	D	D	3	6	18
MEC305	Thermodynamics	3	P	P	P	3	4	12
MEL301	Materials Testing	1	O	O	O	1	10	10
MEL302	Machine Shop Practice	2	-	C	C	2	7	14
MESBL301	C A D - Modelling	2	C	C	C	2	7	14
MEPBL301	Mini Project - 1 A	2	O	O	O	2	10	20
TOTAL		24				18		109

REMARK : UnSuccessful

SGPI : --


CGPI : --

RESULT DECLARED ON : 21 AUG 2023

LEGEND : F - Head of failure, - Not Applicable, Ab - Absent,

/ - Female, SGPI -  $\Sigma$  (c x g) /  $\Sigma$  (C), ~ - Dyslexia Benefit



  
PRINCIPAL

[Click here for summary page](#)



**UNDERTAKING**

I, \_\_\_\_\_  
 student of \_\_\_\_\_ College  
 appeared at the \_\_\_\_\_ examination with  
 Seat No. \_\_\_\_\_ willingly giving the following undertaking for obtaining the photocopy  
 of my answer-book.

I shall abide by the rules and regulations in respect of the availability of photocopy of the answer-book and I shall not violate these rules and regulations by using the photocopy for any other purpose except for my exclusive and relevant use.

**Signature of the Candidate**

\_\_\_\_\_

**Certificate for the S.C., S.T., D.T./N.T. and E.B.C. Students**

This is to certify that Shri/Smt./Kum. \_\_\_\_\_  
 is/was a bonafide student of this College/Department/Institute during the year/s and he/she was getting the  
 concession in tuition fees and other fees as he/she is/was belonging to Economically Backward Class i.e.  
 his/her parental income is Rs. \_\_\_\_\_ /- or less per annum or he/she is/was belonging to Scheduled  
 Caste/Scheduled Tribe/Denotified and Nomadic Tribe. He/She is therefore, eligible to get the concession  
 in the fee for photocopy of answer-books.

I forward herewith certified xerox copy of the caste certificate submitted by him/her.

The above information to the best of my knowledge is true, correct as per the college record.

Name of the College/Department/Institute : \_\_\_\_\_

**Signature of the Principal,**

Class : \_\_\_\_\_ Div. : \_\_\_\_\_

Year : \_\_\_\_\_

**College Stamp**

University of Mumbai



### Application for Revaluation

For Office use only

Receipt No. ....

Date .....

at \_\_\_\_\_ of \_\_\_\_\_ Month \_\_\_\_\_ Year Seat No. \_\_\_\_\_  
Name of Examination

Name and Address of Candidate (in BLOCK LETTERS)

Shri/Smt./Kum. \_\_\_\_\_

Address : \_\_\_\_\_

Tel No. : \_\_\_\_\_ Mobile No. : \_\_\_\_\_ E-mail No. : \_\_\_\_\_

Name and Address of the College/Department/Institute

Seal of the College  
Dept./Institute

PARTICULARS OF SUBJECT(S) APPLIED FOR REVALUATION. Just fill in the column(s) numbered by Roman numerals only

Nomenclature of Subject/Paper									Paper No. & Code No.			Date & Time of Examination			Marks Obtained in Theory Paper		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	Total	Grace Marks given, if any	Max. Sub. Grace	Signature of the Clerk
I																	
II																	
III																	
IV																	
V																	
VI																	

Revaluation of answer-books shall be deemed to be an additional facility to the candidates, it being understood that the delay in the declaration of revaluation results for any reason whatsoever shall not confer any right upon them for admission to a higher class, which matter shall always be regulated in accordance with the relevant Ordinances and/or Rules made by the University in that behalf.

Place :  
Date :

Signature of Candidate  
[ P.T.O.

**UNDERTAKING**

I hereby undertake that the results of the revaluation of my answer-book/s shall be binding on me and that I shall accept the revised marks assigned to my paper/s.

Mumbai,

\_\_\_\_\_  
Signature of the Candidate

Date :

**DETAILS REGARDING APPLICANTS RESULT AT THE LOWER EXAMINATION  
CONDUCTED BY THIS UNIVERSITY/COLLEGE**

Name of the Lower Examination :

Month & Year :

Seat No. :

Result :

(Whether passed/failed or held in Reserve)

**(Attach xerox copy)**

Candidate must necessarily write in the column mentioned above the Seat No. Month and Year of Passing the Lower Examination.

**CERTIFICATE FOR THE S.C., S.T., D.T./N.T. AND E.B.C. STUDENTS**

This is to certify that Shri/Smt./Kum. \_\_\_\_\_ is/was a bonafide student of this college during the year/s and he/she was getting the concession in tuition fees and other fees as he/she is/was belonging to Economically Backward Class i.e. his/her parental income is ₹ 15,000/- or less per annum or he/she is/was belonging to Scheduled Caste/Scheduled Tribe/Denotified and Nomadic Tribe. He/She is therefore, eligible to get the concession in the fee for Revaluation of answerbooks.

I forward herewith certified xerox copy of the caste certificate submitted by him/her.

The above information is to the best of my knowledge true, correct as per the college record.

Name of the College : \_\_\_\_\_

\_\_\_\_\_  
Signature of the Principal,

Class : \_\_\_\_\_ Div. : \_\_\_\_\_

Year : \_\_\_\_\_

College Stamp

**P.S.** Please strike out whichever is not applicable.

**N.B. :** The result of revaluation of his/her answer-books will be communicated to the candidate by post at his/her address.

