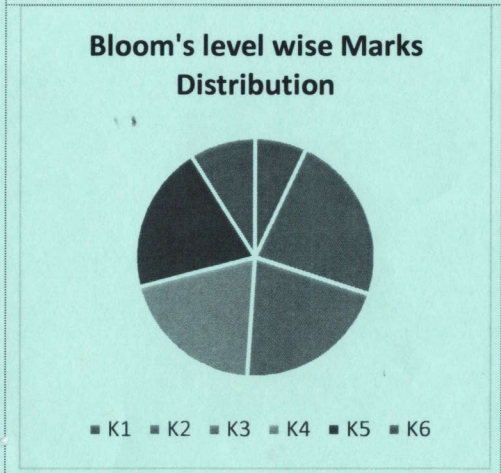
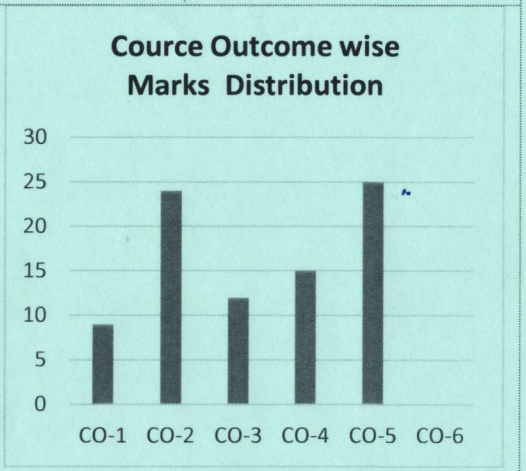
CO- Course Outcomes, **KL**- Knowledge Level, **PO** – Program Outcome

Course Outcomes	CO1	Understand & remember the principles and processes of business communication.
	CO2	Apply effective written communication for business purposes.
	CO3	Analyze oral communication skills in professional scenarios.
	CO4	Interpret non-verbal communication and practice interpersonal communication.
	CO5	Design business documents, presentations, and communication strategies professionally.

GRAPHICAL REPRESENTATION





JGI **ARKA JAIN University** Jharkhand | NAAC GRADE A ACCREDITED UNIVERSITY | **[02-02-2026] END SEM EXAMINATION School of Engineering & IT**

Program	**Master of Computer Application**		
Subject Name	**Business Communication**	**Session**	**Odd, 2025-26**
Semester	**I**	**Year**	**Jan, 2026**
Time: 3 Hour Max. Marks : 70	• Start writing from 2nd page onwards; **don't Write on the 1st Page & Backside** • **Answer all Questions of Section A (Compulsory)** • **Answer Any Four out of Six of Section B** • **Answer Any Three out of Five of Section C** • **Possession of Mobile Phone** or any kind of **Written Material, Arguments with the Invigilator or Discussion with Co-Student** will comes under **Unfair Means** and will **Result** in the **Cancellation of the Paper(s)**.		
Knowledge Level (KL)	**K1** : Remembering	**K3** : Applying	**K5** : Evaluating
	K2 : Understanding	**K4** : Analysing	**K6** : Creating

Section A (Each question Carry 02 Marks from Q1-i to x – 20 Marks)

Q. N 1	QUESTIONS	Marks	COs	KL
i	State any two importance of communication in business.	02	CO2	K2
ii	What are the basic elements of the communication process?	02	CO3	K3
iii	Mention any two principles of effective communication.	02	CO1	K1
iv	What are visual aids in presentations?	02	CO5	K4
v	What is proofreading?	02	CO4	K3
vi	Define public speaking.	02	CO1	K5
vii	State the objective of the group discussion.	02	CO3	K1
viii	Define proxemics.	02	CO4	K4
ix	What is paralanguage?	02	CO5	K1
x	Define an executive summary.	02	CO3	K4

Section B (Answer any FOUR out of SIX) – 20 Marks
(Each question Carry 05 Marks)

Q. No.	QUESTIONS	Marks	COs	KL
2	Explain the meaning and importance of communication in an organization.	05	CO1	K4
3	Describe the elements of the communication process with examples.	05	CO4	K3
4	Explain the 7 Cs of Business Communication in detail.	05	CO5	K5
5	Discuss business etiquette and professionalism in the workplace.	05	CO3	K1
6	Differentiate between active listening and passive listening with examples.	05	CO2	K4
7	Explain memo and circular writing with suitable examples.	05	CO3	K2

Section C (Answer any THREE out of FIVE) – 30 Marks
(Each question Carry 10 Marks)

