JGI ARKA JAIN University Jharkhand | NAAC GRADE A ACCREDITED UNIVERSITY		[06-05-2026] END SEM EXAMINATION School of Engineering & IT	
Branch	**Computer Science & Engineering**	**Program**	**Diploma**
Subject Name	**Advance Computer Networks**	**Session**	**Even 2025-2026**
Semester	**VI**	**Year**	**April 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 computer network. Give advantages of computer network.	02	CO1	K1
ii	Compare client server and peer to peer network.	02	CO2	K1
iii	What are the responsibilities of Network Layer?	02	CO1	K2
iv	State the features of HTTP.	02	CO2	K4
v	Describe data encapsulation.	02	CO4	K1
vi	Compare the working of hub and switch.	02	CO4	K2
vii	Explain FTP.	02	CO3	K3
viii	Write down the responsibilities of Transport Layers.	02	CO4	K1
ix	Define a. Load Balancers b. Caching	02	CO3	K2
x	Describe the different services provide by data link layer.	02	CO1	K1

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

Q. No.	QUESTIONS	Marks	COs	KL
2	Describe switching techniques in details.	05	CO3	K1
3	Explain basic principles of mobile communication.	05	CO3	K2
4	Discuss various transmission modes in details.	05	CO1	K3
5	Describe proxy server. Why do we need a proxy server?	05	CO3	K3
6	Write down various differences between IPV6 and IPV4.	05	CO1	K3
7	Explain bridge, hub and router in detail.	05	CO2	K1

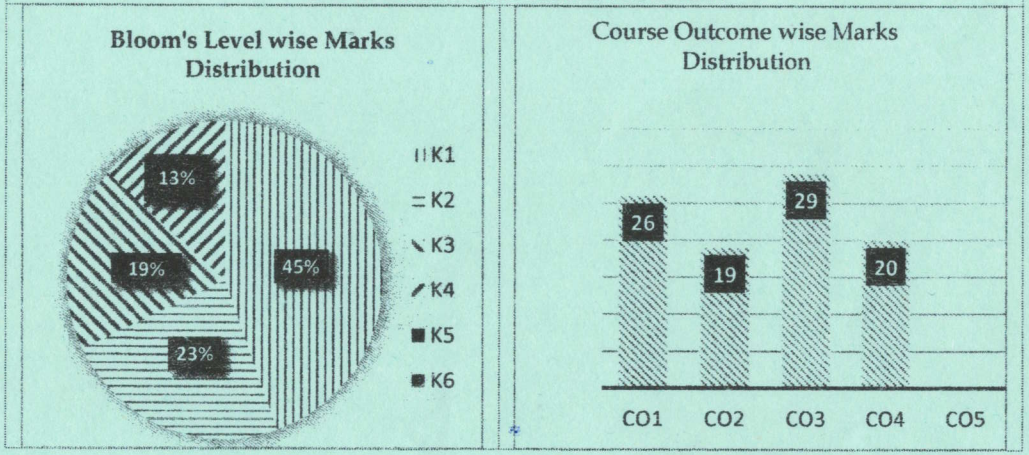
Section C (Answer any THREE out of FIVE) – 30 Marks
(Each question Carry 10 Marks)

Q. No.	QUESTIONS	Marks	COs	KL
8	Define proxy firewall and explain the benefits of a firewall.	10	CO1	K1
9	Explain VPN and its types. Also, discuss the use of VPN.	10	CO3	K1
10	Define unicast, multicast and broadcast. Also, differentiate among Unicast, Multicast and broadcast.	10	CO2	K2
11	Explain SNMP in detail. Also, differentiate between SNMP and RMON.	10	CO4	K2
12	Explain the wireless network with example. Write down various differences between GSM and CDMA.	10	CO4	K4

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

Course Outcomes	CO1	Explain the functions of the different layer of the OSI Protocol.
	CO2	Draw the functional block diagram of wide-area networks (WANs), local area networks (LANs) and Wireless LANs (WLANs) describe the function of each block.
	CO3	For a given requirement (small scale) of wide-area networks (WANs), local area networks (LANs) and Wireless LANs (WLANs) design it based on the market available component.
	CO4	For a given problem related TCP/IP protocol developed the network programming.