**No inquiries in this connection will be entertained.**



Vidyavardhini's College of Engineering and Technology, Vasai

Academic Calendar Even Semester (2022-2023) (Tentative) (SE, TE, BE)

Month	Week No.	Mon	Tue	Wed	Thu	Fri	Sat	Sun
JAN 2023	0	2 Term Start (SE TE BE)	3	4* Anshu 2023 Intercollegiate Sports Festival	5*	6*	7*	8*
	1	9*	10*	11*	12*	13*	14	15
	2	16*	17*	18*	19*	20*	21*	22
	3	23	24	25	26 Republic Day	27	28	29
	4	30	31	1	2	3	4 Alumni Meet 23	5
FEB 2023	5	6 Defaulter List 1	7 Proctor report and action by respective HODs	8 Zeal 23	9 Shri. Bhausaheb Vartak's Birth Anniversary Zeal 23	10 Zeal 23	11	12
	6	13	14	15	16	17	18 Mahashivratri	19 Chhatrapati Shivaji Maharaj Jayanti
	7	20	21	22	23	24 Marathi Bhasha Diwas	25	26
	8	27	28	1 Defaulters list 2	2 Internal Assessment 1 (SE TE BE)	3 Internal Assessment 1 (SE TE BE) Proctor report and action by respective HODs	4 Internal Assessment 1 (SE TE BE)	5
MARCH 2023	9	6	7 Holi	8	9	10 Internal Assessment 1 Result Display	11	12
	10	13		15	16	17 Oscillations 2023 Intercollegiate TPP competition	18	19
	11	20	21	22 Gudhi Padwa	23	24	25	26
	12	27	28	29	30 Ram Navami	31	1	2
APRIL 2023	13	3 Defaulters List 3	4 Mahavir Jayanti	5 Proctor report and action by respective HODs	6 VNPS 2023	7 Good Friday	8	9
	14	10 Internal Assessment 2 (SE TE BE)	11 Internal Assessment 2 (SE TE BE)	12 Internal Assessment 2 (SE TE BE)	13	14 Dr. Babasaheb Ambedkar Jayanti	15	16
	15	17	18	19 Internal Assessment 2 Result Display	20 Final Defaulters List	21 TERM END (SE TE BE)	22 Akshya Tritiya and Ramzan-Id (Id-UI-Fitr)	23
	16	24 Commencement of Oral/Practical Exams (SE TE BE)	25	26	27	28	29	30
MAY 2023	17	1 Maharashtra Divas	2	3	4	5 Buddha Pournima	6	7
	18	8	9	10 Commencement of Theory Exams (IV, VI, VIII sem)	11	12	13	14
	19	15	16	17	18	19	20	21
	20	22	23	24 Commencement of Theory Exams (III, V, VII sem)	25	26	27	28
	21	29 Malsahab Smt Tarabai Vartak's Death Anniversary	30	31				

\*Sports activities ^ placement training for TE students all programmes  
 \*\*Commencement of Odd Semester AY 2023-24 from 10<sup>th</sup> July 2023.

Dr. Vikas Gupta  
 Dean, Academics

Dr. Harish V. Vankudre  
 Principal



Vidyavardhini's College of Engineering and Technology  
Department of Computer Engineering  
Academic Year : 2022-23 (Odd Sem)

**Internal Assessment-2**

**Code/Sub: CSDLO5013/ADBMS**

**Year/Sem: TE-V**

**Date: 18/10/2022**

**Max. Marks: 20**

**Duration: 1Hr**

**N.B.:**

CSDLO5013.4	Compare different types of NoSQL databases.	Analyze (Level 4)
CSDLO5013.5	Formulate NoSQL queries using MongoDB.	Apply (Level 3)
CSDLO5013.6	Compare various trends in advance databases through temporal, graph based and spatial based databases.	Analyze (Level 4)

Q.No.	Questions	Marks	CO	BL
1	A) Answer the following questions. 1) Illustrate Key value paired database model for following schema Student(Name, email, city, enrolldate)	2M	CO4	Analyze
	B) Answer the following questions (Any one) 1) Distinguish Between SQL and NOSQL databases on the basis of types, scalability, implementation an performance 2)BASE Transactions ensures the properties like Basically Available, Soft State, and Eventual Consistency. Justify what is soft state of any system and how it is depend on Eventual Consistency property.	5M		
2	A) Answer the following questions 1) Use a Mongo DB command to find a book details of inserted records in formatted sequence.	2M	CO5	Apply
	B) Solve the following questions (Any one) 1) Consider the following document schema for	5M		



Vidyavardhini's College of Engineering and Technology  
Department of Computer Engineering  
Academic Year : 2022-23 (Odd Sem)

	<p>book (bid,bname,Author,edition)</p> <p>a) Display book whose edition that are greater than 3 b) Display books written by author Korth and edition 6 using AND operator.</p> <p>2)Apply findOne an updateOne methods on Facultydetails schema where it includes First_Name, Last_Name, Date_Of_Birth, e_mail, phone.</p>			
<b>3</b>	<p>A) Answer the following questions</p> <p>1) Illustrate temporal databases for given schema EMP(Eid,Ename,sal,dno) as</p> <p>a) Transaction time temporal Database</p> <p>B) Solve the following questions (Any one)</p> <p>1) Analyze and Model the College Management system as a graph database.</p> <p>i) Identify different labels, Nodes, relationship and respective properties.</p> <p>ii) Draw a Graph model using the same.</p> <p>2) Consider an example of a road map. A road map is a two-dimensional object that contains points, lines, and polygons that can represent cities, roads, and political boundaries Justify which database is best for above example and how you can use queries and operators for the same situation.</p>	<p>1M</p> <p>5M</p>	<p>CO6</p>	<p>Analyze</p>



