



IMS Engineering College, Ghaziabad

(Affiliated to Dr. A.P.J. Abdul Kalam Technical University, Lucknow, Uttar Pradesh & Approved by AICTE, New Delhi)

NH-09, Adhyatmik Nagar, Near Dasna, Distt: Ghaziabad, Uttar Pradesh Website: <https://www.imsec.ac.in>

SUPPORTING DOCUMENTS

AQAR: 2023-24

1.1.2	The institution adheres to the academic calendar including for the conduct of Continuous Internal Evaluation (CIE)
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Attachment: Academic Manual



ACADEMIC ASSESSMENT & MONITORING MANUAL

[2023-24]



IMS ENGINEERING COLLEGE, GHAZIABAD

(Affiliated to Dr. A.P.J. Abdul Kalam Technical University, Lucknow, U.P)

(Approved by AICTE, New Delhi, NBA & NAAC Accredited)

IMS ENGINEERING COLLEGE, GHAZIABAD
ACADEMIC CALENDAR (As per AKTU) (ODD SEM: 2023 - 24)

August-2023						
M	T	W	T	F	S	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

September-2023						
M	T	W	T	F	S	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

October-2023						
M	T	W	T	F	S	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

November-2023						
M	T	W	T	F	S	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

December-2023						
M	T	W	T	F	S	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

January-2024						
M	T	W	T	F	S	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

IMPORTANT DATES		HOLIDAYS		EXAMINATION / CLASS TESTS	
Date of Registration: 14 Aug 2023 (VII semester B.Tech students)		15 AUG (TUE): INDIPENDENCE DAY		CT1: 1 st , 2 nd 3 rd & 4 th Year: 16-20 October 2023	
Commencement of Classes: 16 Aug 2023 (VII semester B.Tech students)		31-AUG (THU): RAKSHA BANDHAN		CT2: 1 st , 2 nd , 3 rd & 4 th Year: 4-8 December 2023	
Registration and Commencement of Academics: 28 Aug 2023 (I semester B.Tech)		7-SEP (THU): JANMASTHAMI		AKTU End Semester Examinations	
Date of Registration: 30 Aug 2023 (III, & V semester students of B.Tech)		28-SEP (THU): ID-E-MILAD			
Commencement of Classes: 01 Sep 2023 (III, V semester B.Tech students)		2-OCT (TUE): MAHATMA GANDHI JAYANTI			
First Year Orientation Program: As per University Schedule		23-OCT (MON): MAHANAVMI			
Fresher Party: 30 September 2023		24-OCT (TUE): DUSSHERA			
CHAKRAVYUH 2023: National Sports Fest (2-4 November 2023)		12-NOV (SUN): DEEPAWALI			
		13-NOV (MON): GOVERDHAN POOJA			
		15-NOV (WED): BHAI DOOJ			
		27-NOV (MON): GURU NANAK JAYANTI			
		25-DEC (MON): CHRISTMAS			
		15-JAN (MON): (MAKARSANKRANTI)			
		26-JAN (FRI): REPUBLIC DAY			
DAYS OF CELEBRATION					
National Sports Day: 29 August 2023		Engineer's Day: 15 September 2023			
Teachers' Day: 05 September 2023		International Girl Child Day: 11 October 2023			
World Literacy Day: 08 September 2023		Human Rights Day: 10 December 2023			
Hindi Day: 14 September 2023		International Energy Day: 14 December 2023			

Prof. (Dr.) Vikram Bali
Director



IMS ENGINEERING COLLEGE, GHAZIABAD

Academic Action Schedule: ODD Semester 2023-2024 (August 2023 - January 2024)

S.No.	Activity	Date/Month	Remarks
1	Course Allocation, Faculty Load Calculation and projection of requirement of resources. (B.Tech, MBA & MCA)	2 nd August 2023	By Respective Departments
2	Subject Allotment (B.Tech-Final Year)	3 rd August 2023	By Respective Departments
3	Finalisation of Department Academic Calendar (B.Tech, MCA & MBA) to include Guest Lectures/Seminars/Workshop	4 th August 2023	By Respective Departments
4	HoD, Dean & Director Meeting	7 th August 2023	Director Office
5	Registration of Final Year Students (B.Tech)	14 th August 2023	By Respective Departments
6	Independence Day Celebration	15 th August 2023	College Level Celebration
7	Commencement of VII Semester Class (B.Tech Program)	16 th August 2023	By Respective Departments
8	Registration and Start of Academics: B.Tech 1 st year (All Branches), 2023-24	28 th August 2023	Department of AS&H
9	Celebration: National Sports Day	29 th August 2023	College Level Celebration
10	Registration of 2 nd Year & 3 rd Year B.Tech Students. Timetable to be released.	30 th August 2023	By respective Departments.
11	Raksha Bandhan	31 st August 2023	University Declared Holiday
12	Student Induction Program (SIP)	1 st September 2023	To be planned by Respective Departments
13	Commencement of Class (B.Tech-2 nd & 3 rd Yr)	2 nd September 2023	By Respective Departments
14	Celebration: Teacher's Day	5 th September 2023	College Level Celebration
15	Janmashmi	7 th September 2023	University Declared Holiday
16	Celebration: World Literacy Day	8 th September 2023	College Level Celebration
17	Celebration: Hindi Day	14 th September 2023	College Level Celebration
18	Celebration: Engineer's Day	15 th September 2023	College Level Celebration
19	Eid-UI-Milad	28 th September 2023	University Declared Holiday
20	Fresher Party	30 th September 2023	College Level Celebration
21	Gandhi Jayanti	2 nd October 2022	National Holiday
22	Celebration: International Girls Child Day	11 th October 2023	College Level Celebration
23	Student Feedback (Through ERP)	12 th -14 th October 2023	System Admin & Dean (Acad)
24	DAC Meeting	12 th October 2023	For Departments
25	Department Academic Audit	13-14 October 2023	Dean (Academic) & Team
26	PAC Meeting/ QIC for 1 st Year	13 th October 2023	By Respective Departments
27	PAQIC/QIC (For 1 st Year)	14 th October 2023	By Respective Departments
28	Class Test-I: All Year B.Tech, MBA & MCA	16 th to 20 th October 2023	Exam Cell
29	Maha Navmi & Dshehra	23 rd & 24 th October 2023	University Declared Holiday
30	Parent-Teacher Meeting	27 th - 28 th October 2023	To be Planned by all Depts
31	CHAKRAVYUH 2023: National Sports Fest	2 nd - 4 th November 2023	National Level Celebration
32	Deepawali	12 th November 2023	University Declared Holiday
33	Govardhan Pooja	13 th November 2023	University Declared Holiday
34	Bhaidooj	15 th November 2023	University Declared Holiday
35	Gurunanak Jayanti	27 th November 2023	University Declared Holiday
36	Student Feedback (Through ERP)	1 st & 2 nd December 2023	System Admin & Dean (Acad)
37	Class Test-II: All Year B.Tech, MBA & MCA	4 th to 8 th December 2023	Exam Cell
38	Celebration: International Energy Day	14 th December 2023	College Level Celebration
39	End Semester University Exam	-----	To be Announced by University
40	Christmas	25 th December 2023	University Declared Holiday
41	Makarsankranti	15 th January 2024	University Declared Holiday
42	Republic Day	26 th January 2024	College Level Celebration



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Department of Information Technology, email: hodit@imsec.ac.in

DEPARTMENT OF INFORMATION TECHNOLOGY
Academic Calendar
ODD Semester 2023-24

S. No.	Activity	Date	Monitored By
1	Subject Choice Filling by faculty members	15/7/2023	HOD
2	Subject Allotment and Faculty Load Calculation	30/7/2023	HOD
3	Time Table Preparation VII Semester	05/08/2023	Time Table Coordinator
4	Registration for VII Semester Students	14/08/2023	Class Coordinators
5	Commencement of Class VII Semester	16/08/2023	Class Coordinators
6	Time Table Preparation III & V Semester	20/08/2023	Time Table Coordinator
7	Time Table Mapping with ERP	21/08/2023	ERP Coordinator
8	Finalization of Lab Manuals	22/08/23	Lab Coordinators
9	Registration for III & V Semester Students	30/08/2023	Class Coordinators
10	Commencement of Class: III & V Semester	01/09/2023	Class Coordinators
11	Module Coordinator Mating— I for auditing of Lecture plans. CUs, CO-PO-PSO mappings. (Audit-1)	02/09/2023	Module Coordinators
12	Course File Audit (VI] Semester)	04/09/23	HOD
13	Department Meeting-I	06/09/2023	HOD
14	PAQIC Meeting-I	22/09/2023	HOD
15	Final Year Project: "Project Proposal Presentation"	22/09/2023	Project Coordinator
16	Coding Contest	23/09/2023	INFOCORP/CSI Coordinator
17	NBA Criterion Heads meeting with HOD	25/09/2023	HOD
18	Mentors meeting with HOD	26/09/2023	HOD
19	Final Year Project: "Synopsis Presentation" (Review-1)	29/09/2023	Project Coordinator
20	Mock Interview Session (Final Year)	03/10/2023	HOD & Project Coordinator
21	Departmental Meeting-II	04/10/2023	HOD
22	Student Feedback	12/10/2023	Academic Survey Committee
23	Audit by module coordinators to evaluate the course coverage & assessment tools, Quality of question Papers (CT-1). (Audit-2)	13/10/2023	By Module coordinators
24	Course coverage report to Dean(A)	13/10/2023	Class Coordinator
25	Sending short attendance letter to parents and display attendance	13/10/2023	Mentors/ Class Coordinators
26	CT-1 (2 nd 3 rd 4 th year students)	16-20 October 2023	COE

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27	CT-1 Marks Submission at AMC	25/10/2023	By Respective Faculty
28	Second Mentor Meeting	27/10/2023	Respective Mentors
29	Final Year Project Presentation: Review-2	01/11/2023	Project Coordinator
30	PAQIC Meeting-2	20/11/2024	HOD
31	Student Feedback through ERP	24/11/2023	Academic Survey Committee
32	Course coverage report to Dean(A)	25/11/2023	Class Coordinator
33	CT-2	4-8 December 2023	COE
34	CI-2 Marks Submission	11/12/2023	Respective Faculty
35	CT-2 Band analysis and Attainment submission	12/12/2023	Respective Faculty
36	Submission of CT-2 Result Analysis	12/12/2023	Result Analysis Committee
37	Sending short attendance letter to parents and display attendance	13/12/2023	Mentors/ Class Coordinators
38	DAC Meeting	22/12/2023	HOD
39	Internal Practical Examination and Final Assessment	Third week of Dec 2023	Respective Faculty
40	Internal marks Submission	As per the AKTIJ dates and guidelines	Respective Faculty

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IT Department
IMS Engineering College
HOD (IT), IMSEC

Dean (Academics), IMSEC

Dean (Academics)
IMS Engineering College
Ghaziabad



DEPARTMENT OF INFORMATION TECHNOLOGY
Academic Calendar (Adherence Report)
ODD Semester 2023-24

S. No.	Activity	Scheduled Date	Actual Date of Conduct of Activity	Adherence Report	Remarks
1	Subject Choice Filling by faculty members	15/7/2023	15/7/2023	As per schedule	HOD
2	Subject Allotment and Faculty Load Calculation	30/7/2023	30/7/2023	As per schedule	HOD
3	Time Table Preparation VII Semester	05/08/2023	05/08/2023	As per schedule	Time Table Coordinator
4	Registration for VII Semester Students	14/08/2023	14/08/2023	As per schedule	Class Coordinators
5	Commencement of Class VII Semester	16/08/2023	16/08/2023	As per schedule	Class Coordinators
6	Time Table Preparation III & V Semester	20/08/2023	20/08/2023	As per schedule	Time Table Coordinator
7	Time Table Mapping with ERP	21/08/2023	21/08/2023	As per schedule	ERP Coordinator
8	Finalization of Lab Manuals	22/08/23	22/08/23	As per schedule	Lab Coordinators
9	Registration for III & V Semester Students	30/08/2023	30/08/2023	As per schedule	Department
10	Commencement of Class: III & V Semester	01/09/2023	01/09/2023	As per schedule	Department
11	Course File Audit (Vi] Semester)	04/09/23	04/09/23	As per schedule	HOD
12	Department Meeting-I	06/09/2023	06/09/2023	As per schedule	HOD
13	PAQIC Meeting-1	22/09/2023	16/11/2023	As per the availability of the PAQIC Members	IT Department
14	Final Year Project: "Project Proposal Presentation"	22/09/2023	22/09/2023	As per schedule	Project Coordinator
15	Coding Contest	23/09/2023	Coding Contest	As per schedule	Technical Club
16	NBA Criterion Heads meeting with HOD	25/09/2023	25/09/2023	As per schedule	HOD
17	Mentors meeting with HOD	26/09/2023	26/09/2023	As per schedule	HOD

Department of Information Technology

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18	Final Year Project: "Synopsis Presentation" (Review-1)	29/09/2023	29/09/2023	As per schedule	Project Coordinator
19	Mock Interview Session (Final Year)	03/10/2023	03/10/2023	As per schedule	HOD & Project Coordinator
20	Student Feedback	12/10/2023	12/10/2023	As per schedule	Academic Survey Committee
21	Audit by module coordinators to evaluate the course coverage & assessment tools, Quality of question Papers (CT-1).	13/10/2023	13/10/2023	As per schedule	By Module coordinators
22	Course coverage report to Dean(A)	13/10/2023	13/10/2023	As per schedule	Class Coordinator
23	Sending short attendance letter to parents and display attendance	13/10/2023	13/10/2023	As per schedule	Mentors/ Class Coordinators
24	CT-1 (2 nd 3 rd 4 th year students)	16-20 October 2023	16-20 October 2023	As per schedule	COE
25	CT-1 Marks Submission at AMC	25/10/2023		As per schedule	By Respective Faculty
26	Second Mentor Meeting	27/10/2023		As per schedule	Respective Mentors
27	Final Year Project Presentation: Review-2	01/11/2023		As per schedule	Project Coordinator
28	PAQIC Meeting-2	20/11/2024	19/01/2024	As per the availability of the PAQIC Members	HOD
29	Student Feedback through ERP	24/11/2023		As per schedule	Academic Survey Committee
30	Course coverage report to Dean(A)	25/11/2023		As per schedule	Class Coordinator
31	CT-2 (2 nd , 3 rd & 4 th Year students)	4-8 December 2023	4-8 December 2023 (Test Conducted for 3 rd & 4 th Year Students) CT-2 for 2 nd year 19-24 February 2024	2 nd Year (Semester III) test will be held later	COE
32	CI-2 Marks Submission	11/12/2023	11/12/2023	As per schedule	Respective Faculty