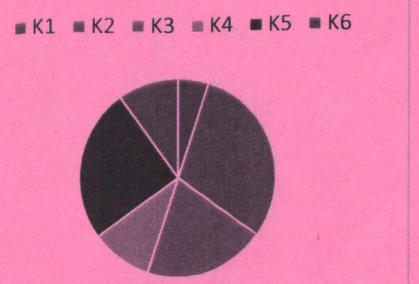
Q. No.	QUESTIONS	Marks	Cos	KL
8	Define communication and explain its meaning, importance, and role in effective business management.	10	CO5	K4
9	Discuss in detail the characteristics of good business writing and their importance in Professional communication.	10	CO2	K3
10	Discuss in detail the principles of effective speaking and public speaking techniques with suitable examples.	10	CO3	K5
11	Explain listening skills, empathy, and emotional intelligence as key components of successful communication.	10	CO1	K1
12	Explain communication strategies adopted by organizations during business crises and their impact on public trust.	10	CO2	K3

CO- Course Outcomes, **KL**- Knowledge Level, **PO** – Program Outcome

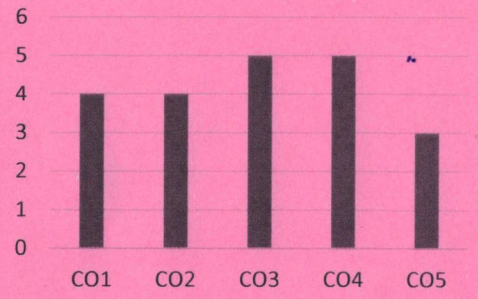
Course Outcomes	CO1	Understand & remember the evolution and classification of programming languages and their paradigms.
	CO2	Apply compare syntax, semantics, and translation mechanisms.
	CO3	Analyze data types, control structures, and memory models.
	CO4	Evaluate functional, object-oriented, and scripting languages for real-time applications.
	CO5	Demonstrate problem-solving using multi-paradigm programming principles.

GRAPHICAL REPRESENTATION

Bloom's level wise Marks Distribution



Course Outcomewise Marks Distribution



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[16-01-2026]
END SEM EXAMINATION
School of Engineering & IT

Program	**Master of Computer Application**		
Subject Name	**Basics of Programming Languages**	**Session**	**Odd, 2025-26**
Semester	**I**	**Year**	**Jan, 2026**
Time: 3 Hour Max. Marks : 70	• Start writing from 2nd page onwards; **don't Write on the 1st Page Backside** • **Answer all Questions of Section A (Compulsory)** • **Answer Any Four out of Six of Section B** • **Answer Any Three out of Five of Section C** • **Possession of Mobile Phone** or any kind of **Written Material, Arguments with the Invigilator or Discussion with Co-Student** will comes under **Unfair Means** and will **Result** in the **Cancellation of the Paper(s)**.		
Knowledge Level (KL)	**K1** : Remembering	**K3** : Applying	**K5** : Evaluating
	K2 : Understanding	**K4** : Analysing	**K6** : Creating

Section A (Each question Carry 02 Marks from Q1-i to x – 20 Marks)

Q. N 1	QUESTIONS	Marks	COs	KL
i	State one difference between a compiler and an interpreter.	02	CO1	K5
ii	What is an exception?	02	CO4	K5
iii	Mention the name of two primitive data type?	02	CO3	K2
iv	What is concurrency?	02	CO4	K3
v	Which data type stores only one value at a time from its members?	02	CO3	K5
vi	What is a runtime environment?	02	CO2	K6
vii	The first high-level programming language was___.	02	CO1	K1
viii	What is dynamic memory allocation?	02	CO2	K2
ix	What is heap memory allocation?	02	CO3	K4
x	What is multithreading?	02	CO4	K2

Section B (Answer any FOUR out of SIX) – 20 Marks
(Each question Carry 05 Marks)

Q. No.	QUESTIONS	Marks	COs	KL
2	Draw the flowchart and write a C based program to compute simple interest.	05	CO1	K3
3	What is an operator? List and explain various types of operators.	05	CO2	K2
4	Write a program to demonstrate the use of enumerated data type for weekdays and display the selected day.	05	CO3	K4
5	Explain the role of programming languages in system software and application software.	05	CO5	K5
6	Define i) variable ii) Constant iii) Associativity iv) Precedence.	05	CO2	K2
7	Write a C based program using union and structure. Explain the memory difference between them.	05	CO3	K2