  
HEAD  
Dept of Computer Engg.,  
Vidyavardhini's College of  
Engineering and Technology,  
Vasai Road 401 202





Vidyavardhini's College of Engineering and Technology  
 Department of Computer Engineering  
 Academic Year : 2022-23 (Odd Sem)

**Internal Assessment-2**

**Code/Sub: CSDLO5013/ADBMS**

**Year/Sem: TE-V**

**Date: 19/10/2022**

**Max. Marks: 20**

**Duration: 1Hr**

**N.B.:**

Q. No	Questions	Marks								
1	<p>A) Answer the following questions.</p> <p>1) Illustrate Key value paired database model for following schema            Student(Name, email, city, enrolldate)</p> <p>Key value pair            Student</p> <table border="1" data-bbox="225 1050 798 1552"> <tbody> <tr> <td>Name</td> <td>Taher</td> </tr> <tr> <td>Email</td> <td>abbc@gmailcom</td> </tr> <tr> <td>City</td> <td>Mumbai</td> </tr> <tr> <td>enrolldate</td> <td>20/06/2020</td> </tr> </tbody> </table> <p>B) Answer the following questions (Any one)</p> <p>1) Distinguish Between SQL and NOSQL databases on the basis of types, scalability, implementation an performance</p>	Name	Taher	Email	abbc@gmailcom	City	Mumbai	enrolldate	20/06/2020	<p>2M</p> <p>5M</p>
Name	Taher									
Email	abbc@gmailcom									
City	Mumbai									
enrolldate	20/06/2020									



Vidyavardhini's College of Engineering and Technology  
Department of Computer Engineering  
Academic Year : 2022-23 (Odd Sem)

Sr. No.	Key	SQL	NoSQL
1	Type	SQL database is generally classified as a Relational database i.e. RDBMS.	While NOSQL database is known as non-relational or distributed database.
2	Language	As we already know SQL uses structured query language for its CRUD operation which is defined as SQL. This makes SQL database to store data in more structured form and also preferred for more complex operations which could get completed with complex SQL queries.	NoSQL database on other hand has dynamic schema for unstructured data. Data stored in this type of database is not structured and could be stored in either of forms such as document-oriented, column-oriented, graph-based or organized as a Key Value store. This syntax can be varied from DB to DB.
3	Scalability	SQL database can extend its capacity on single server by increasing things like RAM, CPU or SSD i.e we can say that SQL dbs could be scalable in vertical as their storage could be increase for the same server by enhancing its storage components.	In order to increase the capacity of NOSQL dbs we required to install new servers parallel to the parent server i.e NOSQL dbs could be scalable in horizontal and this made them more preferable choice for large or ever-changing data sets.

Each Point (1M)



Vidyavardhini's College of Engineering and Technology  
Department of Computer Engineering  
Academic Year : 2022-23 (Odd Sem)

4	Internal implementation	SQL follows ACID properties for its operations which is abbreviation of Atomicity, Consistency, Isolation and Durability.	On other hand NOSQL is based on Brewers CAP theorem which maily focus on Consistency, Availability and Partition tolerance.
5	Performance and suited for	SQL databases are best suited for complex queries but are not preferred for hierarchical large data storage.	NoSQL databases are not so good for complex queries because these are not as powerful as SQL queries but are best suited for hierarchical large data storage.
6	Examples	SQL dbs is implemented in both open source and commercial Database such as like Postgres & MySQL as open source and Oracle and Sqlite as commercial.	On other hand NOSQL is purely open source and MongoDB, BigTable, Redis, RavenDB, Cassandra, Hbase, Neo4j, CouchDB are the main implementation of it.

2)BASE Transactions ensures the properties like Basically Available, Soft State, and Eventual Consistency. Justify what is soft state of any system and how it is depend on Eventual Consistency property.

BASE is a term that refers to database processing in a NoSQL database, such as a data lake.

Basically Available: It means that in the event of failure the system is guaranteed to be available.

Soft State: It means the state of teh data can be changed with interacting with the application.

\*Eventual Consistency: It means, after the application input, the system will gradually become consistent. The data will be duplicated over several nodes until it reaches a consistent state. At the transaction level, however, consistency is not ensured.

For  
explanation  
of  
terms 2  
Marks



Vidyavardhini's College of Engineering and Technology  
Department of Computer Engineering  
Academic Year : 2022-23 (Odd Sem)

**Soft state indicates that the state of the system may change over time, even without input.**

This is because of the eventual consistency model. Eventual consistency indicates that the system will become consistent over time. Basically Available, Soft State, Eventual Consistency, also known as BASE, is a model that balances the trade-offs between data consistency and availability. It contrasts with the ACID model, which prioritizes strict consistency in database transactions. Here are three real-world examples of technologies or systems that employ BASE:

Amazon DynamoDB: Amazon's managed NoSQL database, DynamoDB, uses the BASE model to offer high availability and low latency performance. It ensures that data updates are eventually propagated across all nodes in the distributed system, allowing the system to continue processing requests even with temporary inconsistencies. Additionally, the soft state feature facilitates high availability, while the system reaches eventual consistency through the use of optimistic replication and conflict resolution mechanisms.