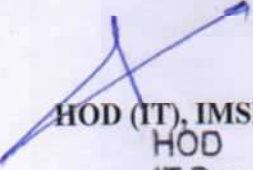
Department of Information Technology

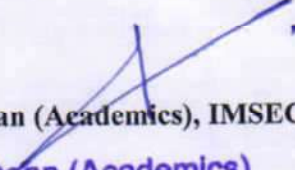
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33	CT-2 Band analysis and Attainment submission	12/12/2023	12/12/2023	As per schedule	Respective Faculty
34	Submission of CT-2 Result Analysis	12/12/2023	12/12/2023	As per schedule	Result Analysis Committee
35	Sending short attendance letter to parents and display attendance	13/12/2023	13/12/2023	As per schedule	Mentors/ Class Coordinators
36	DAC Meeting	22/12/2023	Not held due to unavailability of DAC Members	Meeting held on 24-02-2024	IT Department
37	Internal Practical Examination and Final Assessment	Third week of Dec 2023	Was held in 3-6 January 2024	Due to late exam of AKTU	Respective Faculty
38	Internal marks Submission	As per the AKTIJ dates and guidelines	For 3 rd & 4 th Year 9-15 February 2024	Due to late University Exam	Respective Faculty


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Department of Computer Science & Engineering

COURSE FILE



Faculty Name : Meenu Sharma

Course Code : KCS-051

Course Name : Data Analytics

NBA Code : C 304

Year/Sem/Sec : 3rd / 5th /CSE3 & CSE4

Academic Year : 2023-24

Email ID : Meenu.sharma@imsec.ac.in

Mobile Number : 9818680986



Department of Computer Science & Engineering

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14.	Sessional Mapping with CO (CO-PO Attainment sheet)	
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16.	Action taken for Weak Students Attach proof of action taken	
17.	Evaluated Answer Scripts (Highest/Average/Poor category) 2 from each category	
18.	Question Paper CT2	
19.	Attendance of CT2 with obtained marks	
20.	Sessional Mapping with CO (CO-PO Attainment sheet)	
21.	List of Bright and weak student	
22.	Action taken for weak students Attach proof of action taken	
23.	Evaluated Answer Scripts (Highest/Average/Poor category) 2 from each category	
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Department of Computer Science & Engineering

Vision and Mission of the Institute and Department

Vision of the Institute

To make IMSEC an Institution of Excellence for empowering students through technical education coupled with incorporating values and developing engineering acumen for innovations and leadership skills for the betterment of society.

Mission of the Institute

1. To promote academic excellence by continuous learning in core and emerging Engineering areas using innovative teaching and learning methodologies.
2. To inculcate values and ethics among the learners.
3. To promote industry interactions and produce young entrepreneurs.
4. To create a conducive learning and research environment for life-long learning to develop the students as technology leaders and entrepreneurs for addressing societal needs.



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Tel: (0120) 4940000

Department of Computer Science & Engineering

Vision of the Department

To provide globally competent professionals in the field of Computer Science & Engineering embedded with sound technical knowledge, aptitude for research and innovation with ethical values to cater to the industrial & societal needs.

Mission of the Department

- M1: To provide quality undergraduate education in both the theoretical & applied foundations of Computer Science Engineering.
- M2: Conduct research to advance the state of the art in Computer Science & Engineering and integrate the research results as innovations.
- M3: To inculcate team building skills and promote life-long learning with a high societal and ethical values.



Department of Computer Science & Engineering

Program Outcomes (POs)

S. No.	Program Outcomes / Program Specific Outcomes
PO1.	Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO2.	Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO3.	Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
PO4.	Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
PO5.	Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
PO6.	The engineer and society: apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
PO7.	Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PO8.	Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO9.	Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
PO10.	Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
PO11.	Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
PO12.	Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.



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Department of Computer Science & Engineering

Program Specific Outcomes (PSOs)

PSO1: To apply standard software engineering practices & strategies in real-time software project development

PSO2: To apply latest programming languages in creating innovative career opportunities.

Program Educational Objectives (PEOs)

Graduate Will:

PEO1: Possess knowledge to enable continued professional development.

PEO2: Engage in life-long learning to foster personal & organization growth.

PEO3: Work productively as successful professionals in diverse career paths.

PEO4: Effectively communicate ideas to promote collaboration in accordance with societal standards & ethical practices.

Data Analytics (KCS-051)		
Course Outcome (CO)		Bloom's Knowledge Level (KL)
At the end of course , the student will be able to :		
CO 1	Describe the life cycle phases of Data Analytics through discovery, planning and building.	K1,K2
CO 2	Understand and apply Data Analysis Techniques.	K2, K3
CO 3	Implement various Data streams.	K3
CO 4	Understand item sets, Clustering, frame works & Visualizations.	K2
CO 5	Apply R tool for developing and evaluating real time applications.	K3,K5,K6
DETAILED SYLLABUS		3-0-0
Unit	Topics	Proposed Lecture
I	Introduction to Data Analytics: Sources and nature of data, classification of data (structured, semi-structured, unstructured), characteristics of data, introduction to Big Data platform, need of data analytics, evolution of analytic scalability, analytic process and tools, analysis vs reporting, modern data analytic tools, applications of data analytics. Data Analytics Lifecycle: Need, key roles for successful analytic projects, various phases of data analytics lifecycle – discovery, data preparation, model planning, model building, communicating results, operationalization.	08
II	Data Analysis: Regression modeling, multivariate analysis, Bayesian modeling, inference and Bayesian networks, support vector and kernel methods, analysis of time series: linear systems analysis & nonlinear dynamics, rule induction, neural networks: learning and generalisation, competitive learning, principal component analysis and neural networks, fuzzy logic: extracting fuzzy models from data, fuzzy decision trees, stochastic search methods.	08
III	Mining Data Streams: Introduction to streams concepts, stream data model and architecture, stream computing, sampling data in a stream, filtering streams, counting distinct elements in a stream, estimating moments, counting oneness in a window, decaying window, Real-time Analytics Platform (RTAP) applications, Case studies – real time sentiment analysis, stock market predictions.	08
IV	Frequent Itemsets and Clustering: Mining frequent itemsets, market based modelling, Apriori algorithm, handling large data sets in main memory, limited pass algorithm, counting frequent itemsets in a stream, clustering techniques: hierarchical, K-means, clustering high dimensional data, CLIQUE and ProCLUS, frequent pattern based clustering methods, clustering in non-euclidean space, clustering for streams and parallelism.	08

V	<p>Frame Works and Visualization: MapReduce, Hadoop, Pig, Hive, HBase, MapR, Sharding, NoSQL Databases, S3, Hadoop Distributed File Systems, Visualization: visual data analysis techniques, interaction techniques, systems and applications.</p> <p>Introduction to R - R graphical user interfaces, data import and export, attribute and data types, descriptive statistics, exploratory data analysis, visualization before analysis, analytics for unstructured data.</p>	08
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Text books and References:

1. Michael Berthold, David J. Hand, Intelligent Data Analysis, Springer
2. Anand Rajaraman and Jeffrey David Ullman, Mining of Massive Datasets, Cambridge University Press.
3. Bill Franks, Taming the Big Data Tidal wave: Finding Opportunities in Huge Data Streams with Advanced Analytics, John Wiley & Sons.
4. John Garrett, Data Analytics for IT Networks : Developing Innovative Use Cases, Pearson Education
5. Michael Minelli, Michelle Chambers, and Ambiga Dhiraj, "Big Data, Big Analytics: Emerging Business Intelligence and Analytic Trends for Today's Businesses", Wiley
6. David Dietrich, Barry Heller, Beibei Yang, "Data Science and Big Data Analytics", EMC Education Series, John Wiley
7. Frank J Ohlhorst, "Big Data Analytics: Turning Big Data into Big Money", Wiley and SAS Business Series
8. Colleen Mccue, "Data Mining and Predictive Analysis: Intelligence Gathering and Crime Analysis", Elsevier
9. Michael Berthold, David J. Hand," Intelligent Data Analysis", Springer
10. Paul Zikopoulos, Chris Eaton, Paul Zikopoulos, "Understanding Big Data: Analytics for Enterprise Class Hadoop and Streaming Data", McGraw Hill
11. Trevor Hastie, Robert Tibshirani, Jerome Friedman, "The Elements of Statistical Learning", Springer
12. Mark Gardner, "Beginning R: The Statistical Programming Language", Wrox Publication
13. Pete Warden, Big Data Glossary, O'Reilly
14. Glenn J. Myatt, Making Sense of Data, John Wiley & Sons
15. Pete Warden, Big Data Glossary, O'Reilly.



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Department of Computer Science & Engineering

Department Academic Calendar for Odd Semester (2023-24)

S. No.	Event	Date	Remarks
1	Course Allocation, Faculty load calculation and projection of requirement of resources	02-Aug-23	By HOD
2	Subject Allotment	03-Aug-23	By HOD & Time Table Committee
3	Department Time Table for IV Year	09-Aug-23	By Time Table Committee
4	Department Academic Calendar Presentation	11-Aug-23	By HOD
5	Departmental Meeting – I	11-Aug-23	BY HOD
6	Finalisation of LAB Manual	14-Aug-23	By Lab Manual coordinator
7	Registration of Final Year Students	14-Aug-23	By Registrar
8	Commencement of Classes for 4 th year of B.Tech	16-Aug-23	By HOD
9	Allocation of Departmental Responsibilities	18-Aug-23	By HOD
10	Preparation of Course files, Module Files, Class Coordinator files and Subject Coordinator Files	23-Aug-23	By All Faculty
11	Department Time Table for II and III Year	28-Aug-23	By Time Table Committee
12	Expert Talk/Workshop/Seminar	28-Aug-23	By Industrial Interaction Coordinator
13	Registration of 2 nd Year & 3 rd Year B.Tech Students. Time table to be released	30-Aug-23	By Time Table Committee
14	Commencement of Class (B.Tech 2 nd Year and 3 rd Year	02-Sep-23	By HOD
15	Auditing of Lecture Plan / CO-PO-PSO mapping / Course file for 4, 3 and 2 year	04-Sep-23	By NBA & Module Coordinator
16	Module Coordinator Meeting with HOD	06-Sep-23	BY HOD
17	NBA Coordinator and Criteria Incharges Meeting with HOD	06-Sep-23	By NBA Coordinator
18	Industrial / Mini Project Coordinator meeting with HOD (2,3,4 year)	07-Sep-23	BY HOD and Industrial/Mini Project Incharges
19	Club Incharges meeting with HOD	08-Sep-23	By HoD and Dept Club Incharges
20	Alumni Coordinator meeting with HOD	09-Sep-23	By HOD
21	NAAC Meeting	09-Sep-23	By HOD and NAAC Coordinator
22	Result Analysis committee meeting with HOD	10-Sep-23	By HOD
23	NBA Meeting (Review of criteria of 1,2)	10-Sep-23	By HOD & NBA Coordinator
24	NBA Meeting (Review of criteria of 3,4)	11-Sep-23	By HOD & NBA Coordinator
25	NBA Meeting (Review of criteria of 5,6)	12-Sep-23	By HOD & NBA Coordinator
26	Publication of Departmental Newsletter	12-Sep-23	By Dept Editorial Board
27	Project Coordinator meeting with HOD	13-Sep-23	By HOD
28	PAC Meeting	14-Sep-23	By HOD & PAC Members
29	First Mentors Meeting	18-Sep-23	By Mentoring Coordinator
30	Project Synopsis Submission	18-Sep-23	By Project Coordinator
31	Departmental Meeting – II	19-Sep-23	By HOD
32	Expert Talk/Workshop/Seminar	19-Sep-23	By Industrial Interaction Coordinator
33	CSI & IEEE Faculty In charge meeting with HOD	20-Sep-23	BY HOD
34	Industrial Visit	20-Sep-23	By Industrial Interaction Coordinator



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35	Project Review – I	25-29 Sept 23	By Project Coordinator and Project Module Coordinator
36	NBA Progress Meeting of Criteria Incharges	06-Oct-23	By HOD & NBA Coordinator
37	NAAC Progress Meeting with Criteria Incharges	07-Oct-23	By HOD & NAAC Coordinator
38	Detention list of CT-1 Students	14-Oct-23	By Class Coordinator
39	Letters of detained students to be send to parents	14-Oct-23	By Attendance Review Committee
40	Attendance and course coverage send to Dean Academic	13-Oct-23	By HOD
41	DAC Meeting	12-Oct-23	BY HOD & DAC Members
42	First Audit by Module Coordinator	13-Oct-23	by NBA & Module Coordinator
43	Student Feedback - I (Through ERP)	12 -14 Oct 2023	System Admin & Dean (Acad)
44	Department Academic Audit	13-14-Oct- 23	Dean(Academic) & Team
45	Sessional – I Test	16-20-Oct- 23	BY Exam Cell Committee
46	Uploading of Sessional Marks on ERP and AMC	25-Oct-23	By All Faculty
47	Project Review – II	23-27 Oct- 23	By Project Coordinator and Project Module Coordinator
48	Internal Lab Exam & Lab Viva-1	23-27 Oct- 23	By Subject Faculty
49	Auditing of Course File	25-Oct-23	By NBA & Module Coordinator
50	Expert Talk/Workshop/Seminar	25-Oct-23	By Industrial Interaction Coordinator
51	Last Date of showing evaluated answer sheet to students & compilation of marks.	27-Oct-23	By All faculty
52	Parent Teacher Meeting (2, 3 ,4 yr)	27-28-Oct- 23	By HOD, Class Coordinators and ARC
53	Students, parents meeting with HOD's (for showing student attendance & weak student performance in CT-I)	30-Oct-23	By Attendance Review Committee
54	Second Audit by module coordinator	30-Oct-23	By Module Coordinator
55	CHAKRAVYUH 2023 : National Sports Fest	02-04- Nov- 23	Event Coordinator
56	Departmental Meeting – III	07-Nov-23	By HOD
57	Industrial Visit	07-Nov-23	By Industrial Interaction Coordinator
58	NBA Progress Meeting of Criteria Incharges	08-Nov-23	By HOD & NBA Coordinator
59	NAAC Progress Meeting with Criteria Incharges	09-Nov-23	By HOD & NAAC Coordinator
60	Project Review – III	20-24 Nov- 23	By Project Coordinator and Project Module Coordinator
61	Expert Talk/Workshop/Seminar	29-Nov-23	By Industrial Interaction Coordinator
62	Detention list of CT-II Students	30-Nov-23	By Class Coordinator
63	Letters of detained students to be send to parents	01-Dec-23	By Attendance Review Committee