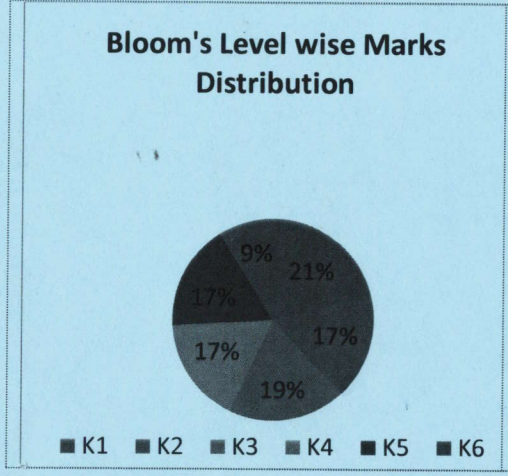
Section C (Answer any THREE out of FIVE) – 30 Marks
(Each question Carry 10 Marks)

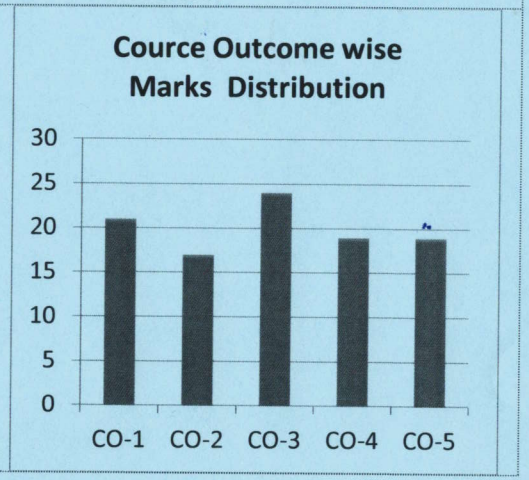
Q. No.	QUESTIONS	Marks	COs	KL
8	Write a program to demonstrate inheritance (single or multilevel) and method overriding.	10	CO4	K3
9	Write a program to calculate factorial using recursion and explain the call stack behavior.	10	CO5	K5
10	Describe lexical analysis, syntax analysis, and semantic analysis in compilation.	10	CO1	K6
11	Write a program to illustrate polymorphism using function overloading or method overriding.	10	CO4	K3
12	Discuss various security issues in language design and how modern languages reduce vulnerabilities.	10	CO5	K3

CO- Course Outcomes, **KL**- Knowledge Level, **PO** – Program Outcome

Course Outcomes	CO1	Understand & remember the fundamental concepts of object oriented programming and Java syntax.
	CO2	Apply object-oriented features like inheritance, encapsulation, and Polymorphism.
	CO3	Analyze exception handling, collections, and file I/O using Java.
	CO4	Evaluate multi-threaded and event-driven applications.
	CO5	Create interactive GUI applications and apply design principles for large-scale software systems.

GRAPHICAL REPRESENTATION





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[19-01-2026]
END SEM EXAMINATION
School of Engineering & IT

Program	**Master of Computer Application**		
Subject Name	**Object Oriented Programming and Design (Java)**	**Session**	**Odd, 2025-26**
Semester	**I**	**Year**	**Jan, 2026**
Time: 3 Hour Max. Marks : 70	• Start writing from 2nd page onwards; **don't Write on the 1st Page Backside** • **Answer all Questions of Section A (Compulsory)** • **Answer Any Four out of Six of Section B** • **Answer Any Three out of Five of Section C** • **Possession of Mobile Phone** or any kind of **Written Material, Arguments with the Invigilator or Discussion with Co-Student** will comes under **Unfair Means** and will **Result** in the **Cancellation of the Paper(s)**.		
Knowledge Level (KL)	**K1** : Remembering	**K3** : Applying	**K5** : Evaluating
	K2 : Understanding	**K4** : Analysing	**K6** : Creating

Section A (Each question Carry 02 Marks from Q1-i to x – 20 Marks)

Q. N 1	QUESTIONS	Marks	COs	KL
i	Who is the creator of Java?	02	CO1	K1
ii	Name any two features of Java.	02	CO1	K6
iii	What is garbage collection?	02	CO4	K2
iv	What is an abstract class?	02	CO3	K3
v	What is an iterator?	02	CO4	K1
vi	What is Comparable interface?	02	CO1	K6
vii	What is thread priority?	02	CO5	K5
viii	What is synchronization?	02	CO2	K4
ix	What is Swing?	02	CO3	K3
x	Name any two AWT components.	02	CO5	K1

Section B (Answer any FOUR out of SIX) – 20 Marks
(Each question Carry 05 Marks)