GRAPHICAL REPRESENTATION



JGI	ARKA JAIN University, Jharkhand	NAAC A GRADE ACCREDITED UNIVERSITY	[08-05-2026] END SEM EXAMINATION School of Engineering & IT

Program	**Computer Science and Engineering**	**Branch**	**Diploma**
Subject Name	**Software Testing**	**Session**	**Even, 2025-26**
Semester	**VI**	**Year**	**April, 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 verification?	02	CO1	K1
ii	List any two types of software testing.	02	CO1	K1
iii	What is test data?	02	CO2	K1
iv	What is bug tracking?	02	CO3	K1
v	When should automation testing be used?	02	CO3	K2
vi	What is defect management?	02	CO3	K2
vii	What is version control? Give one example.	02	CO3	K2
viii	What is code review?	02	CO2	K1
ix	What is Selenium?	02	CO3	K1
x	What is Defect Priority?	02	CO2	K2

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

Q. No.	QUESTIONS	Marks	COs	KL
2	Describe the V-Model of Software Testing with diagram.	05	CO1	K2
3	Explain Unit Testing, Integration Testing, and UAT.	05	CO2	K2
4	Describe Code Review and Version Control in QA.	05	CO3	K2
5	Describe defect life cycle with diagram.	05	CO2	K3
6	Describe Selenium architecture.	05	CO3	K3
7	Explain the concept of Test Oracles with examples.	05	CO2	K3

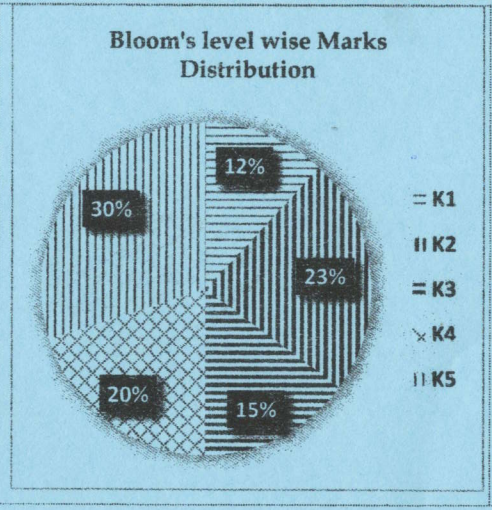
Section C (Answer any THREE out of FIVE) – 30 Marks
(Each question Carry 10 Marks)

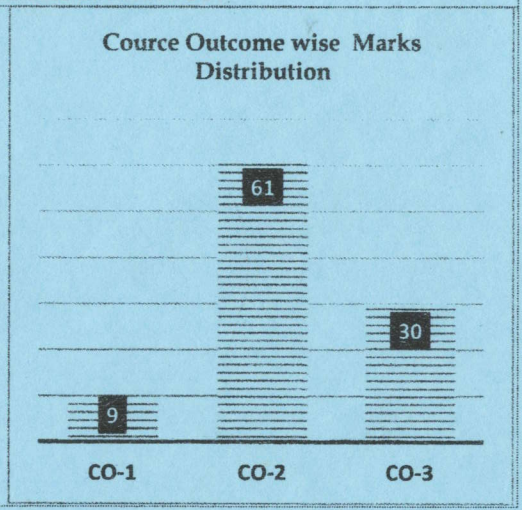
Q. No.	QUESTIONS	Marks	COs	KL
8	Explain Alpha, Beta, and Acceptance Testing in detail.	10	CO2	K4
9	Explain in detail the process of Test Case Design with examples.	10	CO2	K5
10	Evaluate the role of bug tracking tools (JIRA/Bugzilla) in improving software quality.	10	CO2	K5
11	Analyze the risks of poor test planning and propose a structured test strategy.	10	CO2	K4
12	Discuss Quality Assurance practices: Code review, change management, version control.	10	CO3	K5

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

Course Outcomes	CO1	Student will develop skills to understand the system
	CO2	Choose suitable testing methods, strategies, tools and technology, execute and report the test.
	CO3	Student will also be able to understand need and usage of test automation and gain expertise in at least 1 test automation tool

GRAPHICAL REPRESENTATION





JGI	**ARKA JAIN University** Jharkhand | NAAC GRADE A ACCREDITED UNIVERSITY		[11-05-2026] END SEM EXAMINATION School of Engineering & IT
Program	**Computer Science & Engineering**	**Branch**	**Diploma**
Subject Name	**Cyber Security Laws, Standards and IPR**	**Session**	**Even, 2025-26**
Semester	**VI**	**Year**	**April, 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 are cyber security vulnerabilities?	02	CO1	K1
ii	List different types of Cyber Attack.	02	CO4	K1
iii	What do you mean by multi-factor authentication (MFA)?	02	CO2	K2
iv	How do software vulnerabilities arise?	02	CO3	K3
v	Differentiate between Cyber Security and Cyber Crime with an example.	02	CO2	K2
vi	How does encryption help protect data?	02	CO3	K4
vii	What do you understand by E-mail Spoofing? Mention at least one process to avoid this.	02	CO2	K3
viii	What are the benefits of a zero-trust security model?	02	CO3	K4
ix	What do you Understand by Identity theft? Mention the way to handle it.	02	CO2	K1
x	Define the term cryptography, and how does it help secure communication?	02	CO3	K2