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64	Attendance and course coverage send to Dean Academic	01-Dec-23	BY HOD
65	Third Audit by module coordinator	01-Dec-23	by NBA & Module Coordinator
66	Student Feedback - II (Through ERP)	01-02-Dec-23	System Admin & Dean (Acad)
67	Sessional – II Test	04-08, Dec-2023	By Exam Cell Committee
68	Internal Lab Exam & Lab Viva-2	11-15 Dec-23	By Subject Faculty
69	Uploading of Sessional Marks on ERP and AMC	13-Dec-23	By All Faculty
70	Last Date of showing evaluated answer sheet to students & compilation of marks.	13-Dec-23	By all faculty
71	Auditing of Course File	14-Dec-23	By NBA & Module Coordinator
72	Students, parents meeting with HOD's (for showing student attendance & weak student performance in CT-II)	15-Dec-23	By HOD
73	Fourth Audit by module coordinator	15-Dec-23	By Module Coordinator
74	Departmental Meeting – IV	15-Dec-23	By HOD
75	Submission of Sessional marks and answers sheet to the exam cell	30-Dec-23	By Examination Committee
76	Preparation of internal marks	30-Dec-23	By Respective class Coordinator
77	University End semester Examination	--	As per university announced
78	End semester practical examinations	--	As per university announced





Department: Computer Science and Engineering

Opening Report

(Action Plan 2023-2024, Odd Semester)

Course Name: **Data Analytics** Course Code: KCS 051
 Semester / Year: Vth / 3rd NBA Code: C 304
 Faculty Name(s): Ms. Meenu Sharma

Course Outcomes:

Sl.NO	DESCRIPTION	COGNITIVE LEVEL (BLOOMS TAXONOMY)
C304.1	Describe the life cycle phases of Data Analytics through discovery, planning and building.	K₁, K₂
C304.2	Understand and apply Data Analysis Techniques.	K₂, K₃
C304.3	Implement various Data streams.	K₂
C304.4	Understand item sets, Clustering, frame works & Visualizations.	K₃
C304.5	Apply R tool for developing and evaluating real time applications.	K₃, K₅, K₆

CO-PO-PSO Mapping:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C304.1	3	3	2	2	2	1	1	1	1	1	2	1	2	-
C304.2	2	3	2	2	2	1	1	1	1	1	1	1	2	-
C304.3	2	2	2	1	3	1	1	1	1	1	1	1	3	1
C304.4	2	2	2	1	2	1	1	1	1	1	2	1	2	1
C304.5	3	2	2	2	3	1	1	1	2	1	1	1	3	2
C304	2.40	2.40	2.00	1.60	2.40	1.00	1.00	1.00	1.20	1.00	1.40	1.00	2.40	1.33



Department: Computer Science and Engineering

CO Attainment:

Cos	Attainment in 2022-23	Target	Identified Gap	Action to be taken in 2023-24 to strengthen COs
C304.1	2.58	1.8	No Gap Identified	-
C304.2	2.46	1.8	No Gap Identified	-
C304.3	2.70	1.8	No Gap Identified	Case study on real time sentiment analysis
C304.4	2.52	1.8	No Gap Identified	-
C304.5	2.34	1.8	No Gap Identified	Detailed discussion on Hadoop

Identified Curriculum Gaps (If Any): Curriculum gap found in the course when compared to “DTU and GGSIPU Syllabus for undergraduate degree courses in Engineering and Technology.

1. Text mining

Action Plan for the Identified Curriculum Gaps:

1. Class Discussion on text mining and its techniques.

Innovative Teaching Learning :

1. Flipped classroom.

Content beyond Syllabus(If Any):

Implementation of data analytics tool.

Actions for improvement: (looking at previous years closing report) such as content beyond syllabus via training/workshops/expert lecture etc.

1. Expert lecture on text mining and its techniques in Oct. 2023.

CO-PO	MAPPING (1/2/3)	JUSTIFICATION
C304.1-PO1	3	Engineering knowledge is required to describe the life cycle phases of Data Analytics through discovery, planning and building. Therefore, mapping is high.
C304.1-PO2	3	Problem analysis is required to describe the life cycle phases of Data Analytics through discovery, planning and building. Therefore, mapping is high.
C304.1-PO3	2	Design/development of solutions is sometimes required to describe the life cycle phases of Data Analytics through discovery, planning and building. Therefore, mapping is moderate.
C304.1-PO4	2	Conduct investigations of complex problems is sometimes required to describe the life cycle phases of Data Analytics through discovery, planning and building. Therefore, mapping is moderate.
C304.1-PO5	2	Modern tool usage is sometimes required to describe the life cycle phases of Data Analytics through discovery, planning and building. Therefore, mapping is moderate.
C304.1-PO6	1	The engineer and society are required slightly to describe the life cycle phases of Data Analytics through discovery, planning and building. Therefore, mapping is low.
C304.1-PO7	1	Environment and sustainability is required slightly to describe the life cycle phases of Data Analytics through discovery, planning and building. Therefore, mapping is low.
C304.1-PO8	1	Ethics is required slightly to describe the life cycle phases of Data Analytics through discovery, planning and building. Therefore, mapping is low.
C304.1-PO9	1	Individual and team work is required slightly to describe the life cycle phases of Data Analytics through discovery, planning and building. Therefore, mapping is low.
C304.1-PO10	1	Communication is required slightly to describe the life cycle phases of Data Analytics through discovery, planning and building. Therefore, mapping is low.
C304.1-PO11	2	Project management and finance is sometimes required to describe the life cycle phases of Data Analytics through discovery, planning and building. Therefore, mapping is moderate.
C304.1-PO12	1	Life-long learning is required slightly to describe the life cycle phases of Data Analytics through discovery, planning and building. Therefore, mapping is low.
C304.1-PSO1	2	Describing the life cycle phases of Data Analytics through discovery, planning and building sometimes require applying standard software engineering practices & strategies in real-time software project development. Therefore, mapping is moderate.
C304.1-PSO2	-	Describing the life cycle phases of Data Analytics through discovery, planning and building is not required to apply latest programming languages and creating innovative carrier oportunities. Therefore mapping is not required.

C304.2-PO1	2	Engineering knowledge is sometimes required to Understand and apply Data Analysis Techniques. Therefore, mapping is moderate.
C304.2-PO2	3	Problem analysis is required to Understand and apply Data Analysis Techniques. Therefore, mapping is high.
C304.2-PO3	2	Design/development of solutions is sometimes required to Understand and apply Data Analysis Techniques. Therefore, mapping is moderate.
C304.2-PO4	2	Conduct investigations of complex problems is sometimes required to Understand and apply Data Analysis Techniques. Therefore, mapping is moderate.
C304.2-PO5	2	Modern tool usage is sometimes required to Understand and apply Data Analysis Techniques. Therefore, mapping is moderate.
C304.2-PO6	1	The engineer and society are required slightly to Understand and apply Data Analysis Techniques. Therefore, mapping is low.
C304.2-PO7	1	Environment and sustainability is required slightly to Understand and apply Data Analysis Techniques. Therefore, mapping is low.
C304.2-PO8	1	Ethics is required slightly to Understand and apply Data Analysis Techniques. Therefore, mapping is low.
C304.2-PO9	1	Individual and team work is required slightly to Understand and apply Data Analysis Techniques. Therefore, mapping is low.
C304.2-PO10	1	Communication is required slightly to Understand and apply Data Analysis Techniques. Therefore, mapping is moderate.
C304.2-PO11	1	Project management and finance is required slightly to Understand and apply Data Analysis Techniques. Therefore, mapping is low.
C304.2-PO12	1	Life-long learning is required slightly to Understand and apply Data Analysis Techniques. Therefore, mapping is low.
C304.2-PSO1	2	Understanding and applying Data Analysis Techniques sometimes require applying standard software engineering practices & strategies in real-time software project development. Therefore, mapping is moderate.
C304.2-PSO2	-	Understanding and applying Data Analysis Techniques is not required to apply latest programming languages and creating innovative career opportunities therefore no mapping is required.
C304.3-PO1	2	Engineering knowledge is sometimes required to Implement various Data streams. Therefore, mapping is moderate.
C304.3-PO2	2	Problem analysis is sometimes required to Implement various Data streams. Therefore, mapping is moderate.
C304.3-PO3	2	Design/development of solutions is sometimes required to Implement various Data streams. Therefore, mapping is moderate.
C304.3-PO4	1	Conduct investigations of complex problems is required slightly to Implement various Data streams. Therefore, mapping is low.

C304.3-PO5	3	Modern tool usage is required to Implement various Data streams. Therefore, mapping is high.
C304.3-PO6	1	The engineer and society are required slightly to Implement various Data streams. Therefore, mapping is low.
C304.3-PO7	1	Environment and sustainability is required slightly to Implement various Data streams. Therefore, mapping is low.
C304.3-PO8	1	Ethics is required slightly to Implement various Data streams. Therefore, mapping is low.
C304.3-PO9	1	Individual and team work is required slightly to Implement various Data streams. Therefore, mapping is low.
C304.3-PO10	1	Communication is required slightly to Implement various Data streams. Therefore, mapping is low.
C304.3-PO11	1	Project management and finance is required slightly to Implement various Data streams. Therefore, mapping is low.
C304.3-PO12	1	Life-long learning is required slightly to Implement various Data streams. Therefore, mapping is low.
C304.3-PSO1	3	Implementing various data streams require applying standard software engineering practices & strategies in real-time software project development. Therefore, mapping is high.
C304.3-PSO2	1	Implementing various data streams require slightly by applying latest programming languages in creating innovative career opportunities. Therefore, mapping is low.
C304.4-PO1	2	Engineering knowledge is sometimes required to Understand item sets, Clustering, frame works & Visualizations. Therefore, mapping is moderate.
C304.4-PO2	2	Problem analysis is sometimes required to Understand item sets, Clustering, frame works & Visualizations. Therefore, mapping is moderate.
C304.4-PO3	2	Design/development of solutions is sometimes required to Understand item sets, Clustering, frame works & Visualizations. Therefore, mapping is moderate.
C304.4-PO4	1	Conduct investigations of complex problems is required slightly to Understand item sets, Clustering, frame works & Visualizations. Therefore, mapping is low.
C304.4-PO5	2	Modern tool usage is sometimes required to Understand item sets, Clustering, frame works & Visualizations. Therefore, mapping is moderate.
C304.4-PO6	1	The engineer and society are required slightly to Understand item sets, Clustering, frame works & Visualizations. Therefore, mapping is low.
C304.4-PO7	1	Environment and sustainability is required slightly to Understand item sets, Clustering, frame works & Visualizations. Therefore, mapping is low.
C304.4-PO8	1	Ethics is required slightly to Understand item sets, Clustering, frame works & Visualizations. Therefore, mapping is low.
C304.4-PO9	1	Individual and team work is required slightly to Understand item sets, Clustering, frame works & Visualizations. Therefore, mapping is low.
C304.4-PO10	1	Communication is required slightly to Understand item sets, Clustering, frame works & Visualizations. Therefore, mapping is low.

C304.4-PO11	2	Project management and finance is sometimes required to Understand item sets, Clustering, frame works & Visualizations. Therefore, mapping is moderate.
C304.4-PO12	1	Life-long learning is required slightly to Understand item sets, Clustering, frame works & Visualizations. Therefore, mapping is low.
C304.4PSO1	2	Understand item sets, Clustering, frame works & Visualizations sometimes require applying standard software engineering practices & strategies in real-time software project development. Therefore, mapping is moderate.
C304.4PSO2	1	Understand item sets, Clustering, frame works & Visualizations does require slightly by applying latest programming languages in creating innovative career opportunities. Therefore, mapping is low.
C304.5-PO1	3	Engineering knowledge is required to Apply R tool for developing and evaluating real time applications. Therefore, mapping is high.
C304.5-PO2	2	Problem analysis is sometimes required to Apply R tool for developing and evaluating real time applications. Therefore, mapping is moderate.
C304.5-PO3	2	Design/development of solutions is sometimes required to Apply R tool for developing and evaluating real time applications. Therefore, mapping is moderate.
C304.5-PO4	2	Conduct investigations of complex problems is sometimes required to Apply R tool for developing and evaluating real time applications. Therefore, mapping is moderate.
C304.5-PO5	3	Modern tool usage is required to Apply R tool for developing and evaluating real time applications. Therefore, mapping is high.
C304.5-PO6	1	The engineer and society are required slightly to Apply R tool for developing and evaluating real time applications. Therefore, mapping is low.
C304.5-PO7	1	Environment and sustainability is required slightly to Apply R tool for developing and evaluating real time applications. Therefore, mapping is low.
C304.5-PO8	1	Ethics is required slightly to Apply R tool for developing and evaluating real time applications. Therefore, mapping is low.
C304.5-PO9	2	Individual and team work is sometimes required to Apply R tool for developing and evaluating real time applications. Therefore, mapping is moderate.
C304.5-PO10	1	Communication is required slightly to Apply R tool for developing and evaluating real time applications. Therefore, mapping is low.
C304.5-PO11	1	Project management and finance is required slightly to Apply R tool for developing and evaluating real time applications. Therefore, mapping is low.
C304.5-PO12	1	Life-long learning is required slightly to Apply R tool for developing and evaluating real time applications. Therefore, mapping is low.
C304.5-PSO1	3	Applying R tool for developing and evaluating real time applications requires applying standard software engineering

		practices & strategies in real-time software project development. Therefore, mapping is high.
C304.5-PSO2	2	Applying R tool for developing and evaluating real time applications sometimes require applying standard software engineering practices & strategies in real-time software project development. Therefore, mapping is moderate.