Q. No.	QUESTIONS	Marks	COs	KL
2	Explain different control structures in Java with suitable examples.	05	CO2	K2
3	Explain various layout managers with examples.	05	CO3	K1
4	Explain the difference between while and do-while loops with an example.	05	CO1	K3
5	Explain thread life cycle with a neat diagram.	05	CO5	K5
6	Explain SOLID principles with Java examples.	05	CO3	K6
7	Compare Thread class and Runnable interface.	05	CO4	K4

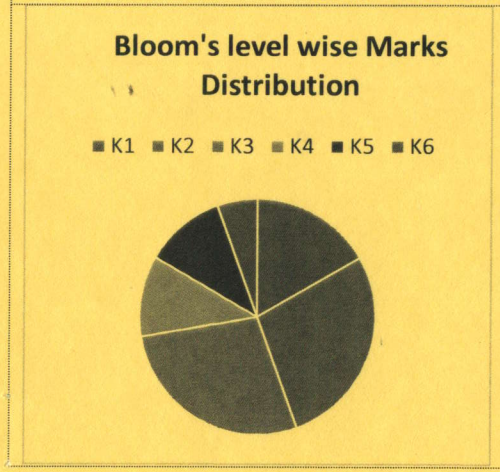
Section C (Answer any THREE out of FIVE) – 30 Marks
(Each question Carry 10 Marks)

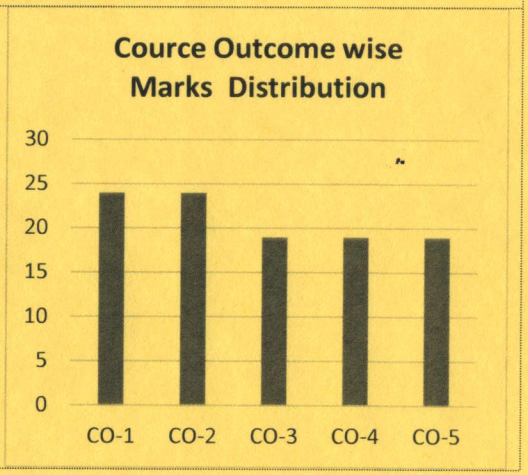
Q. No.	QUESTIONS	Marks	COs	KL
8	What are constructors in Java? Explain different types and their purpose with a simple example.	10	CO1	K1
9	A college wants to develop a Java application to manage basic student information such as roll number, name, course, and marks. The program should accept input from the user at runtime, process the data using appropriate data types and control structures, and display the result in a clear and formatted manner. The application must be designed using classes and objects, follow Java coding standards, and demonstrate the use of constructors, method overloading, and basic input/output techniques.	10	CO5	K5
10	What is inheritance in Java? Explain different types and their purpose with a simple example.	10	CO3	K4
11	Explain applet cycle with a neat diagram.	10	CO4	K2
12	Design a Java program that defines a `Vehicle` class with attributes like `vehicleType`, `rentalFee`, and `availability`. The program should create multiple `Vehicle` objects and manage their rental status.	10	CO2	K3

CO- Course Outcomes, **KL**- Knowledge Level, **PO** – Program Outcome

Course Outcomes	CO1	Apply principles of logic, reasoning, and proof methods to solve computational problems
	CO2	Understand and analyse relations, algorithms, and number theory concepts in computing
	CO3	Solve problems using recurrence relations, combinatorics, and counting principles
	CO4	Demonstrate understanding of algebraic structures and coding theory in computing contexts
	CO5	Design finite automata, grammars, and Turing machines for language recognition

GRAPHICAL REPRESENTATION





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Program	**Master of Computer Application**		
Subject Name	**Mathematical Foundation for Computer Application**	**Session**	**Odd, 2025-26**
Semester	**I**	**Year**	**Jan, 2026**
Time: 3 Hour Max. Marks : 70	• Start writing from 2nd page onwards; **don't Write on the 1st Page Backside** • **Answer all Questions of Section A (Compulsory)** • **Answer Any Four out of Six of Section B** • **Answer Any Three out of Five of Section C** • **Possession of Mobile Phone** or any kind of **Written Material, Arguments with the Invigilator or Discussion with Co-Student** will comes under **Unfair Means** and will **Result** in the **Cancellation of the Paper(s)**.		
Knowledge Level (KL)	**K1 :** Remembering	**K3 :** Applying	**K5 :** Evaluating
	K2 : Understanding	**K4 :** Analysing	**K6 :** Creating

Section A (Each question Carry 02 Marks from Q1-i to x – 20 Marks)