For  
justifica  
tion  
with  
exampl  
es 3  
Marks

2

A) Answer the following questions

- 1) Use a Mongo DB command to find a book details of inserted records in formatted sequence.

```
db.book.find().pretty();
{
  "_id" : ObjectId("6150a1b2f945783949c3ffb5"),
  "bid" : 5,
  "bname" : "ADBMS priciples",
  "Author" : "Navathe",
  "edition" : 4
}
{
  "_id" : ObjectId("6150a40ef945783949c3ffb6"),
  "bid" : 2,
  "bname" : "DBMS priciples",
  "Author" : "korth",
  "edition" : 4
}
```

B) Solve the following questions (Any one)

- 1) Consider the following document schema for book (bid,bname,Author,edition)

- a) Display book whose edition that are greater than 3

2M

1M for  
Comma  
nd and  
1M for  
output



Vidyavardhini's College of Engineering and Technology  
Department of Computer Engineering  
Academic Year : 2022-23 (Odd Sem)

```
db.book.find({edition: {$gt:3}}).pretty()
```

2.5M

```
{
  "_id" : ObjectId("6150a1b2f945783949c3ffb5"),
  "bid" : 5,
  "bname" : "ADBMS priciples",
  "Author" : "Navathe",
  "edition" : 4
}
{
  "_id" : ObjectId("6150a40ef945783949c3ffb6"),
  "bid" : 2,
  "bname" : "DBMS priciples",
  "Author" : "korth",
  "edition" : 4
}
{
  "_id" : ObjectId("6150a617f945783949c3ffb7"),
  "bid" : 8,
  "bname" : "SE",
  "Author" : "Pressman",
  "edition" : 5
}
{
  "_id" : ObjectId("6150a811f945783949c3ffb8"),
  "bid" : 9,
  "bname" : "os",
  "Author" : "Tanenbaum",
  "edition" : 5
}
```

b) Display books written by author Korth and edition 6 using AND operator.

```
db.book.find({$and: [{"Author":"korth"}, {"edition": 6}]}).pretty()
```

2.5M

```
{
  "_id" : ObjectId("6150a40ef945783949c3ffb6"),
  "bid" : 2,
  "bname" : "DBMS priciples",
  "Author" : "korth",
  "edition" : 6
}
```

2) Apply findOne and updateOne methods on Facultydetails schema where it includes First\_Name, Last\_Name, Date\_Of\_Birth, e\_mail, phone.

```
> db.Facultydetails.findOne()
```

2.5M



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```
{  
  "_id" : ObjectId("6150a1b2f945783949c3ffb5"),  
  "First_Name" : "John",  
  "Last_Name" : "Thomas",  
  "Date_Of_Birth" : "18 oct 2022",  
  "e_mail" : "abc@gmailcom"  
  "phone" : 9225667849  
}  
  
>db.Facultydetails.updateOne({"e_mail": "abc@gmailcom"},{$set:{"phone": 9225667849}});  
  