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NOTICE

This is to inform the students of CSE 3rd year (CSE3 and CSE4) that a session of Flipped classroom is organized on Nov. 03, 2023 on the topic "Real time Analytics Platform".

Following students are going to prepare the presentation on given topics:

S.NO.	Name of Students	Topic
1	Vrienda Pathak	MangoDB
2	Nishika Singh	Wearable Devices

Ms. Meenu Sharma

(Faculty, CSE)



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Department of Computer Science and Engineering

Data Analytics-KCS 051 Session 2023 - 24

Assignment 1

Maximum Marks: 20

Submission Date:

COURSE OUTCOMES

By the end of the course, students will be able to:

CO.No	DESCRIPTION	COGNITIVE LEVEL (BLOOMS TAXONOMY)
C304.1	Describe the life cycle phases of Data Analytics through discovery, planning and building.	K1, K2
C304.2	Understand and apply Data Analysis Techniques.	K2, K3
C304.3	Implement various Data streams.	K3
C304.4	Understand item sets, Clustering, frame works & Visualizations.	K2
C304.5	Apply R tool for developing and evaluating real time applications.	K3, K5, K6

ATTEMPT ALL QUESTIONS

Q. No.	Questions	CO
1.	Define data and data analytics. Explain the need of data analytics.	CO1
2.	What are the various applications of data analytics? Explain in brief.	CO1
3.	Define big data platform. Explain the analytics process with diagram.	CO1
4.	Explain evolution of analytic scalability and modern data analytic tools.	CO1
5.	Explain Data Analytic Life cycle.	CO1



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Data Analytics (KCS-051) Session 2023-24

Assignment 2

Maximum Marks: 20

Submission Date:

COURSE OUTCOMES

By the end of the course, students will be able to:

CO.No.	DESCRIPTION	COGNITIVE LEVEL (BLOOMS TAXONOMY)
C304.1	Describe the life cycle phases of Data Analytics through discovery, planning and building.	K1, K2
C304.2	Understand and apply Data Analysis Techniques.	K2, K3
C304.3	Implement various Data streams.	K3
C304.4	Understand item sets, Clustering, frame works & Visualizations.	K2
C304.5	Apply R tool for developing and evaluating real time applications.	K3, K5, K6

ATTEMPT ALL QUESTIONS each question carries equal marks

Q. No.	Question	CO
1.	Explain the steps involved in Bayesian data analysis.	CO2
2.	Differentiate different types of Support Vector and kernel methods of Data Analysis	CO2
3.	Distinguish between Supervised and Unsupervised learning with example.	CO2
4.	What is Lasso Regression?	CO2
5.	What do you mean by Fuzzy Decision trees?	CO2



Data Analytics (KCS-051) Session 2023-24

Assignment 3

Maximum Marks: 20

Submission Date:

COURSE OUTCOMES

By the end of the course, students will be able to:

CO.No.	DESCRIPTION	COGNITIVE LEVEL (BLOOMS TAXONOMY)
C304.1	Describe the life cycle phases of Data Analytics through discovery, planning and building.	K1, K2
C304.2	Understand and apply Data Analysis Techniques.	K2, K3
C304.3	Implement various Data streams.	K3
C304.4	Understand item sets, Clustering, frame works & Visualizations.	K2
C304.5	Apply R tool for developing and evaluating real time applications.	K3, K5, K6

ATTEMPT ALL QUESTIONS each question carries equal marks

Q. No.	Question	CO
1.	Describe how would you stream data model architecture with suitable block diagram?	CO3
2.	What is the role of sliding window in analysis of streaming data.	CO3
3.	How is sentiment analysis playing a major role in data mining?	CO3
4.	What are the phases involved in real time data analytics-deployment to production? Analyze.	CO3
5.	Assuming a real time stock market situation, bring out the various ideas used in prediction analysis	CO3



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Data Analytics (KCS-051) Session 2023-24

Assignment 5

Maximum Marks: 20

Submission Date:

COURSE OUTCOMES

By the end of the course, students will be able to:

CO.No.	DESCRIPTION	COGNITIVE LEVEL (BLOOMS TAXONOMY)
C304.1	Describe the life cycle phases of Data Analytics through discovery, planning and building.	K1, K2
C304.2	Understand and apply Data Analysis Techniques.	K2, K3
C304.3	Implement various Data streams.	K3
C304.4	Understand item sets, Clustering, frame works & Visualizations.	K2
C304.5	Apply R tool for developing and evaluating real time applications.	K3, K5, K6

ATTEMPT ALL QUESTIONS each question carries equal marks

Q. No.	Question	CO
1.	Write short notes on i. NoSQL Databases and its types ii. Visualization for Big Data	CO5
2.	Compare and Contrast the Hadoop and MapR.	CO5
3.	Explain the classification of Interaction techniques.	CO5
4.	List and Explain five R functions used in Descriptive analysis.	CO5
5.	Discuss Hive, Pig and HDFS.	CO5

MODEL QUESTION PAPER

UNIT -5

DATA ANALYTICS (KCS-051)

Q.No	Question	Competence	Level
1	What is CAP theorem? State its significances	Remember	BTL 1
2	What is NoSQL?	Remember	BTL 1
3	What is the advantage of MaPR	Remember	BTL 1
4	What is hive in Big Data	Remember	BTL 1
5	What is Hadoop Distributed File System?	Remember	BTL 1
6	List the data types to be visualized	Remember	BTL 1
7	Describe Relational Database?	Understand	BTL 2
8	Discuss the features of Hive	Understand	BTL 2
9	Give the applications of IDA	Understand	BTL 2
10	How can Map-Reduce computation executes?	Understand	BTL 2
11	Illustrate dimensional stacking	Apply	BTL 3
12	Show the advantage of visual data exploration	Apply	BTL 3
13	Illustrate Reduce function	Apply	BTL 3
14	Classify visualization techniques	Analyze	BTL 4
15	Classify interaction techniques	Analyze	BTL 4
16	Explain how can you manage compute node failures?	Analyze	BTL 4
17	What are the components of Hadoop framework	Evaluate	BTL 5
18	Judge why the partitions are shuffled in map reduce?	Evaluate	BTL 5
19	How will you formulate Hadoop development	Create	BTL 6
20	Who is generating big data and what are the ecosystem projects used for processing	Create	BTL 6



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Department of Computer Science and Engineering

Data Analytics(KCS-051) (2022-2023)

Assignment 4

Maximum Marks: 20

Submission Date:

COURSE OUTCOMES

By the end of the course, students will be able to:

CO No.	Description	Bloom's Level
C 305.1	To understand the need for machine learning for various problem solving	K1, K2
C 305.2	To understand a wide variety of learning algorithms and how to evaluate models generated from data	K1, K3
C 305.3	To understand the latest trends in machine learning	K2, K3
C 305.4	To design appropriate machine learning algorithms and apply the algorithms to a real-world problem	K4, K6
C 305.5	To optimize the models learned and report on the expected accuracy that can be achieved by applying the models	K4, K5

ATTEMPT ALL QUESTIONS each question carries equal marks

Q. No.	Question	CO
1.	Why do we need to mine frequent item datasets in input data. Explain	CO4
2.	Explain k- means clustering in detail	CO4
3.	Explain APRIORI algorithm with example.	CO4
4.	Write a short note on limited pass Algorithms?	CO4
5.	Compare CLIQUE & ProCLUS algo.	CO4



IMS Engineering College, Ghaziabad
3rd Year Examination Schedule for CT-1, Odd Semester (2023-24)

		Morning Exam Timing: 9:30 AM to 11:30 AM		Reporting: 9:10 AM
		Evening Exam Timing: 2:00 PM to 4:00 PM		Reporting: 1:40 PM
16.10.2023 (Evening)				
BRANCH	SUBJECT NAME	SUB CODE	BRANCH	SUB CODE
CSE	Database Management Systems	KCS-501	CSE	KCS-502
CS	Database Management Systems	KCS-501	CS	KCS-502
CSD	Database Management Systems	KCS-501	CSD	KCD-501
IT	Database Management Systems	KCS-501	IT	KIT-501
ECE	Integrated Circuits	KEC-501	ECE	KEC-502
ME	Heat and Mass Transfer	KME-501	ME	KME-502
BT	Genetic Engineering	KBT-501	BT	KBT-502
18.10.2023 (Evening)				
BRANCH	SUBJECT NAME	SUB CODE	BRANCH	SUB CODE
CSE	Design and Analysis of Algorithm	KCS-503	CSE	KCS-051 / KCS-054
CS	Design and Analysis of Algorithm	KCS-503	CS	KCS-051
CSD	Design and Analysis of Algorithm	KCS-503	CSD	KCS-051
IT	Design and Analysis of Algorithm	KCS-503	IT	KCS-054
ECE	Digital Signal Processing	KEC-503	ECE	KEC-051
ME	Industrial Engineering	KME-503	ME	KME-054
BT	Bioinformatics-I	KBT-503	BT	KBT-051
20.10.2023 (Morning)				
BRANCH	SUBJECT NAME	SUB CODE	BRANCH	SUB CODE
CSE	Machine Learning Techniques	KCS-055	CSE	KNC-502
CS	Applications of Soft Computing	KCS-056	CS	KNC-501
CSD	Software Engineering (KCD054)	KCD-054	CSD	KNC-501
IT	Applications of Soft Computing	KCS056	IT	KNC-502
ECE	Electronic Measurement & Instrumentation	KEC-057	ECE	KNC-501
ME	Advance Welding	KME-055	ME	KNC-501
BT	Biofuels and Alcohol Technology	KBT055	BT	KNC-501
20.10.2023 (Evening)				
BRANCH	SUBJECT NAME	SUB CODE	BRANCH	SUB CODE
CSE	Indian Tradition, Culture and Society	KCS-502	CSE	KCS-502
CS	Constitution of India, law and Engineering	KCS-501	CS	KCS-502
CSD	Constitution of India, law and Engineering	KCD-501	CSD	KCD-501
IT	Indian Tradition, Culture and Society	KCS056	IT	KIT-501
ECE	Constitution of India, law and Engineering	KEC-057	ECE	KEC-502
ME	Constitution of India, law and Engineering	KME-055	ME	KME-502
BT	Constitution of India, law and Engineering	KBT055	BT	KBT-502
17.10.2023 (Evening)				
BRANCH	SUBJECT NAME	SUB CODE	BRANCH	SUB CODE
CSE	Compiler Design	KCS-501	CSE	KCS-502
CS	Compiler Design	KCS-501	CS	KCS-502
CSD	Web Designing and Development	KCS-501	CSD	KCD-501
IT	Web Technology	KCS-501	IT	KIT-501
ECE	Microprocessor & Microcontroller	KEC-501	ECE	KEC-502
ME	Strength of Material	KME-501	ME	KME-502
BT	Fermentation Biotechnology	KBT-501	BT	KBT-502
19.10.2023 (Evening)				
BRANCH	SUBJECT NAME	SUB CODE	BRANCH	SUB CODE
CSE	Data Analytics / Object Oriented System Design	KCS-503	CSE	KCS-051 / KCS-054
CS	Data Analytics	KCS-503	CS	KCS-051
CSD	Data Analytics	KCS-503	CSD	KCS-051
IT	Object Oriented System Design	KCS-503	IT	KCS-054
ECE	Computer Architecture & Organization	KEC-503	ECE	KEC-051
ME	IC Engine Fuel and Lubrication	KME-503	ME	KME-054
BT	Pharmaceutical Biotechnology	KBT-503	BT	KBT-051

Dr. Vijay Kumar
(COE)
06/10/23

Controller of Examinations
IMS Engineering College
Ghaziabad



Roll No.																			
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IMS ENGINEERING COLLEGE
Department of Computer Science

CT-1

Course : B.Tech	AY 2023-24 (Odd Semester)
Semester : 5 TH	Date : 19.10.2023
Subject : Data Analytics	Subject Code : KCS 051
Time : 2 Hours	Max. Marks : 60

COURSE OUTCOMES (CO)		Bloom's Level
CO-1	Describe the life cycle phases of Data Analytics through discovery, planning and building.	K ₁ , K ₂
CO-2	Understand and apply Data Analysis Techniques.	K ₂ , K ₃
CO-3	Implement various Data streams.	K ₂
CO-4	Understand item sets, Clustering, framework, and visualizations.	K ₃
CO-5	Apply R tool for developing and evaluating real-time applications.	K ₃ , K ₅ , K ₆