Q. N 1	QUESTIONS	Marks	COs	KL
i	Define tautology and contradiction.	02	CO1	K1
ii	What is a reflexive relation?	02	CO2	K2
iii	Find number of subsets of set containing 6 elements.	02	CO3	K3
iv	Define a relation between two sets.	02	CO2	K2
v	Which element always exists in a group?	02	CO4	K4
vi	What is the difference between a group and a monoid?	02	CO4	K2
vii	Which machine includes an output in each transition?	02	CO5	K5
viii	The logical equivalence of $\neg(P \wedge Q)$ is:____	02	CO1	K3
ix	Find the coefficient of x^2 in $(1 + x)^4$.	02	CO3	K3
x	What is a formal language?	02	CO5	K1

Section B (Answer any FOUR out of SIX) – 20 Marks
(Each question Carry 05 Marks)

Q. No.	QUESTIONS	Marks	COs	KL
2	Explain De Morgan's laws and show their validity using truth tables.	05	CO1	K2
3	Given relation R = {(1,1), (2,2), (1,2), (2,1)} on set A = {1,2}. Verify numerically that R is an equivalence relation.	05	CO2	K2
4	Solve using substitution method: $T(n)=3T(n/2)+n$	05	CO3	K5
5	Using mathematical induction, prove that: $1 + 2 + 3 + \ldots + n = n(n+1)/2$	05	CO1	K3
6	Determine the transitive closure of: R={(1,2),(2,3)}	05	CO2	K6
7	Check whether {2, 4, 6, 8} under multiplication mod 10 is a group or not.	05	CO4	K3

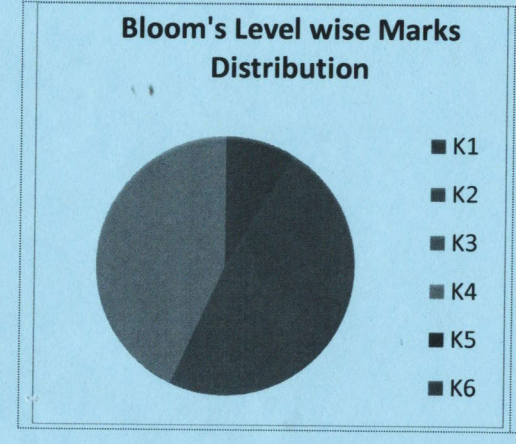
Section C (Answer any THREE out of FIVE) – 30 Marks
(Each question Carry 10 Marks)

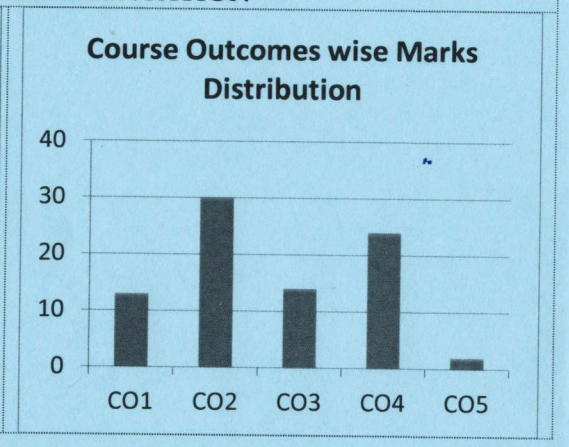
Q. No.	QUESTIONS	Marks	COs	KL
8	Prove the following propositional equivalence using truth tables: $(p\wedge(q\vee r))\equiv((p\wedge q)\vee(p\wedge r))$.	10	CO1	K3
9	Derive the recurrence relation for Merge Sort: $T(n)=2T(n/2)+n$	10	CO3	K4
10	Explain the difference between worst-case, best-case, and average-case complexity. Solve an example using linear search and analyze its complexity.	10	CO2	K2
11	Explain the Working of a Turing Machine step by step with an example.	10	CO5	K1
12	Give an example of a monoid and verify the closure, associativity, and identity properties.	10	CO4	K3

CO- Course Outcomes, **KL**- Knowledge Level, **PO** – Program Outcome

Course Outcomes	CO1	Understand the fundamentals of ecosystems, natural resources and ecological balance.
	CO2	Examine the significance of biodiversity, conservation strategies and environmental ethics.
	CO3	Identify the causes and effects of environmental pollution and methods of control.
	CO4	Analyze global environmental challenges, sustainable development goals and climate change mitigation.
	CO5	Interpret environmental policies, laws and the role of information technology in environmental protection.

GRAPHICAL REPRESENTATION





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[31-01-2026]
END SEM EXAMINATION
School of Engineering & IT.