{ "acknowledged" : true, "matchedCount" : 1, "modifiedCount" : 1 }
```

2.5M

3

A) Answer the following questions

1) Illustrate temporal databases for given schema EMP(Eid,ENAME,sal,dno) as

a) Transaction time temporal Database

A database fact is stored in a database at some point in time. A transaction time of a data fact is the time at which the information about a modelled object or event is stored in the database. The transaction time is automatically recorded by the DBMS and cannot be changed. If a fact is updated to a database at 10:15 on 4/2/1999, this transaction time never changes. If the data is changed at a later time, then a second transaction time is generated for the change, and so on. In this way a history of database changes based on transaction time timestamps is built up.

Eid	ENAME	Sal	dno	TST	TFT
12	Rushikesh	50000	D3	01/10/90	01/10/20
23	Mohit	75000	D5	01/10/21	01/11/22
27	Samarth	85000	D3	01/10/75	01/12/20
31	OM	90000	D6	01/10/96	01/8/10

1M

B) Solve the following questions (Any one)

1) Analyze and Model the College Management system as a graph database.

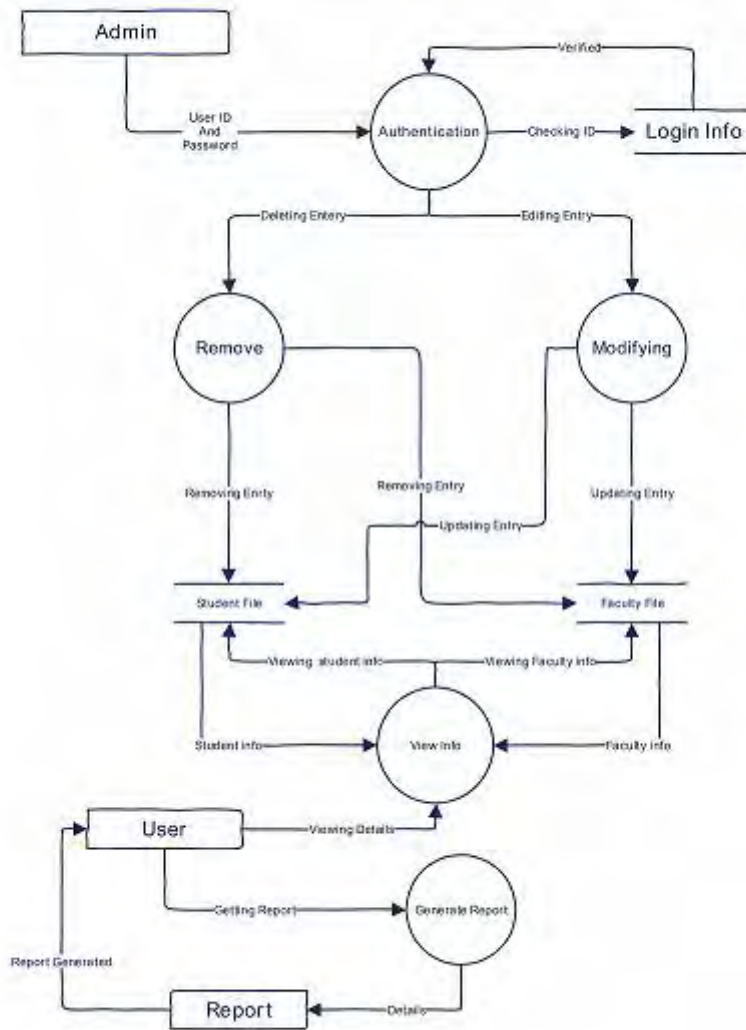
- Identify different labels, Nodes, relationship and respective properties.
- Draw a Graph model using the same.

5M

For  
laes  
nodes  
2M



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3 Marks  
for  
graph



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2) Consider an example of a road map. A road map is a two-dimensional object that contains points, lines, and polygons that can represent cities, roads, and political boundaries. Justify which database is best for above example and how you can use queries and operators for the same situation.

Spatial data is associated with geographic locations such as cities, towns etc. A spatial database is optimized to store and query data representing objects. These are the objects which are defined in a geometric space.

#### Characteristics of Spatial Database

A spatial database system has the following characteristics

- It is a database system
- It offers spatial data types (SDTs) in its data model and query language.
- It supports spatial data types in its implementation, providing at least spatial indexing and efficient algorithms for spatial join.

#### Example

A road map is a visualization of geographic information. A road map is a 2-dimensional object which contains points, lines, and polygons that can represent cities, roads, and political boundaries such as states or provinces.

In general, spatial data can be of two types –

- Vector data: This data is represented as discrete points, lines and polygons
- Raster data: This data is represented as a matrix of square cells.

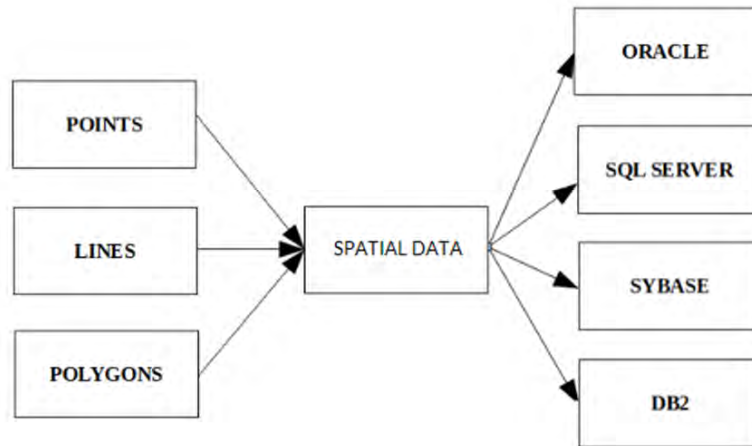
1 Marks  
for  
identi-  
fication

04  
marks  
for  
explana-  
tion





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Any type of spatial data that is data related to location and which represents objects defined in a geometric space, is stored and maintained by **Spatial Databases**. These are used to handle these Spatial Databases. Spatial database mainly contain representation of simple geometric objects such as 3D objects, topological coverage, linear networks and TINs(Triangulated irregular networks).

There are mainly **three** types of spatial queries as given below.

1. **Nearness queries:**

It request objects that present near a specified location. A query to find all Hotels that lie within a given distance of a given point is an example of a nearness query. The nearest-neighbor query requests the object that is nearest to a specified point.

For example, we may want to find the nearest Railway station. Note that this query does not have to specify a limit on the distance, and hence we can ask it even if we have no idea how far the nearest Railway station lies.

2. **Region queries:**

It deal with spatial regions. For example, a query can ask for objects that is present partially or completely within a fixed region. A query to find all medicine shops within the geographic boundaries of a given town or we can find all the available school in a particular city.

3. **Union/Intersection:**