Q. No.	Questions	CO	Bloom's Level
<u>PART- A: Attempt All Questions (5x2 = 10 Marks)</u>			
1 (a)	Differentiate between Analysis and reporting.	CO1	K4
1 (b)	Explain data analytics. Give some applications of data analytics.	CO1	K2
1 (c)	List various sources of data.	CO1	K1
1 (d)	Explain the difference between univariate and multivariate analysis.	CO2	K2
1 (e)	Describe the term Bayesian Network.	CO2	K2
<u>PART-B:</u>			
Attempt any four of the following Questions		(5x4 = 20 Marks)	
2 (a)	Explain the types of data analytics.	CO1	K2
2 (b)	Illustrate the various characteristics of data.	CO1	K3
2 (c)	Differentiate between structured, semi-structured, and unstructured data.	CO1	K4
2 (d)	Define Support Vector Machine (SVM). Also, discuss the functionality of the kernel.	CO2	K1
2 (e)	Write a short note on fuzzy Decision Tree.	CO2	K3
<u>PART-C:</u>			
3. Attempt any one part of the following Question		(10x1 = 10 Marks)	
3 (a)	Discuss the steps involved in the Data Analytics Process.	CO1	K2
3 (b)	Illustrate various modern data analytical tools. How are they different from traditional tools?	CO1	K3
4. Attempt any one part of the following Question		(10x1 = 10 Marks)	
4 (a)	Explain various models of time series analysis along with their application areas.	CO2	K2
4 (b)	Given data = {4,8,13,7; 11,4,5,14,}. Compute the principle component using PCA.	CO2	K2
5. Attempt any one part of the following Question		(10x1 = 10 Marks)	
5 (a)	Explain various phases of the data analytics life cycle.	CO1	K2
5 (b)	Write a short note on Regression analysis. Also, discuss its types with an appropriate example.	CO2	K3



Roll No.																			
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IMS ENGINEERING COLLEGE
Department of CS/CSE

CT-2

Course : B.Tech	AY 2023-24 (Odd Semester)
Semester : Vth	Date : 21/12/2023
Subject : DATA ANALYTICS	Subject Code : KCS051
Time : 2 Hours	Max. Marks : 60
	Shift : II

COURSE OUTCOMES (CO)		Bloom's Level
CO-1	Describe the life cycle phases of Data Analytics through discovery, planning and building.	K1,K2
CO-2	Understand and apply Data Analysis Techniques.	K2, K3
CO-3	Implement various Data streams.	K3
CO-4	Understand item sets, Clustering, frame works & Visualizations.	K2
CO-5	Apply R tool for developing and evaluating real time applications.	K3,K5,K6

Q. No.	Questions	CO	Bloom's Level
<u>PART- A: Attempt All Questions (5x2 = 10 Marks)</u>			
1 (a)	Give the full form of RTAP.	CO3	K3
1 (b)	Data sampling is very crucial for data analytics. Justify the statement.	CO3	K3
1 (c)	Explain the principle behind the Hierarchical clustering technique.	CO4	K2
1 (d)	Define Lift in Association Data Mining.	CO4	K2
1 (e)	Differentiate between Pig and SQL.	CO5	K3
<u>PART-B:</u>			
Attempt any four of the following Questions		(5x4 = 20 Marks)	
2 (a)	Explain the Datar-Gionis-Indyk-Motwani (DGIM) algorithm for counting oneness in a window.	CO3	K3
2 (b)	Why PCY algorithm is preferred over the Apriori algorithm?	CO4	K2
2 (c)	Explain CLIQUE and ProCLUS algorithms.	CO4	K2
2 (d)	How RDBS is different from HDFS?	CO5	K5
2 (e)	Describe the architecture of HIVE.	CO5	K3
<u>PART-C:</u>			
3. Attempt any one part of the following Question		(10x1 = 10 Marks)	
3 (a)	Describe Data Stream Management System architecture with its major components.	CO3	K3
3 (b)	Explain any one algorithm to count the number of distinct elements in a Data Stream.	CO3	K3
4. Attempt any one part of the following Question		(10x1 = 10 Marks)	
4 (a)	Cluster the following eight points (with (x, y) representing locations) into three clusters: A1(2, 10), A2(2, 5), A3(8, 4), A4(5, 8), A5(7, 5). A6(6, 4), A7(1, 2), A8(4, 9) Initial cluster centers are A1(2, 10), A4(5, 8) and A7(1, 2). The distance function between two points a = (x1, y1) and b= (x2, y2) is defined as $P(a,b) = x2 - x1 + y2 - y1 $ Use the K-Means Algorithm to find the three cluster centers after the second iteration.	CO4	K5



IMS ENGINEERING COLLEGE
Department of CS/CSE

	TID	ITEMS Bought	CO4	K2
4 (b)	10	Beer, Nuts, Diaper		
	20	Beer, Coffee, Diaper		
	30	Beer, Diaper, Eggs		
	40	Nuts, Eggs, Milk		
	50	Nuts, Coffee, Diaper, Eggs, Milk		
	Find all the Association rules from above-given Transaction with the given Minsup = 50%, Minconf= 50%			
5. Attempt any one part of the following Question			(10x1 = 10 Marks)	
5 (a)	Describe the architecture of Hadoop with its features.		CO5	K3
5 (b)	Brief about Pig's data model with examples.		CO5	K3



IMS Engineering College, Ghaziabad

INSTRUCTION

Set Target Percentage For "Ct", "University Exam","Assignment", "Feedback" in Fill details sheet

Write Maximum Marks For "University Exam","Assignment", "Feedback" in Fill details sheet

Fill CT1, CT2 Data-Use "A" for Absent, "D" for Detained and "UFM" for UFM.

Enter the "Name and Roll no" of the students in CT attainment sheet

Enter University Marks In "EE Attainment"

Fill Only Assignment Marks In " Fill Assignment Marks" Sheet

Fill Only Feedback Marks In "Fill Feedback Marks" Sheet

Fill CO-PO Mapping In "Attainment" Sheet

FILL THE FOLLOWING

Institute:	IMS Engineering College, Ghaziabad
Department:	Department of Computer Science and Engineering
Subject Name:	Big Data
Subject Code:	KCS 061
Semester (Odd/Even):	Even Semester
Semester No:	6th
Section:	3CSE3
Session:	2023-24
Faculty Name:	

Type	Target % of Marks	Maximum Marks	
CT	60	30	Fixed 60 % , Please Don't Change (Target)
University Exam	60	100	
ASSIGNMENT	60	20	Fixed 60 % , Please Don't Change (Target)
FEEDBACK	60	3	Fixed 60 % , Please Don't Change (Target)

CT1 DATE 18/4/2024

CT2 DATE 4/6/2024



IMS Engineering College, Ghaziabad

Subject Code:	KCS 061
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Subject Name : Big Data

6 CSE3

NBA CODE	Direct attainment			Course exit survey	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
	CT Attainment	Assign Attainment	External Attainment	Feedback Attainment														
CO1	3.00	3.00	#REF!	3.00	3	3	3	3	2	2	1	-	1	2	2	3	2	3
CO2	0	3.00	#REF!	3.00	3	2	2	2	3	2	-	-	1	2	2	3	2	3
CO3	1.00	3.00	#REF!	3.00	3	2	3	3	3	2	-	-	1	2	2	3	2	3
CO4	0	3.00	#REF!	3.00	3	2	2	3	3	2	-	-	1	3	1	3	2	3
CO5	0	3.00	#REF!	3.00	3	2	2	2	2	2	-	-	1	2	1	3	2	3
TARGET					3	2.2	2.4	2.6	2.6	2	0.2	-	1	2.2	1.6	3	2	3
Direct Attainment(CT+EE+AT)					#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#DIV/0!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Indirect Attainment (Feedback)					3.00	3.00	3.00	3.00	3.00	3.00	3.00	#DIV/0!	3.00	3.00	3.00	3.00	3.00	3.00
PO attainment new method Attainment (Direct-80% + Indirect-20%)					#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#DIV/0!	#REF!	#REF!	#REF!	#REF!	#REF!

Course Outcome Attainment:

	Direct Attainment (CT60%)+(AT10%)+(EE30%)	Indirect Attainment	Direct + Indirect (80% +20%)	Overall Course Attainment Level
CO1	#REF!	3	#REF!	
CO2	#REF!	3	#REF!	
CO3	#REF!	3	#REF!	
CO4	#REF!	3	#REF!	
CO5	#REF!	3	#REF!	

Average	#REF!	3.00	#REF!
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S.No.	Roll.No.	Name	PART A(ATTEMPT ALL) (5x2=10)					PART B (ATTEMPT (4x5=20)					PART C (Attempt any one (3x10=30)					TOTAL MARKS (60)	CO1 attempt	CO1 Marks obt.	CO2 attempt	CO2 Marks obt.	Attainment	
			1A	1B	1C	1D	1E	2(a)	2(b)	2(c)	2(d)	2(e)	3(a)	3(b)	4(a)	4(b)	5(a)							5(b)
			CO1	CO1	CO1	CO2	CO2	CO1	CO1	CO1	CO2	CO2	CO1	CO1	CO2	CO2	CO1							CO2
1	2101430100078	HARSH SINHA	2	2	2	0	1	4	5	0	0	9	8			8	41	31	24.0	29	17.0	60		
2	2101430100080	HARSHITA GUPTA	2	2	1	2	1	4	5	0	0	5	10	10	10		52	36	34.0	24	18.0	60		
3	2101430100083	HIMANSHU RAJPUT	2	2	1	2	2	5	5	4	5	9	10	10			57	36	34.0	24	23.0	60		
4	2101430100085	HIMANSHU TOMAR	2	2	2	1	1	5	5	0	4	10	5	10			47	41	36.0	19	11.0	60		
5	2101430100086	HRITIK RAINA															D	0	0.0	0	0.0	0		
6	2101430100087	ILMA KHAN	2	2	2	2	2	5	5	0	4	10		4		5	43	26	26.0	34	17.0	60		
7	2101430100088	INDRAJEET SINGH	2	2	1	2	2	5	5	4	4	10	8	10			55	41	39.0	19	16.0	60		
8	2101430100090	SHIKHA BHAGAT															D	0	0.0	0	0.0	0		
9	2101430100091	ISHU GAUR	2	1	2	0	1	5		4	0	5	8		0	0	28	36	22.0	24	6.0	60		
10	2101430100092	KASHISH BANSAL	2	2	2	0	2	4	5	5	5	9	9	10			55	26	24.0	34	31.0	60		
11	2101430100095	KUSH AGARWAL	2	1	2	0	1	4	5	0	0	8	4	0			27	36	22.0	24	5.0	60		
12	2101430100099	MANISH KUMAR															D	0	0.0	0	0.0	0		
13	2101430100100	MANSI TYAGI															D	0	0.0	0	0.0	0		
14	2101430100101	MEGHA	2	2	2	2	2	5	5	5	5	10	9		10	59	31	31.0	29	28.0	60			
15	2101430100102	MIRZA YUNUS BEG															D	0	0.0	0	0.0	0		
16	2101430100103	MOHD. ADNAN	0	2	2	0	1	3	5		3	0	9		4	8	37	26	21.0	34	16.0	60		
17	2101430100104	MOHD ARSLAAN															D	0	0.0	0	0.0	0		
18	2101430100105	MOHD MUHIUDDIN	0	0	0	0	0	5	5	0	0	9	0	8			27	41	27.0	19	0.0	60		
19	2101430100107	MOHD MURTAZA KHAN	2	1	2	0	2	5	5	4	4	8	8	8			49	36	31.0	24	18.0	60		
20	2101430100108	MOHD NAZIM RASALAT	2	2	2	0	2	5	4	0	0	5	8	7	0		37	36	23.0	24	14.0	60		
21	2101430100109	MOHD SAIF KHAN	1	2	1	0	1	3	5	3	0	8	4	0			28	41	23.0	19	5.0	60		
22	2101430100110	MIRDUL KHANDELWAL															D	0	0.0	0	0.0	0		
23	2101430100111	MIRINAL KUMAR	1	1	0	1	2	3	4	5	0	9	2	0			28	41	23.0	19	5.0	60		
24	2101430100112	MUSKAN GUPTA	2	2	2	2	0	5	4	5	5	9	10	8			54	36	32.0	24	22.0	60		
25	2101430100113	NAKUL SINGH	2	2	1	0	2	5	5	1		4	8	7	0		37	31	24.0	29	13.0	60		
26	2101430100114	NAMAN MISHRA	2	1	2	0	2	4	4		3	5	9	9	8		49	26	22.0	34	27.0	60		
27	2101430100116	NEHA ZABI															D	0	0.0	0	0.0	0		
28	2101430100117	NIRMAL SINGH GILL	0	2	2	0	0	0	4	0		0	10	10	0		28	41	18.0	19	10.0	60		
29	2101430100118	NISHANT LOHANI	2	2	1	0	0	5	5	4	4	9	8		7		47	31	28.0	29	19.0	60		
30	2101430100119	NISHANT TYAGI	2	2	2	0	1	5	5	0	0	9	5	0			31	31	25.0	29	6.0	60		
31	2101430100120	NISHKA															D	0	0.0	0	0.0	0		
32	2101430100122	OMY BEDAR	1	1	1	0	2	4	0	4	4	9	9				44	26	16.0	34	28.0	60		
33	2101430100123	PARI SINGH	2	2	2	2	2	4	5	5	5	10		10	9		58	31	30.0	29	28.0	60		
34	2101430100125	PIYUSH SINGH	0	2	2	0	0	4	5	0	0	9	5	0			27	41	22.0	19	5.0	60		
35	2101430100127	PRAKSHAL JAIN	1	2	2	0	0	5	0	5	4	9	8		0		36	26	19.0	34	17.0	60		
36	2101430100128	PRASHANT PANDEY	2	2	1	2	2	0	0	0	4	8		0	8		29	31	13.0	29	16.0	60		
37	2101430100130	PRATEEKSHIT JAISWAL	2	0	2	0	0	5	5	4		5	8	9	8		48	31	26.0	29	22.0	60		
38	2101430100131	PRATHMESH JAIN															D	0	0.0	0	0.0	0		
39	2101430100132	PRATYUSH GIRI	0	0	0	0	0	0	0	0		0	1	0	0		1	41	1.0	19	0.0	60		
40	2101430100133	PRATYUSH SINGH SONIK															D	0	0.0	0	0.0	0		
41	2101430100135	PRINCE SHARMA															A	0	0.0	0	0.0	0		
42	2101430100136	PRIYANG SAGAR															D	0	0.0	0	0.0	0		
43	2201430109001	APARNA MISHRA	2	0	0	0	0	4	4		5	0	9	8	8		40	26	19.0	34	21.0	60		
44	2201430109002	APARNA MISHRA															D	0	0.0	0	0.0	0		
45	2201430109005	KSHAMA RAI	2	2	1	0	1	5	5	0	4	10	8	1			39	41	26.0	19	13.0	60		
46	2201430109006	NIHIL KUMAR	2	1	1	0	2	5	5	0	0	5	10	10		5	46	26	24.0	34	22.0	60		
47	2201430109008	NISHANT	0	0	0	0	0	5	5	4	0	8	9		2		33	26	18.0	34	15.0	60		
48	2201430109009	PRADEEP KUMAR	2	2	2	0	2	4	5	4		5	9	5	3		43	31	28.0	29	15.0	60		
49	2201430109011	PRINCE	2	1	1	0	0	4	4	4	3	8	7	0			34	41	24.0	19	10.0	60		
50	2201430109012	SACHIN KUMAR YADAV	0	0	0	1	2	0	5	0	4	8	3	9			32	41	22.0	19	10.0	60		
51	2201430109013	SANSKAR BHARDWAJ	0	1	1	0	2	0	5	0	4	8	8		3		32	31	15.0	29	17.0	60		
52	2201430109017	SHBUHAM SINGH	2	2	2	2	2	5	0	0	0	8	8	0			31	36	19.0	24	12.0	60		
53	2001430100030	AKASH KUMAR KUSHWAHA	2	1	0	0	2	4	5	0	1	7	0	0			22	41	19.0	19	3.0	60		