Program	**Master of Computer Application**		
Subject Name	**Environmental Studies**	**Session**	**Odd, 2025-26**
Semester	**I**	**Year**	**Jan, 2026**
Time: 1.5 Hour Max. Marks : 35	• Start writing from 2nd page onwards; **don't Write on the 1st Page Backside** • **Answer all Questions of Section A (Compulsory)** • **Answer Any Five out of Six of Section B** • **Answer Any Two out of Four of Section C** • **Possession of Mobile Phones** or any kind of **Written Material, Arguments with the Invigilator or Discussing with Co-Student** will comes under **Unfair Means** and will **Result** in the **Cancellation of the Papers**.		
Knowledge Level (KL)	**K1** : Remembering	**K3** : Applying	**K5** : Evaluating
	K2 : Understanding	**K4** : Analysing	**K6** : Creating

Section A (Each question Carry 01 Mark from Q1-i to v) – 05 Marks

Q. N 1	QUESTIONS	Marks	COs	KL
i	What is an ecosystem? Write any two functions of an ecosystem.	01	CO1	K1
ii	Name any two biodiversity hotspots found in India..	01	CO2	K1
iii	Mention any two effects of soil pollution.	01	CO3	K2
iv	What is biodegradable waste?	01	CO3	K1
v	What is meant by climate change?	01	CO4	K2

Section B (Answer any FIVE out of SIX) – 10 Marks
(Each question Carry 02 Marks)

Q. No.	QUESTIONS	Marks	COs	KL
2	Describe the structure of an ecosystem.	02	CO1	K2
3	Explain the three levels of biodiversity.	02	CO2	K2
4	Describe major pollution control Acts in India.	02	CO3	K1

5	Explain global warming and climate change.	02	CO4	K2
6	Explain the Forest Conservation Act and Wildlife Protection Act.	02	CO5	K2
7	Explain disaster management, its phases, and strategies for disaster risk reduction.	02	CO4	K4

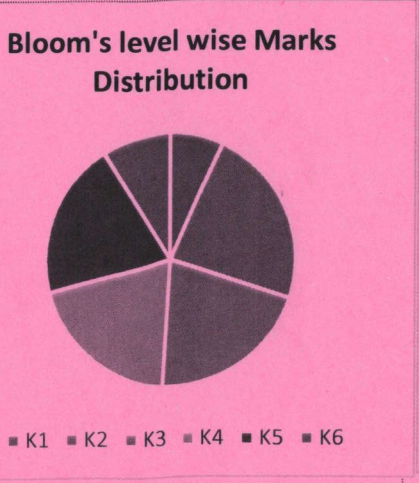
Section C (Answer any TWO out of FOUR) – 20 Marks
(Each question Carry 10 Marks)

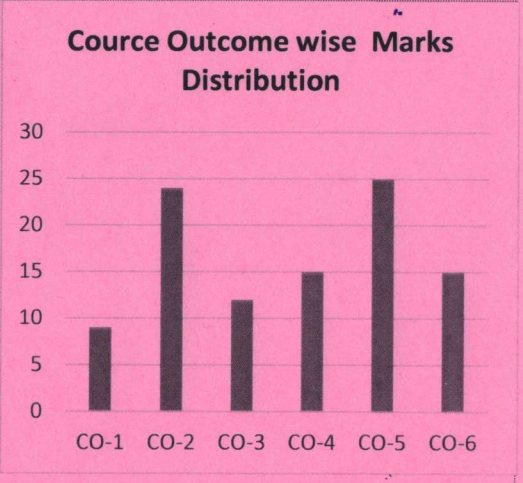
Q. No.	QUESTIONS	Marks	COs	KL
8	Explain the energy flow in ecosystems, including food chains, food webs, and Lindeman's 10% law.	10	CO1	K2
9	Discuss environmental ethics and responsibility, and explain the role of individuals and society in protecting biodiversity.	10	CO2	K4
10	Discuss major industrial pollution case studies (such as the Bhopal Gas Tragedy) and lessons learned.	10	CO3	K2
11	Explain the role of international organizations such as UN, UNEP, WHO, and World Bank in addressing global environmental issues.	10	CO4	K4

CO- Course Outcomes, **KL**- Knowledge Level, **PO** – Program Outcome

Course Outcomes	CO1	Understand the fundamentals of analytics, big data, and their applications in different domains
	CO2	Apply IBM Cognos Analytics features to create reports, dashboards, and visualizations.
	CO3	Analyze business problems and evaluate how predictive analytics can provide actionable insights.
	CO4	Design effective data visualizations and dashboards for decision-making in real-world scenarios.
	CO5	Evaluate case studies to understand the impact of analytics across industries (education, retail, law enforcement, insurance, etc.).
	CO6	Apply their knowledge and skills to address industry-specific challenges using tools like IBM Cognos Analytics, Excel and Power BI