In this type of queries, we may also request intersections and unions of regions.

For example, given region information, such as annual rainfall and population density, a query may request all regions with a low annual rainfall as well as a high population density.

In general, there is a combination of **spatial and Non spatial requirements** in the queries on spatial data . For example, we may want to find the nearest restaurant that has vegetarian selections and that charges less than \$10 for a meal.

Since spatial data are inherently graphical, we usually query them by using a **graphical query language**. Results of such queries are also displayed graphically, rather than in tables. The user can invoke various operations on the interface, such as choosing an area to be viewed



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(e.g., by pointing and clicking on suburbs west of Manhattan), zooming in and out, choosing what to display on the basis of selection conditions (e.g., hotels with more than three stars), overlay of multiple maps (e.g., hotels with more than three stars overlaid on a map representing areas with low crime rates), and so on. The graphical interface constitutes the front end.

Extensions of SQL have been proposed to permit relational databases to store and retrieve spatial information efficiently, and also to allow queries to mix spatial and non spatial conditions. Extensions include allowing abstract data types, such as lines, polygons, and bit maps, and allowing spatial conditions, such as contains or overlaps.

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## Internal Assessment Monitoring Committee (Odd Semester)

### NOTICE

To  
IAMC Members,

Date:21/08/2022

Dear Sir / Madam,

This is to inform you that the Internal Assessment Monitoring Committee meeting will be held on 26/08/2022 at 3.00 pm in Room No.112. All the members are requested to be present for the same.

Mrs. Smita Jawale  
IA Exam In-charge

Dr. Megha Trivedi  
HOD ,Computer Engineering



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Dept. of Computer Engg.

Internal Assessment Monitoring Committee  
(Odd Semester)

Minutes of Meeting (IA-I)

Date:- 26/02/2022

Following members were present in the meeting :-

- 1) Dr. Megha Trivedi (HOD, Comp. Engg.)
- 2) Dr. Swapna Borge (Member)
- 3) Mr. Anil Hingmire (Member)
- 4) Ms. Smita Jaware (IA exam Incharge)
- 5) Ms. Vaishali Shirsath (Member, IT Dept)

The points discussed in the meeting were:-

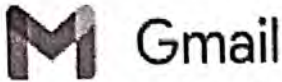
- ① The formation of question for the course BDA had minor changes according to BL.
- ② change in the questions for the course DS according to Apply:- level.
- ③ The formation of question for the course ML had minor changes according to BL.



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hod\_comp &lt;hod\_comp@vcet.edu.in&gt;

## Guidelines for conduction of IA2 for Even Sem AY 2022-23

1 message

hod\_comp &lt;hod\_comp@vcet.edu.in&gt;

Wed, Mar 29, 2023 at 7:07 PM

To: hod\_vcet &lt;hod@vcet.edu.in&gt;

Cc: "Dr. Harish Vankudre" &lt;principal@vcet.edu.in&gt;, dean\_academic\_vcet &lt;dean\_academic@vcet.edu.in&gt;, fe\_coordinator\_vcet &lt;fe\_coordinator@vcet.edu.in&gt;, lcexam\_vcet &lt;lcexam\_vcet@vcet.edu.in&gt;, smita jawale &lt;smi.jawale@vcet.edu.in&gt;

Dear Sir/Madam,

Following points were finalised in the meeting with Exam Coordinators of all Departments regarding IA2 ( 10,11,12 April 2023) held on 29/03/2023:

1. The time slots for IA would be as follows:

Morning: 9.30-10.30 am and 11.00 am -12.00 noon - SE, TE

Afternoon: 1.00 -2.00 pm and 2.30-3.30 pm -BE

**Supervisor should be allotted 2 consecutive duties. They are required to be in the classroom in the slots between 2 papers and invigilate, so that students do not scribble on the desks/benches/walls.**

2. BE papers would be held on 10th and 11th April 2023

3. For BE, 1st paper would be ILOC

4. For SE, 1st paper would be Maths

5. For TE, last paper would be Major/Minor course

6. DSE students will have IA 2 with regular students

7. Major/Minor course IA will be handled by respective Departments offering the Course