IMS Engineering College, Ghaziabad

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

EVEN SEMESTER 2023-2024

III YR (6TH SEMESTER)

CT2 ANALYSIS

S.No.	Roll.No.	Name	PART A(ATTEMPT ALL)					PART B (ATTEMPT)					PART C (Attempt any one)					TOTAL MARKS (60)	CO3 attempt	CO3 Marks obt.	CO4 attempt	CO4 Marks obt.	CO5 attempt	CO5 Marks obt.	Attainment (60)	
			(5x2=10)					(4x5=20)					(3x10=30)													
			1a	1b	1c	1d	1e	2(a)	2(b)	2(c)	2(d)	2(e)	3(a)	3(b)	4(a)	4(b)	5(a)									5(b)
			CO3	CO3	CO4	CO4	CO5	CO3	CO4	CO4	CO5	CO5	CO3	CO3	CO4	CO4	CO5									CO5
1	2101430100078	HARSH SINHA															A	0	0	0	0	0	0	0	0	
2	2101430100080	HARSHITA GUPTA	2	1	2	2	2	3	5		4	4	10			10	10	55	19	16	19	19	22	20	60	
3	2101430100083	HIMANSHU RAJPUT	2	2	2	2	1	5	5	5	4			10		10	7	55	19	19	24	24	17	12	60	
4	2101430100085	HIMANSHU TOMAR	2	0	0	2	0	0	0	0	2		10		6		0	22	19	12	24	8	17	2	60	
5	2101430100086	HRITIK RAINA																A	0	0	0	0	0	0	0	
6	2101430100087	ILMA KHAN	2	1	2	1	0	0	0	2	0		6		7	10	31	19	9	24	12	17	10	60		
7	2101430100088	INDRAJEET SINGH	2	2	1	2	2	4	5		5	3	4		4	7	41	19	12	19	12	22	17	60		
8	2101430100090	ISHIKA BHAGAT	0	0	0	0	0	3	0	0	0		3		0	6	12	19	6	24	0	17	6	60		
9	2101430100091	ISHU GAUR	0	0	0	0	0	2	0	0	0			6		0	3	11	19	8	24	0	17	3	60	
10	2101430100093	KASHISH BANSAL	2	0	2	2	0	4	4	5	5		10			8	6	48	19	16	24	21	17	11	60	
11	2101430100095	KUSH AGARWAL	1	1	0	0	0	0	2	0	3			6		1	0	14	19	8	24	3	17	3	60	
12	2101430100099	MANISH KUMAR	2	0	0	0	1		0	0	0	2	4		1		12	14	6	24	1	22	5	60		
13	2101430100100	MANSI TYAGI	1	0	2	2	2		4	4	3	4		9		7	2	40	14	10	24	19	22	11	60	
14	2101430100101	MEGHA .	2	2	1	2	2	5	5		4	5	10			10	10	58	19	19	19	18	22	21	60	
15	2101430100102	MIRZA YUNUS BEG	2	0	0	0	1	0	3	0	3		8		4		3	24	19	10	24	7	17	7	60	
16	2101430100103	MOHD. ADNAN	0	0	0	0	0	0		0	0	4		3	3		4	14	19	3	19	3	22	8	60	
17	2101430100104	MOHD ARSLAAN	2	0	1	0	1	5	3	0	5		8		6		7	38	19	15	24	10	17	13	60	
18	2101430100105	MOHD MUHIUDDIN	2	2	0	0	0		0	0	0	1		0		0	2	7	14	4	24	0	22	3	60	
19	2101430100107	MOHD MURTAZA KHAN	2	2	1	2	2	5	3	4	5		8		7		8	49	19	17	24	17	17	15	60	
20	2101430100108	MOHD NAZIM RASALAT	2	0	0	2	0	5	0	0	4		8		9	3	33	19	15	24	11	17	7	60		
21	2101430100109	MOHD SAIF KHAN	2	1	1	1	0	0	1		4	0	2		0	0	12	19	5	19	3	22	4	60		
22	2101430100110	MRIDUL KHANDLWAL	1	0	0	0	0	5	0		0	0	8		9	0	23	19	14	19	9	22	0	60		
23	2101430100111	MRINAL KUMAR	2	0	2	0	1		0	0	2	0	5		0		12	14	7	24	2	22	3	60		
24	2101430100112	MUSKAN GUPTA	2	2	2	1	1		5	5	5	2	6			10	10	51	14	10	24	23	22	18	60	
25	2101430100113	NAKUL SINGH	2	2	0	0	0	5	0	0	0		7		8	6	30	19	16	24	8	17	6	60		
26	2101430100114	NAMAN MISHRA	2	2	2	0	0	5	4	4	4		8		8	7	46	19	17	24	18	17	11	60		
27	2101430100116	NEHA ZABI	2	0	1	2	1		0	0	3	3		10		2	5	29	14	12	24	5	22	12	60	
28	2101430100117	NIRMAL SINGH GILL	0	0	0	0	0		0	0	0	0		0	6		6	12	14	0	24	6	22	6	60	
29	2101430100118	NISHANT LOHANI	1	0	0	0	0	3	0		3	0	3			5	2	17	19	7	19	5	22	5	60	
30	2101430100119	NISHANT TYAGI	2	0	1	2	0	3	4	0	4			10		9	10	45	19	15	24	16	17	14	60	
31	2101430100120	NISHIKA .	2	2	2	2	2		3	4	5	4		10	7		7	50	14	14	24	18	22	18	60	
32	2101430100122	OM BEDAR	1	0	1	2	0	2	2		4	0	4		1		8	25	19	7	19	6	22	12	60	
33	2101430100123	PARI SINGH	2	2	2	2	2	5	4	5	5		10			10	9	58	19	19	24	23	17	16	60	
34	2101430100125	PIYUSH SINGH	2	1	2	2	2	4		0	0	0	8			9	2	32	19	15	19	13	22	4	60	
35	2101430100127	PRAKSHAL JAIN	0	0	0	0	0	0		4	4	3		6	7		7	31	19	6	19	11	22	14	60	
36	2101430100128	PRASHANT PANDEY																UFM	0	0	0	0	0	0	0	
37	2101430100130	PRATEEKSHIT JAISWAL	2	1	1	0	1	4	4		4	3	7		5		2	34	19	14	19	10	22	10	60	
38	2101430100131	PRATHMESH JAIN	2	2	2	2	1	0	2	3	5		4		7	7	37	19	8	24	16	17	13	60		
39	2101430100132	PRATYUSH GIRI	1	0	0	0	0		0	0	0	0		0	0		0	1	14	1	24	0	22	0	60	
40	2101430100133	PRATYUSH SINGH SONIK	1	0	0	1	0	4	0	0		0	4		2		5	17	19	9	24	3	17	5	60	
41	2101430100135	PRINCE SHARMA	0	0	1	2	1	3	0	3	5		6			7	9	37	19	9	24	13	17	15	60	
42	2101430100136	PRIYANG SAGAR	2	0	0	0	0	4		0	0	0		7		0	0	13	19	13	19	0	22	0	60	
43	2201430109001	AMAN SHARMA	0	0	0	0	2	3	3		4	0	7			4	7	30	19	10	19	7	22	13	60	
44	2201430109002	APARNA MISHRA	2	0	0	0	0	5	2		4	1	6		0		3	23	19	13	19	2	22	8	60	
45	2201430109005	KSHAMA RAI	1	2	1	1	1	5	3		5	3	8			8	10	48	19	16	19	13	22	19	60	
46	2201430109006	NIKHIL KUMAR	2	0	1	0	1	5	1	0	5			8		10	7	40	19	15	24	12	17	13	60	
47	2201430109008	NISHANT	0	0	0	0	0		4	2	0	2		0		0	1	9	14	0	24	6	22	3	60	
48	2201430109009	PRADEEP KUMAR	2	1	1	2	0	5	4	1	4		8			10	8	46	19	16	24	18	17	12	60	
49	2201430109011	PRINCE	1	0	0	1	1	2	5	4	4		7		2		7	34	19	10	24	12	17	12	60	
50	2201430109012	SACHIN KUMAR YADAV	1	2	1	0	1		4	0	4	4		10	5		8	40	14	13	24	10	22	17	60	
51	2201430109013	SANSKAR BHARDWAJ	2	0	0	0	0		0	0	4	3	6			7		28	14	8	24	7	22	13	60	
52	2201430109017	SHBUHAM SINGH	2	2	2	0	2		1	0	4	0		7		8	6	34	14	11	24	11	22	12	60	
53	2001430100030	AKASH KUMAR KUSHWAHA	2	0	1	0	1	5	3	3	5		5			10	6	41	19	12	24	17	17	12	60	



S. No.	University roll No.	Student Name	CT1				CT2					
			CO1>=	60	CO2>=	60	CO3>=	60	CO4>=	60	CO5>=	60
			%age	attainment	%age	attainment	%age	attainment	%age	attainment	%age	attainment
1	2101430100078	HARSH SINHA	77.42	Y	58.62	N	NA	NA	NA	NA	NA	NA
2	2101430100080	HARSHITA GUPTA	94.44	Y	75.00	Y	84.21	Y	100.00	Y	90.91	Y
3	2101430100083	HIMANSHU RAJPUT	94.44	Y	95.83	Y	100.00	Y	100.00	Y	70.59	Y
4	2101430100085	HIMANSHU TOMAR	87.80	Y	57.89	N	63.16	Y	33.33	N	11.76	N
5	2101430100086	HRIITIK RAINA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6	2101430100087	ILMA KHAN	100.00	Y	50.00	N	47.37	N	50.00	N	58.82	N
7	2101430100088	INDRAJEET SINGH	95.12	Y	84.21	Y	63.16	Y	63.16	Y	77.27	Y
8	2101430100090	ISHIKA BHAGAT	NA	NA	NA	NA	31.58	N	0.00	NA	35.29	N
9	2101430100091	ISHU GAUR	61.11	Y	25.00	N	42.11	N	0.00	NA	17.65	N
10	2101430100093	KASHISH BANSAL	92.31	Y	91.18	Y	84.21	Y	87.50	Y	64.71	Y
11	2101430100095	KUSH AGARWAL	61.11	Y	20.83	N	42.11	N	12.50	N	17.65	N
12	2101430100099	MANISH KUMAR	NA	NA	NA	NA	42.86	N	4.17	N	22.73	N
13	2101430100100	MANSI TYAGI	NA	NA	NA	NA	71.43	Y	79.17	Y	50.00	N
14	2101430100101	MEGHA	100.00	Y	96.55	Y	100.00	Y	94.74	Y	95.45	Y
15	2101430100102	MIRZA YUNUS BEG	NA	NA	NA	NA	52.63	N	29.17	N	41.18	N
16	2101430100103	MOHD. ADNAN	80.77	Y	47.06	N	15.79	N	15.79	N	36.36	N
17	2101430100104	MOHD ARSLAAN	NA	NA	NA	NA	78.95	Y	41.67	N	76.47	Y
18	2101430100105	MOHD MUHIUDDIN	65.85	Y	0.00	N	28.57	N	0.00	NA	13.64	N
19	2101430100107	MOHD MURTAZA KHAN	86.11	Y	75.00	Y	89.47	Y	70.83	Y	88.24	Y
20	2101430100108	MOHD NAZIM RASALAT	63.89	Y	58.33	N	78.95	Y	45.83	N	41.18	N
21	2101430100109	MOHD SAIF KHAN	56.10	N	26.32	N	26.32	N	15.79	N	18.18	N
22	2101430100110	MRIDUL KHANDELWAL	NA	NA	NA	NA	73.68	Y	47.37	N	0.00	NA
23	2101430100111	MRINAL KUMAR	56.10	N	26.32	N	50.00	N	8.33	N	13.64	N
24	2101430100112	MUSKAN GUPTA	88.89	Y	91.67	Y	71.43	Y	95.83	Y	81.82	Y
25	2101430100113	NAKUL SINGH	77.42	Y	44.83	N	84.21	Y	33.33	N	35.29	N
26	2101430100114	NAMAN MISHRA	84.62	Y	79.41	Y	89.47	Y	75.00	Y	64.71	Y
27	2101430100116	NEHA ZABI	NA	NA	NA	NA	85.71	Y	20.83	N	54.55	N
28	2101430100117	NIRMAL SINGH GILL	43.90	N	52.63	N	0.00	NA	25.00	N	27.27	N
29	2101430100118	NISHANT LOHANI	90.32	Y	65.52	Y	36.84	N	26.32	N	22.73	N
30	2101430100119	NISHANT TYAGI	80.65	Y	20.69	N	78.95	Y	66.67	Y	82.35	Y
31	2101430100120	NISHIKA .	NA	NA	NA	NA	100.00	Y	75.00	Y	81.82	Y
32	2101430100122	OM BEDAR	61.54	Y	82.35	Y	36.84	N	31.58	N	54.55	N
33	2101430100123	PARI SINGH	96.77	Y	96.55	Y	100.00	Y	95.83	Y	94.12	Y
34	2101430100125	PIYUSH SINGH	53.66	N	26.32	N	78.95	Y	68.42	Y	18.18	N
35	2101430100127	PRAKSHAL JAIN	73.08	Y	50.00	N	31.58	N	57.89	N	63.64	Y
36	2101430100128	PRASHANT PANDEY	41.94	N	55.17	N	NA	NA	NA	NA	NA	NA
37	2101430100130	PRATEEKSHIT JAISWAL	83.87	Y	75.86	Y	73.68	Y	53.63	N	45.45	Y
38	2101430100131	PRATHMESH JAINI	NA	NA	NA	NA	42.11	N	66.67	Y	76.47	Y
39	2101430100132	PRATYUSH GIRI	2.44	N	0.00	N	7.14	N	0.00	NA	0.00	NA
40	2101430100133	PRATYUSH SINGH SONIK	NA	NA	NA	NA	47.37	N	12.50	N	29.41	N
41	2101430100135	PRINCE SHARMA	NA	NA	NA	NA	47.37	N	54.17	N	88.24	Y
42	2101430100136	PRIYANG SAGAR	NA	NA	NA	NA	68.42	Y	0.00	NA	0.00	NA
43	2201430109001	AMAN SHARMA	73.08	Y	61.76	Y	52.63	N	36.84	N	59.09	N
44	2201430109002	APARNA MISHRA	NA	NA	NA	NA	68.42	Y	10.53	N	36.36	N
45	2201430109005	KSHAMA RAI	63.41	Y	68.42	Y	84.21	Y	68.42	Y	86.36	Y
46	2201430109006	NIKHIL KUMAR	92.31	Y	64.71	Y	78.95	Y	50.00	N	76.47	Y
47	2201430109008	NISHANT	69.23	Y	44.12	N	0.00	NA	25.00	N	13.64	N
48	2201430109009	PRADEEP KUMAR	90.32	Y	51.72	N	84.21	Y	75.00	Y	70.59	Y
49	2201430109011	PRINCE	58.54	N	52.63	N	52.63	N	50.00	N	70.59	Y
50	2201430109012	SACHIN KUMAR YADAV	53.66	N	52.63	N	92.86	Y	41.67	N	77.27	Y
51	2201430109013	SANSKAR BHARDWAJ	48.39	N	58.62	N	57.14	N	29.17	N	59.09	N
52	2201430109017	SHUBHAM SINGH	52.78	N	50.00	N	78.57	Y	45.83	N	54.55	N
53	2001430100030	AKASH KUMAR KUSHWAHA	46.34	N	15.79	N	63.16	Y	70.83	Y	70.59	Y
54	2101430100204	YASHIKA PANDEY	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
55	2101430100208	YOGESH KUMAR	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Absent/ Detained			Y (Attained)	28.00	15.00	22.00	20.00	28.00	17.00	26.00	21.00	26.00
			N (Not Attained)	11.00	22.00	22.00	20.00	28.00	17.00	26.00	21.00	26.00
			NA	14.00	16.00	16.00	16.00	5.00	8.00	8.00	6.00	6.00
			Percentage of students achieved set target level	71.79	40.54	40.54	58.33	37.78	37.78	44.68	44.68	44.68
			CO Attainment Level	3	0	1	0	0	0	0	0	0