GRAPHICAL REPRESENTATION





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Program	Master of Computer Application		
Subject Name	Data Visualization	Session	Odd, 2025-26
Semester	I	Year	Jan, 2026

Time: 3 Hour
Max. Marks : 70

- Start writing from 2nd page onwards; don't Write on the 1st Page Backside
- **Answer all Questions of Section A (Compulsory)**
- **Answer Any Four out of Six of Section B**
- **Answer Any Three out of Five of Section C**
- **Possession of Mobile Phone** or any kind of **Written Material, Arguments with the Invigilator or Discussion with Co-Student** will comes under **Unfair Means** and will **Result** in the **Cancellation of the Paper(s)**.

Knowledge Level (KL)			
	K1 : Remembering	**K3** : Applying	**K5** : Evaluating
	K2 : Understanding	**K4** : Analysing	**K6** : Creating

Section A (Each question Carry 02 Marks from Q1-i to x – 20 Marks)

Q. N 1	QUESTIONS	Marks	COs	KL
i	State one difference between structured data and unstructured data.	02	CO7	KL1
ii	Mention any two applications of predictive analytics in real-world organizations	02	CO6	KL2
iii	Define business analytics in one sentence	02	CO1	KL1
iv	Name two industries where analytics is used to reduce crime or fraud.	02	CO4	KL1
v	Identify the purpose of IBM Cognos Analytics in the finance sector.	02	CO4	KL2
vi	List any two types of reports that can be created in IBM Cognos	02	CO2	KL1
vii	State one advantage of using crosstab reports in Cognos.	02	CO4	KL2
viii	Mention two key features of the Rapidly Adaptive Visualization Engine (RAVE).	02	CO1	KL1
ix	Write any two advanced Excel functions used in financial modeling.	02	CO2	KL1
x	Name two visualization techniques available in Power BI for time series analysis.	02	CO6	KL1

Section B (Answer any FOUR out of SIX) – 20 Marks
(Each question Carry 05 Marks)

Q. No.	QUESTIONS	Marks	COs	KL
2	How can analytics reduce crime rates? Illustrate a real-world law enforcement use case.	05	CO4	KL4
3	Explain how fraud detection systems in banking use analytics to identify anomalies.	05	CO4	KL4
4	Discuss how list reports in Cognos can be used to monitor sales performance.	05	CO2	KL3
5	Why is dashboard design critical for executive decision-making? Provide an industry example.	05	CO1	KL4
6	How is Excel used for financial modeling in investment banking?	05	CO2	KL3
7	How can advanced Excel functions (e.g., SUMPRODUCT, INDEX-MATCH) be applied in supply chain analytics?	05	CO2	KL4

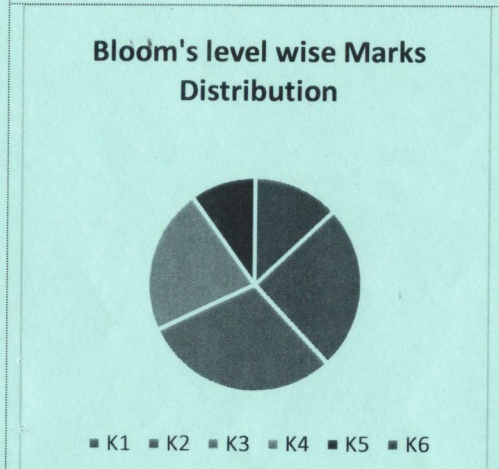
Section C (Answer any THREE out of FIVE) – 30 Marks
(Each question Carry 10 Marks)

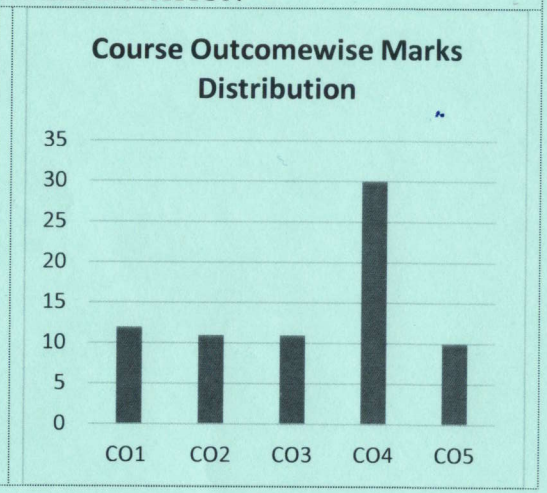
Q. No.	QUESTIONS	Marks	Cos	KL
8	Discuss the difference between detail filters and summary filters in Cognos.	10	CO4	KL4
9	Explain the concept of RAVE (Rapidly Adaptive Visualization Engine) and its importance in Cognos.	10	CO1	KL4
10	Discuss the role of Excel in financial analysis and reporting.Explain budgeting and forecasting techniques in Excel.	10	CO2	KL3
11	Describe the process of importing and manipulating data in Excel using Power Query.Explain the importance of financial modeling techniques in Excel.	10	CO7	KL4
12	Explain the scope and application of IBM Planning Analytics.	10	CO8	KL4