8. IAMC meetings have to be conducted before 5<sup>th</sup> April 2023.

9. Guidelines for paper setting : 5 Marks objective( no MCQ), 15 Marks Subjective

10. Classroom allocation for IA is as follows:

Comp; 517,519,520

CSEDS + Civil : 218,219,220,221

AIDS+Instrumentation: 515, 516

IT: 214,215,216

EXTC: 323, 424, 425

MECH: 313,314,315,320,321

10. Centralised Assessment will be conducted in Room No. 127 from 10-18 April (except Saturday/Sunday & holiday).

11. CAS duty chart is as follows:

10th -Mr. Sanjiv Vedpathak

11th- Mr. Rahul Patil

12th- Mrs. Madhu Lade

13th- Mrs. Komal Shringarpure

17th- Mr. Amol Chowdhari

18th- Mrs. Sujal Patil

thanks and regards

-

Dr. Megha Trivedi

PhD, IIT Bombay

Associate Professor HOD, Computer Engineering

Vidyavardhini's College of Engineering and Technology,

K.T.Marg, Vasai West; Pin-401202

Mobile No-9764197184

office-0250-2338234,Ext 214.

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Vasai Road 401 202.



## Internal Assessment Marks

Roll No.	Name of student	IA									Signature
		IA1				IA2				Avg.	
		CO1	CO2	CO3	Total	CO4	CO5	CO6	Total		
		6	7	7	20	07	06	07	20	20	
1	Advait Sanoj Alinkil	05	03	00	8	07	06	07	20	14	
2	Pooja Sandip Bandgar	03	06	1	10	06	04	06	16	13	
3	Paarth Shirish Baradia	02	07	06	15	06	03	01	10	13	
4	Aditya Prakash Bhandare	07	07	06	20	07	05	03	15	18	
5	Nishant Tanaji Bhandigare	06	07	06	19	07	06	06	19	19	
6	Vipul Naresh Bhoir	07	07	05	19	07	06	05	18	19	v.N.Bhoir
7	Shivaraj Veeresh Bhopalapur	03	05	01	9	05	06	04	15	12	
8	Pratima Dinkar Bombe	07	06	06	19	07	06	07	20	20	
9	Amey Chandrakant Chaudhari	05	06	01	12	07	06	07	20	16	
10	Kunal Kishor Chaudhari	05	07	02	14	01	02	03	6	10	
11	Mrudul Parag Chaudhari	07	07	03	17	07	05	03	15	16	
12	Dhrub Pradip Das	02	03	03	8	06	02	00	8	8	
13	Abhinav Bhimrao Desai	05	04	01	10	07	05	05	17	14	
14	Shivam Diwakar Dhale	02	06	01	9	02	03	03	8	9	
15	Leander Francis Fernandes	03	01	00	4	06	04	02	12	8	
16	Vaishnavi Sadashiv Gaikwad	05	05	05	15	07	06	07	20	18	
17	Srushti Rohidas Gawande	07	07	06	20	07	06	05	18	19	
18	Aarya Hemant Gawhane	07	07	02	16	07	04	04	15	16	
19	Swara Narottam Gharat	07	06	06	19	07	06	07	20	20	
20	Rishi Raju Gharde	02	02	00	4	00	01	00	1	3	
21	Aman Aklesh Gupta	06	06	01	13	05	06	03	14	14	



# Vidyavardhini's College of Engineering & Technology

## Department of Computer Engineering


22	Sayali Sunil Gupta	04	06	06	16	05	05	00	10	13	Sayali
23	Rahul Mahadev Hanegaokar	02	02	01	5	03	04	03	10	8	Rahul
24	Trupti Chandrakant Hedalkar	05	07	03	15	07	06	03	16	16	Trupti
25	Yash Santosh Jadhav	04	07	06	17	02	02	00	4	11	Yash
26	Chaitanya Gajanan Karale	03	07	06	16	07	05	03	15	16	Karale
27	Omkar Sawalaram Khanolkar	05	07	06	18	07	06	07	20	19	Omkar
28	Vinit Vilas Kongil	02	00	01	3	02	00	02	4	4	Vinit
29	Sahil Haresh Kulabkar	07	07	05	19	07	06	03	16	18	Sahil
30	Aditya Aniket Lawate	06	07	03	16	05	05	07	17	17	Aditya
31	Rutuja Rajesh Mestry	02	07	06	15	06	00	00	6	11	Rutuja
32	Aarya Rajesh Mhatre	02	07	05	14	06	06	04	14	14	Aarya
33	Vrusharth Prashant Nirmal	06	05	01	12	06	06	02	14	13	Vrusharth
34	Alok Ramkishun Pal	02	07	05	14	07	03	04	14	14	Alok
35	Pratik Kailash Panigrahy	04	07	05	16	07	05	05	17	17	Pratik
36	Irfan Ayub Patel	04	07	05	16	07	02	02	11	14	Irfan
37	Aryan Uday Patil	04	07	01	12	06	04	03	13	13	Aryan
38	Bramheti Shailesh Patil	05	07	05	17	07	06	04	17	17	Bramheti
39	Nirmiti Jayesh Patil	05	07	04	16	07	05	03	15	16	Nirmiti
40	Soham Ramchandra Patil	05	07	01	13	07	05	05	17	15	Soham
41	Yukta Chandrakant Patil	04	06	02	12	07	06	05	18	15	Yukta
42	Prashant Narendra Rajpal	02	06	00	8	07	06	03	16	12	Prashant
43	Mitij Sachin Raul	05	07	04	16	07	06	07	20	18	Mitij
44	Aniket Rajesh Rinjad	02	04	03	9	02	06	00	8	9	Aniket
45	Kiran Balu Rokade	03	04	01	8	03	06	04	13	11	Kiran
46	Prasheel Shamrao Sakhare	07	05	04	16	06	06	01	13	15	Prasheel



# Vidyavardhini's College of Engineering & Technology

## Department of Computer Engineering

47	Rocky Rodriguse Samuel	05	04	04	13	07	02	03	13	13	
48	Karan Hareshwar Sankhe	07	07	05	19	07	01	07	15	17	
49	Sujal Sanjay Shah	06	07	05	18	07	01	00	8	13	
50	Dheeraj Kumar Singh	05	07	05	17	06	06	05	17	17	
51	Sharvesh Vedprakash Singh	07	07	02	16	07	06	07	20	18	