CO1

CO2

CO3

CO4

CO5

Fill the average attainment level of each CO

CO's	Average attainment level
CO1	3.00
CO2	0
CO3	1.00
CO4	0
CO5	0



IMS Engineering College, Ghaziabad

S.NO	UNIVERSITY ROLL NO	STUDENT NAME	CO1		CO2		CO3		CO4		CO5	
			Assignment	60	Assignment	60	Assignment	60	Assignment	60	Assignment	60
			MM	12	MM	12	MM	12	MM	12	MM	12
			20		20		20		20		20	
1	2101430100078	HARSH SINHA	18	Y	20	Y	20	Y	20	Y	20	Y
2	2101430100080	HARSHITA GUPTA	12	Y	17	Y	20	Y	20	Y	20	Y
3	2101430100083	HIMANSHU RAJPUT	20	Y	20	Y	20	Y	20	Y	20	Y
4	2101430100085	HIMANSHU TOMAR	12	Y	19	Y	20	Y	20	Y	20	Y
5	2101430100086	HRITIK RAINA	19	Y	16	Y	20	Y	19	Y	20	Y
6	2101430100087	ILMA KHAN	12	Y	18	Y	20	Y	20	Y	20	Y
7	2101430100088	INDRAJEET SINGH	18	Y	20	Y	20	Y	20	Y	20	Y
8	2101430100090	ISHIKA BHAGAT	20	Y	19	Y	17	Y	18	Y	19	Y
9	2101430100091	ISHU GAUR	20	Y	19	Y	20	Y	20	Y	20	Y
10	2101430100093	KASHISH BANSAL	20	Y	20	Y	20	Y	20	Y	20	Y
11	2101430100095	KUSH AGARWAL	17	Y	16	Y	20	Y	17	Y	18	Y
12	2101430100099	MANISH KUMAR	12	Y	17	Y	20	Y	19	Y	20	Y
13	2101430100100	MANSI TYAGI	20	Y	20	Y	20	Y	20	Y	20	Y
14	2101430100101	MEGHA .	20	Y	20	Y	20	Y	20	Y	20	Y
15	2101430100102	MIRZA YUNUS BEG	20	Y	19	Y	19	Y	20	Y	19	Y
16	2101430100103	MOHD. ADNAN	12	Y	20	Y	20	Y	19	Y	20	Y
17	2101430100104	MOHD ARSLAAN	20	Y	17	Y	17	Y	20	Y	20	Y
18	2101430100105	MOHD MUHIUDDIN	20	Y	20	Y	20	Y	20	Y	19	Y
19	2101430100107	MOHD MURTAZA KHAN	12	Y	12	Y	12	Y	12	Y	12	Y
20	2101430100108	MOHD NAZIM RASALAT	20	Y	18	Y	20	Y	19	Y	19	Y
21	2101430100109	MOHD SAIF KHAN	20	Y	18	Y	20	Y	20	Y	20	Y
22	2101430100110	MRIDUL KHANDELWAL	18	Y	19	Y	20	Y	20	Y	20	Y
23	2101430100111	MRINAL KUMAR	12	Y	19	Y	20	Y	20	Y	20	Y
24	2101430100112	MUSKAN GUPTA	12	Y	20	Y	20	Y	18	Y	20	Y
25	2101430100113	NAKUL SINGH	20	Y	19	Y	18	Y	20	Y	20	Y
26	2101430100114	NAMAN MISHRA	20	Y	20	Y	20	Y	20	Y	20	Y
27	2101430100116	NEHA ZABI	20	Y	19	Y	20	Y	19	Y	20	Y
28	2101430100117	NIRMAL SINGH GILL	19	Y	20	Y	20	Y	20	Y	20	Y
29	2101430100118	NISHANT LOHANI	18	Y	19	Y	20	Y	20	Y	20	Y
30	2101430100119	NISHANT TYAGI	20	Y	20	Y	20	Y	20	Y	20	Y
31	2101430100120	NISHIKA .	20	Y	20	Y	20	Y	20	Y	20	Y
32	2101430100122	OM BEDAR	18	Y	18	Y	18	Y	18	Y	18	Y
33	2101430100123	PARI SINGH	20	Y	20	Y	20	Y	20	Y	20	Y
34	2101430100125	PIYUSH SINGH	20	Y	20	Y	20	Y	19	Y	20	Y
35	2101430100127	PRAKSHAL JAIN	17	Y	17	Y	20	Y	19	Y	20	Y
36	2101430100128	PRASHANT PANDEY	12	Y	19	Y	20	Y	18	Y	14	Y
37	2101430100130	PRATEEKSHIT JAISWAL	18	Y	19	Y	20	Y	19	Y	20	Y
38	2101430100131	PRATHMESH JAIN	14	Y	16	Y	20	Y	20	Y	20	Y
39	2101430100132	PRATYUSH GIRI	18	Y	18	Y	20	Y	19	Y	18	Y
40	2101430100133	PRATYUSH SINGH SONIK	18	Y	18	Y	20	Y	19	Y	19	Y
41	2101430100135	PRINCE SHARMA	20	Y	19	Y	19	Y	20	Y	20	Y
42	2101430100136	PRIYANG SAGAR	18	Y	18	Y	18	Y	20	Y	18	Y
43	2201430109001	AMAN SHARMA	18	Y	19	Y	20	Y	19	Y	20	Y
44	2201430109002	APARNA MISHRA	20	Y	18	Y	20	Y	20	Y	19	Y
45	2201430109005	KSHAMA RAI	20	Y	20	Y	20	Y	20	Y	20	Y
46	2201430109006	NIKHIL KUMAR	18	Y	20	Y	20	Y	20	Y	20	Y
47	2201430109008	NISHANT	20	Y	20	Y	19	Y	19	Y	20	Y
48	2201430109009	PRADEEP KUMAR	19	Y	20	Y	20	Y	20	Y	20	Y
49	2201430109011	PRINCE	19	Y	18	Y	20	Y	20	Y	19	Y
50	2201430109012	SACHIN KUMAR YADAV	20	Y	20	Y	20	Y	20	Y	20	Y
51	2201430109013	SANSKAR BHARDWAJ	18	Y	20	Y	20	Y	20	Y	20	Y
52	2201430109017	SHBUHAM SINGH	12	Y	20	Y	20	Y	20	Y	20	Y
53	2001430100030	AKASH KUMAR KUSHWAHA	20	Y	17	Y	20	Y	20	Y	18	Y
		Y (Attained)		53		53		53		53		53
		N (Not Attained)		0		0		0		0		0
		NA		0		0		0		0		0
		No of students		53		53		53		53		53
		Percentage of students achieved set target level		100.00		100.00		100.00		100.00		100.00
		CO Attainment Level		3		3		3		3		3

Fill the average attainment level of each CO

CO's	Average attainment level
CO1	3
CO2	3
CO3	3
CO4	3
CO5	3



IMS Engineering College, Ghaziabad

S.NO	UNIVERSITY ROLL NO	STUDENT NAME/Email id	CO1		CO2		CO3		CO4		CO5	
			CO1	60	CO2	60	CO3	60	CO4	60	CO5	60
			MM	1.8	MM	1.8	MM	1.8	MM	1.8	MM	1.8
			3		3		3		3		3	
1	2101430100078	HARSH SINHA	3	Y	3	Y	3	Y	3	Y	3	Y
2	2101430100080	HARSHITA GUPTA	3	Y	3	Y	3	Y	3	Y	3	Y
3	2101430100083	HIMANSHU RAJPUT	3	Y	3	Y	3	Y	3	Y	3	Y
4	2101430100085	HIMANSHU TOMAR	2	Y	1	N	1	N	2	Y	2	Y
5	2101430100086	HRITIK RAINA	3	Y	3	Y	3	Y	3	Y	3	Y
6	2101430100087	ILMA KHAN	3	Y	3	Y	2	Y	2	Y	3	Y
7	2101430100088	INDRAJEET SINGH	3	Y	3	Y	3	Y	3	Y	3	Y
8	2101430100090	ISHIKA BHAGAT	1	N	1	N	1	N	1	N	1	N
9	2101430100091	ISHU GAUR	3	Y	3	Y	3	Y	3	Y	3	Y
10	2101430100093	KASHISH BANSAL	3	Y	3	Y	3	Y	3	Y	3	Y
11	2101430100095	KUSH AGARWAL	2	Y	2	Y	2	Y	2	Y	2	Y
12	2101430100099	MANISH KUMAR	3	Y	3	Y	3	Y	3	Y	3	Y
13	2101430100100	MANSI TYAGI	1	N	1	N	1	N	1	N	1	N
14	2101430100101	MEGHA .	2	Y	3	Y	3	Y	3	Y	3	Y
15	2101430100102	MIRZA YUNUS BEG	2	Y	3	Y	3	Y	2	Y	2	Y
16	2101430100103	MOHD. ADNAN	0	NA	0	NA	0	NA	0	NA	0	NA
17	2101430100104	MOHD ARSLAAN	3	Y	3	Y	3	Y	3	Y	3	Y
18	2101430100105	MOHD MUHIUDDIN	3	Y	3	Y	3	Y	3	Y	3	Y
19	2101430100107	MOHD MURTAZA KHAN	2	Y	3	Y	2	Y	2	Y	2	Y
20	2101430100108	MOHD NAZIM RASALAT	3	Y	3	Y	3	Y	3	Y	2	Y
21	2101430100109	MOHD SAIF KHAN	2	Y	2	Y	2	Y	2	Y	2	Y
22	2101430100110	MRIDUL KHANDELWAL	2	Y	2	Y	2	Y	2	Y	2	Y
23	2101430100111	MRINAL KUMAR	2	Y	2	Y	2	Y	2	Y	2	Y
24	2101430100112	MUSKAN GUPTA	3	Y	3	Y	3	Y	3	Y	3	Y
25	2101430100113	NAKUL SINGH	3	Y	3	Y	3	Y	3	Y	3	Y
26	2101430100114	NAMAN MISHRA	2	Y	2	Y	2	Y	2	Y	2	Y
27	2101430100116	NEHA ZABI	3	Y	2	Y	2	Y	2	Y	2	Y
28	2101430100117	NIRMAL SINGH GILL	2	Y	2	Y	2	Y	2	Y	2	Y
29	2101430100118	NISHANT LOHANI	2	Y	2	Y	2	Y	2	Y	2	Y
30	2101430100119	NISHANT TYAGI	3	Y	3	Y	3	Y	3	Y	3	Y
31	2101430100120	NISHIKA .	2	Y	2	Y	2	Y	2	Y	2	Y
32	2101430100122	OM BEDAR	0	NA	0	NA	0	NA	1	N	1	N
33	2101430100123	PARI SINGH	3	Y	3	Y	3	Y	3	Y	3	Y
34	2101430100125	PIYUSH SINGH	3	Y	3	Y	3	Y	3	Y	3	Y
35	2101430100127	PRAKSHAL JAIN	2	Y	2	Y	2	Y	2	Y	2	Y
36	2101430100128	PRASHANT PANDEY	3	Y	3	Y	3	Y	3	Y	3	Y
37	2101430100130	PRATEEKSHIT JAISWAL	3	Y	3	Y	3	Y	3	Y	3	Y
38	2101430100131	PRATHMESH JAIN	2	Y	1	N	1	N	2	Y	1	N
39	2101430100132	PRATYUSH GIRI	3	Y	3	Y	3	Y	3	Y	3	Y
40	2101430100133	PRATYUSH SINGH SONIK	3	Y	3	Y	3	Y	3	Y	3	Y
41	2101430100135	PRINCE SHARMA	2	Y	2	Y	2	Y	2	Y	2	Y
42	2101430100136	PRIYANG SAGAR	2	Y	2	Y	2	Y	2	Y	2	Y
43	2201430109001	AMAN SHARMA	2	Y	2	Y	3	Y	3	Y	2	Y
44	2201430109002	APARNA MISHRA	3	Y	3	Y	3	Y	3	Y	3	Y
45	2201430109005	KSHAMA RAI	2	Y	2	Y	3	Y	3	Y	3	Y
46	2201430109006	NIKHIL KUMAR	2	Y	3	Y	3	Y	3	Y	2	Y
47	2201430109008	NISHANT	2	Y	2	Y	2	Y	2	Y	2	Y
48	2201430109009	PRADEEP KUMAR	2	Y	2	Y	2	Y	2	Y	2	Y
49	2201430109011	PRINCE	2	Y	2	Y	2	Y	2	Y	2	Y
50	2201430109012	SACHIN KUMAR YADAV	3	Y	3	Y	3	Y	3	Y	3	Y
51	2201430109013	SANSKAR BHARDWAJ	3	Y	3	Y	3	Y	3	Y	3	Y
52	2201430109017	SHBUHAM SINGH	2	Y	2	Y	2	Y	2	Y	2	Y
53	2001430100030	AKASH KUMAR KUSHWAH	3	Y	3	Y	3	Y	3	Y	3	Y
Y (Attained)				49		47		47		49		48
N (Not Attained)				2		4		4		3		4
Total students				55		55		55		55		55
Percentage of students achieved set target level				89.09		85.45		85.45		89.09		87.27
CO Attainment Level				3		3		3		3		3