CO- Course Outcomes, **KL**- Knowledge Level, **PO** – Program Outcome

Course Outcomes	CO1	Identify the suitable research methods and articulate the research steps in a proper sequence for the given problem.
	CO2	Carry out literature survey, define the problem statement and suggest Suitable solution for the given problem.
	CO3	Analyse the problem and conduct experimental design with the samplings.
	CO4	Perform the data collection from various sources segregate the primary and secondary data
	CO5	Apply some concepts/section of Copy Right Act /Patent Act /Cyber Law/ Trademark to the given case and develop – conclusions

GRAPHICAL REPRESENTATION





ARKA JAIN University
Jharkhand

NAAC GRADE A ACCREDITED UNIVERSITY

[21-01-2026]
END SEM EXAMINATION
School of Engineering & IT

Program	**Master of Computer Application**		
Subject Name	**Research Methodology and IPR**	**Session**	**Odd, 2025-26**
Semester	**I**	**Year**	**Jan, 2026**
Time: 3 Hour Max. Marks : 70	• Start writing from 2nd page onwards; **don't Write on the 1st Page Backside** • **Answer all Questions of Section A (Compulsory)** • **Answer Any Four out of Six of Section B** • **Answer Any Three out of Five of Section C** • **Possession of Mobile Phone** or any kind of **Written Material, Arguments with the Invigilator or Discussion with Co-Student** will comes under **Unfair Means** and will **Result** in the **Cancellation of the Paper(s)**.		
Knowledge Level (KL)	**K1 :** Remembering	**K3 :** Applying	**K5 :** Evaluating
	K2 : Understanding	**K4 :** Analysing	**K6 :** Creating

Section A (Each question Carry 02 Marks from Q1-i to x – 20 Marks)

Q. N 1	QUESTIONS	Marks	COs	KL
i	What is meant by research methodology?	02	CO1	K1
ii	What is meant by the scientific method in research?	02	CO2	K2
iii	Mention any two techniques involved in defining a research problem.	02	CO2	K4
iv	What is meant by a research problem?	02	CO3	K2
v	Mention any two basic principles of experimental design.	02	CO3	K1
vi	What is meant by an experimental research design?	02	CO3	K2
vii	What is meant by an oral presentation of a research report?	02	CO2	K2
viii	What is meant by Intellectual Property (IP)?	02	CO5	K1
ix	What is meant by a trademark under the Trade Marks Act, 1999?	02	CO5	K1
x	What is the purpose of the Design Act, 2000?	02	CO5	K2

Section B (Answer any FOUR out of SIX) – 20 Marks
(Each question Carry 05 Marks)

Q. No.	QUESTIONS	Marks	COs	KL
2	Distinguish between research methods and research methodology with examples.	05	CO1	K4
3	What is the role of a literature review in research? Discuss its importance in detail.	05	CO2	K3
4	Explain the concepts of theoretical framework and conceptual framework with examples.	05	CO4	K2
5	Discuss the various concepts related to research design, such as variables, control, and hypothesis.	05	CO4	K4
6	Explain different methods of data collection used in surveys and experiments.	05	CO3	K1
7	Explain the key features and objectives of the Indian Patent Act, 1970.	05	CO5	K3

Section C (Answer any THREE out of FIVE) – 30 Marks
(Each question Carry 10 Marks)

Q. No.	QUESTIONS	Marks	COs	KL
8	Explain the scientific method and its role in research. How does it ensure objectivity and validity?	10	CO1	K3
9	Examine the relationship between literature review and research problem formulation. How does reviewing literature sharpen and refine the research problem?	10	CO4	K2
10	Elaborate on the significance of research design in improving the validity and reliability of a study. Discuss how a good design supports accurate and unbiased results.	10	CO4	K4
11	Describe in detail the structure (layout) of a research report.	10	CO5	K3
12	Provide a detailed explanation of the Copyright Act, 1957—its purpose, types of works protected, rights of authors, infringement issues, and remedies.	10	CO5	K5