52	Khushi Pravin Sinha	02	06	01	9	06	06	01	13	11	
53	Anushka Sanjay Supe	02	05	05	12	06	06	03	15	14	
54	Mohak Rajesh Tamore	06	07	04	17	06	06	06	18	18	
55	Shrawani Rajesh Terde	06	07	04	17	07	06	06	19	18	
56	Siddhesh Vinod Thakarkar	04	07	06	17	07	06	02	15	16	
57	Prathamesh Santosh Tiwari	07	07	05	19	07	06	07	20	20	
58	Vedant Sunil Vasaikar	06	05	05	16	07	06	07	20	18	
59	Vikas Rajesh Yadav	04	06	05	15	07	06	07	20	18	

  
Sign. of Faculty





# VidyaVardhini's College of Engineering & Technology

## Department of Computer Engineering

<b>Total No. of Students</b>	59							
<b>Total Present</b>	59	59	59		59	59	59	59
<b>Qualifier Level (%)</b>	64	64	64		64	64	64	64
<b>Total Marks</b>	6	7	7		6	7	7	6
<b>Qualifier Level In Terms of Marks</b>	3.84	4.48	4.48		3.84	4.48	4.48	3.84
<b>No. of Students Above Qualifier Level</b>	41	49	27		51	41	24	41
<b>% No. of Students Above Qualifier Level</b>	69.49	83.05	45.76		86.44	69.49	40.68	69.49
<b>Attainment Level</b>	2	3	1		3	2	1	

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Vasari Road 401 202



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## Term-work Record

Roll No.	Name of the Student	Attendance	Exp	Assign	Total	Student Sign
		(05)	(15)	(05)	(25)	
1	Advait Sanoj Alinkil	5	11	4	20	
2	Pooja Sandip Bandgar	5	11	4	20	
3	Paarth Shirish Baradia	5	12	4	21	
4	Aditya Prakash Bhandare	4	12	5	21	
5	Nishant Tanaji Bhandigare	5	13	5	23	
6	Sandesh Jayesh Bhavar	0	0	0	0	DROP
7	VIPUL Naresh BHOIR	5	12	4	21	V. N. Bhoir
8	Shivaraj Veeresh Bhopalapur	4	12	3	19	
9	Pratima Dinkar Bombe	5	13	5	23	
10	Amey Chandrakant Chaudhari	5	11	3	19	
11	Kunal Kishor Chaudhari	5	13	5	23	
12	Mrudul Parag Chaudhari	4	13	4	21	
13	Dhrub Pradip Das	4	10	3	17	
14	Abhinav Bhimrao Desai	5	13	4	22	
15	Shivam Diwakar Dhale	4	8	3	15	
16	Leander Francis Fernandes	4	10	3	17	
17	Vaishnavi Sadashiv Gaikwad	4	13	5	22	
18	Srushti Rohidas Gawande	4	14	5	23	
19	Aarya Hemant Gawhane	4	13	4	21	
20	Swara Narottam Gharat	5	12	4	21	
21	Rishi Raju Gharde	1	7	3	11	
22	Aman Aklesh Gupta	5	10	4	19	
23	Sayali Sunil Gupta	5	13	5	23	



Vidyavardhini's College of Engineering & Technology  
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24	Rahul Mahadev Hanegaokar	2	6	2	10	Rahul
25	Trupti Chandrakant Hedalkar	4	12	4	20	Trupti
26	Yash Santosh Jadhav	3	10	3	16	Yash
27	Chaitanya Gajanan Karale	4	13	3	20	Karale
28	Omkar Sawalaram Khanolkar	4	13	4	21	Omkar
29	Vinit Vilas Kongil	4	10	3	17	Vinit
30	Sahil Haresh Kulabkar	5	13	4	22	Sahil
31	Aditya Aniket Lawate	5	12	4	21	Aditya
32	Rutuja Rajesh Mestry	4	13	4	21	Rutuja
33	Aarya Rajesh Mhatre	5	12	4	21	Aarya
34	Vrusharth Prashant Nirmal	5	13	4	22	Vrusharth
35	Alok Ramkishun Pal	5	11	4	20	Alok
36	Pratik Kailash Panigrahy	4	10	3	17	Pratik
37	Irfan Ayub Patel	4	14	4	22	Irfan
38	Aryan Uday Patil	4	10	3	17	Aryan
39	Bramheti Shailesh Patil	5	13	5	23	Bramheti
40	Nirmiti Jayesh Patil	4	12	4	20	Nirmiti
41	Soham Ramchandra Patil	5	11	3	19	Soham
42	Yukta Chandrakant Patil	4	12	4	20	Yukta
43	Prashant Narendra Rajpal	2	12	3	17	Prashant
44	Mitij Sachin Raul	4	14	4	22	Mitij
45	Aniket Rajesh Rinjad	1	6	3	10	Aniket
46	Kiran Balu Rokade	5	13	4	22	Kiran
47	Prasheel Shamrao Sakhare	5	12	4	21	Prasheel
48	Rocky Rodriguse Samuel	5	10	4	19	Rocky



# Vidyavardhini's College of Engineering & Technology

## Department of Computer Engineering

49	Karan Hareshwar Sankhe	5	12	4	21	Karan
50	Sujal Sanjay Shah	5	12	4	21	Sujal
51	Dheeraj Kumar Singh	5	10	4	19	Dheeraj
52	Sharvesh Vedprakash Singh	5	13	4	22	Sharvesh
53	Khushi Pravin Sinha	4	10	3	17	Khushi
54	Anushka Sanjay Supe	4	11	4	19	Anushka
55	Mohak Rajesh Tamore	5	12	5	22	Mohak
56	Shrawani Rajesh Terde	4	13	4	21	Shrawani
57	Siddhesh Vinod Thakarkar	5	12	4	21	Siddhesh
58	Prathamesh Santosh Tiwari	5	11	4	20	Prathamesh
59	Vedant Sunil Vasaikar	5	12	4	21	Vedant
60	Vikas Rajesh Yadav	5	11	4	20	Vikas

Signature

Faculty In-Charge

HOD



Summary	
<b>Total No. of Students</b>	59
<b>Total Present</b>	59
<b>Qualifier Level (%)</b>	80
<b>Total Marks</b>	25
<b>Qualifier Level in terms of marks</b>	20
<b>No. of Students above Qualifier Level</b>	40
<b>% No. of Students above Qualifier Level</b>	<b>67.80</b>
<b>Attainment level</b>	1

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