Please fill the marks from response sheet corresponding to CO's only as per your course exit survey shared by you in your section

Fill the average attainment level of each CO

CO's	Average attainment level
CO1	3
CO2	3
CO3	3
CO4	3
CO5	3

Department of Computer Science and Engineering

Department of Computer Science and Engineering				
Faculty Name:		Ms Meenu Sharma		
Subject Name:		Big Data	Subject Code:	KCS 061
Year/ Semester:		6th	Section:	3CSE3
SN	Roll No.	Student Name	CT1 (60)	CT2 (60)
1	2101430100078	HARSH SINHA	41	A
2	2101430100080	HARSHITA GUPTA	52	55
3	2101430100083	HIMANSHU RAJPUT	57	55
4	2101430100085	HIMANSHU TOMAR	47	22
5	2101430100086	HRITIK RAINA	D	A
6	2101430100087	ILMA KHAN	43	31
7	2101430100088	INDRAJEET SINGH	55	41
8	2101430100090	ISHIKA BHAGAT	D	12
9	2101430100091	ISHU GAUR	28	11
10	2101430100093	KASHISH BANSAL	55	48
11	2101430100095	KUSH AGARWAL	27	14
12	2101430100099	MANISH KUMAR	D	12
13	2101430100100	MANSI TYAGI	D	40
14	2101430100101	MEGHA .	59	58
15	2101430100102	MIRZA YUNUS BEG	D	24
16	2101430100103	MOHD. ADNAN	37	14
17	2101430100104	MOHD ARSLAAN	D	38
18	2101430100105	MOHD MUHIUDDIN	27	7
19	2101430100107	MOHD MURTAZA KHAN	49	49
20	2101430100108	MOHD NAZIM RASALAT	37	33
21	2101430100109	MOHD SAIF KHAN	28	12
22	2101430100110	MRIDUL KHANDELWAL	D	23
23	2101430100111	MRINAL KUMAR	28	12
24	2101430100112	MUSKAN GUPTA	54	51
25	2101430100113	NAKUL SINGH	37	30
26	2101430100114	NAMAN MISHRA	49	46
27	2101430100116	NEHA ZABI	D	29
28	2101430100117	NIRMAL SINGH GILL	28	12
29	2101430100118	NISHANT LOHANI	47	17
30	2101430100119	NISHANT TYAGI	31	45
31	2101430100120	NISHIKA .	D	50
32	2101430100122	OM BEDAR	44	25
33	2101430100123	PARI SINGH	58	58
34	2101430100125	PIYUSH SINGH	27	32
35	2101430100127	PRAKSHAL JAIN	36	31
36	2101430100128	PRASHANT PANDEY	29	UFM
37	2101430100130	PRATEEKSHIT JAISWAL	48	34
38	2101430100131	PRATHMESH JAIN	D	37
39	2101430100132	PRATYUSH GIRI	1	1
40	2101430100133	PRATYUSH SINGH SONIK	D	17
41	2101430100135	PRINCE SHARMA	A	37

42	2101430100136	PRIYANG SAGAR	D	13
43	2201430109001	AMAN SHARMA	40	30
44	2201430109002	APARNA MISHRA	D	23
45	2201430109005	KSHAMA RAI	39	48
46	2201430109006	NIKHIL KUMAR	46	40
47	2201430109008	NISHANT	33	9
48	2201430109009	PRADEEP KUMAR	43	46
49	2201430109011	PRINCE	34	34
50	2201430109012	SACHIN KUMAR YADAV	32	40
51	2201430109013	SANSKAR BHARDWAJ	32	28
52	2201430109017	SHBUHAM SINGH	31	34
53	2001430100030	AKASH KUMAR KUSHWA	22	41

Result Analysis		
	CT-1	CT-2
Number of Students in Section	53	53
Number of Students Present	39	50
Number of Students Absent	1	2
Number of Students Detained	13	0
Number of Students UFM	0	1
Total Pass students	37	33
Pass %($\geq 40\%$)	95%	66%
Average Marks	39	31
Highest Marks	59	58

(Name & Signature of Subject Teacher)

Institute:	IMS Engineering College, Ghaziabad
Department:	Department of Computer Science and Engineering
Subject Name:	Big Data
Subject Code:	KCS 061
Semester (Odd/Even):	Even
Semester:	VI
Session:	2023-24
Class/Section:	3CSE3

SL.NO.	ROLL NO.	NAME OF STUDENT	CT1 Marks (60)
RED BAND ((NO. OF STUDENTS=30)			
1	2201430109011	PRINCE	34
2	2201430109008	NISHANT	33
3	2201430109012	SACHIN KUMAR YADAV	32
4	2201430109013	SANSKAR BHARDWAJ	32
5	2101430100119	NISHANT TYAGI	31
6	2201430109017	SHBUHAM SINGH	31
7	2101430100128	PRASHANT PANDEY	29
8	2101430100091	ISHU GAUR	28
9	2101430100109	MOHD SAIF KHAN	28
10	2101430100111	MRINAL KUMAR	28
11	2101430100117	NIRMAL SINGH GILL	28
12	2101430100095	KUSH AGARWAL	27
13	2101430100105	MOHD MUHIUDDIN	27
14	2101430100125	PIYUSH SINGH	27
15	2001430100030	AKASH KUMAR KUSHWAHA	22
16	2101430100132	PRATYUSH GIRI	1
17	2101430100086	HRITIK RAINA	D
18	2101430100090	ISHIKA BHAGAT	D
19	2101430100099	MANISH KUMAR	D
20	2101430100100	MANSI TYAGI	D
21	2101430100102	MIRZA YUNUS BEG	D
22	2101430100104	MOHD ARSLAAN	D
23	2101430100110	MRIDUL KHANDELWAL	D
24	2101430100116	NEHA ZABI	D
25	2101430100120	NISHIKA .	D
26	2101430100131	PRATHMESH JAIN	D
27	2101430100133	PRATYUSH SINGH SONIK	D
28	2101430100136	PRIYANG SAGAR	D
29	2201430109002	APARNA MISHRA	D
30	2101430100135	PRINCE SHARMA	A
YELLOW BAND ((NO. OF STUDENTS= 10)			
1	2101430100122	OM BEDAR	44

2	2101430100087	ILMA KHAN	43
3	2201430109009	PRADEEP KUMAR	43
4	2101430100078	HARSH SINHA	41
5	2201430109001	AMAN SHARMA	40
6	2201430109005	KSHAMA RAI	39
7	2101430100103	MOHD. ADNAN	37
8	2101430100108	MOHD NAZIM RASALAT	37
9	2101430100113	NAKUL SINGH	37
10	2101430100127	PRAKSHAL JAIN	36
GREEN BAND (NO. OF STUDENTS=13)			
1	2101430100101	MEGHA .	59
2	2101430100123	PARI SINGH	58
3	2101430100083	HIMANSHU RAJPUT	57
4	2101430100088	INDRAJEET SINGH	55
5	2101430100093	KASHISH BANSAL	55
6	2101430100112	MUSKAN GUPTA	54
7	2101430100080	HARSHITA GUPTA	52
8	2101430100107	MOHD MURTAZA KHAN	49
9	2101430100114	NAMAN MISHRA	49
10	2101430100130	PRATEEKSHIT JAISWAL	48
11	2101430100085	HIMANSHU TOMAR	47
12	2101430100118	NISHANT LOHANI	47
13	2201430109006	NIKHIL KUMAR	46
Number of Students in Section			53
NO. OF STUDENTS IN RED BAND			30
NO. OF STUDENTS IN YELLOW BAND			10
NO. OF STUDENTS IN GREEN BAND			13
% OF STUDENTS IN RED BAND			56.6%
% OF STUDENTS IN YELLOW BAND			18.9%
% OF STUDENTS IN GREEN BAND			24.5%
AVERAGE MARKS			27.5

Institute:	IMS Engineering College, Ghaziabad
Department:	Department of Computer Science and Engineering
Subject Name:	Big Data
Subject Code:	KCS 061
Semester (Odd/Even):	Even
Semester:	VI
Session:	2023-24
Class/Section:	3CSE3

SL.NO.	ROLL NO.	NAME OF STUDENT	CT2 Marks (60)
RED BAND ((NO. OF STUDENTS=33)			
1	2101430100130	PRATEEKSHIT JAISWAL	34
2	2201430109011	PRINCE	34
3	2201430109017	SHBUHAM SINGH	34
4	2101430100108	MOHD NAZIM RASALAT	33
5	2101430100125	PIYUSH SINGH	32
6	2101430100087	ILMA KHAN	31
7	2101430100127	PRAKSHAL JAIN	31
8	2101430100113	NAKUL SINGH	30
9	2201430109001	AMAN SHARMA	30
10	2101430100116	NEHA ZABI	29
11	2201430109013	SANSKAR BHARDWAJ	28
12	2101430100122	OM BEDAR	25
13	2101430100102	MIRZA YUNUS BEG	24
14	2101430100110	MRIDUL KHANDELWAL	23
15	2201430109002	APARNA MISHRA	23
16	2101430100085	HIMANSHU TOMAR	22
17	2101430100118	NISHANT LOHANI	17
18	2101430100133	PRATYUSH SINGH SONIK	17
19	2101430100095	KUSH AGARWAL	14
20	2101430100103	MOHD. ADNAN	14
21	2101430100136	PRIYANG SAGAR	13
22	2101430100090	ISHIKA BHAGAT	12
23	2101430100099	MANISH KUMAR	12
24	2101430100109	MOHD SAIF KHAN	12
25	2101430100111	MRINAL KUMAR	12
26	2101430100117	NIRMAL SINGH GILL	12
27	2101430100091	ISHU GAUR	11
28	2201430109008	NISHANT	9
29	2101430100105	MOHD MUHIUDDIN	7
30	2101430100132	PRATYUSH GIRI	1
31	2101430100078	HARSH SINHA	A
32	2101430100086	HRITIK RAINA	A

33	2101430100128	PRASHANT PANDEY	UFM
YELLOW BAND ((NO. OF STUDENTS= 08)			
1	2101430100088	INDRAJEET SINGH	41
2	2001430100030	AKASH KUMAR KUSHWAHA	41
3	2101430100100	MANSI TYAGI	40
4	2201430109006	NIKHIL KUMAR	40
5	2201430109012	SACHIN KUMAR YADAV	40
6	2101430100104	MOHD ARSLAAN	38
7	2101430100131	PRATHMESH JAIN	37
8	2101430100135	PRINCE SHARMA	37
GREEN BAND (NO. OF STUDENTS=12)			
1	2101430100101	MEGHA .	58
2	2101430100123	PARI SINGH	58
3	2101430100080	HARSHITA GUPTA	55
4	2101430100083	HIMANSHU RAJPUT	55
5	2101430100112	MUSKAN GUPTA	51
6	2101430100120	NISHIKA .	50
7	2101430100107	MOHD MURTAZA KHAN	49
8	2101430100093	KASHISH BANSAL	48
9	2201430109005	KSHAMA RAI	48
10	2101430100114	NAMAN MISHRA	46
11	2201430109009	PRADEEP KUMAR	46
12	2101430100119	NISHANT TYAGI	45
Number of Students in Section			53
NO. OF STUDENTS IN RED BAND			33
NO. OF STUDENTS IN YELLOW BAND			8
NO. OF STUDENTS IN GREEN BAND			12
% OF STUDENTS IN RED BAND			62.3%
% OF STUDENTS IN YELLOW BAND			15.1%
% OF STUDENTS IN GREEN BAND			22.6%
AVERAGE MARKS			28.2