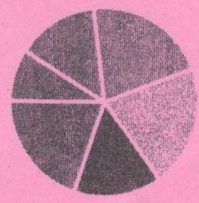


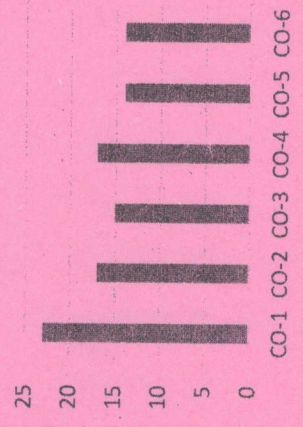
CO- Course Outcomes,	KL- Knowledge Level,	PO – Program Outcome
CO1	Identify Energy forecasting, Energy economics, Energy pricing and incentives For energy conservation	
CO2	Understand various options and assess the business and policy environment regarding energy conservation and energy auditing.	
CO3	Apply the strategies and policy recommendations on energy conservation and energy auditing.	
CO4	Analyze the viability of energy conservation projects.	
CO5	Evaluate technology, economics and regulation related issues associated with energy conservation and energy auditing.	
CO6	Create competency in Energy analysis techniques and methods & Energy conservation Planning and practices.	

Bloom's level wise Marks Distribution



■ K1 ■ K2 ■ K3 ■ K4 ■ K5 ■ K6

Course Outcome wise Marks Distribution



ARKA JAIN University
Jharkhand

NAAC GRADE A
ACCREDITED UNIVERSITY

END SEM EXAMINATION
School of Engineering & IT

Branch	Electrical and Electronics Engineering	Program	Diploma
Subject Name	Energy Efficiency and Audit	Semester	VI
		Year	April 2024

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 Phones or any kind of Written Material, Arguments with the Invigilator or Discussing with Co-Student will come 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 02 Marks from Q1-i to x) - 20 Marks

Q.N	QUESTIONS	Marks	COs	KL	PO
1					
i	Write down the significance for energy conservation.	2	CO1	K1	PO1
ii	What is renewable energy and list at least three renewable energy sources?	2	CO1	K1	PO2
iii	What are the two main types of Centrifugal pumps?	2	CO6	K3	PO4
iv	What are the types of commonly used lamps?	2	CO2	K3	PO5
v	How does the centrifugal compressor work?	2	CO6	K4	PO3
vi	What are role of load pattern in the operational factors of DG sets?	2	CO1	K4	PO5
vii	Define the term "Aggregated Technical and commercial (ATC) losses".	2	CO4	K2	PO6
viii	What do you mean by motor loading?	2	CO1	K4	PO11
ix	List out the electrical measurement instruments.	2	CO5	K2	PO12
x	What do you mean by DOL starter.	2	CO5	K3	PO4

Section B (Answer any FOUR out of SIX) - 20 Marks



(Each question Carry 5 Marks)

Q. No.	QUESTIONS	Marks	COs	KL	PO
2	Write down the role of Bureau of Energy Efficiency.	5	CO1	K4	PO5
3	Whether 5 start rated fans are providing air quantity similar to ordinary fans without star rating?	5	CO2	K5	PO6
4	Write Short notes on the followings: (a) Automatic Power Factor controller (APFC) (b) Tariff system to reduce energy bill	5	CO3	K6	PO7
5	Write down the energy savings checklist for the compressed air systems.	5	CO4	K3	PO11
6	Explain the need of energy conservation in induction motors.	5	CO6	K1	PO12
7	Explain briefly the Variable Frequency Drive (VFD) and its benefits.	5	CO6	K6	PO3

Section C (Answer any THREE out of FIVE) - 30 Marks-

(Each question Carry 10 Marks)

Q. No.	QUESTIONS	Marks	COs	KL	PO
8	What is star labelling? State its need and benefits.	10	CO1	K4	PO5
9	Write down the tips for energy saving in fans and blowers.	10	CO2	K5	PO6
10	Why Periodic survey and adequate maintenance programs are necessary in lighting system?	10	CO3	K3	PO11
11	Describe the efficient pumping system operation.	10	CO4	K6	PO5
12	Describe briefly about the energy flow diagram in a plant and energy flow converting electrical energy-heat-light.	10	CO5	K2	PO3

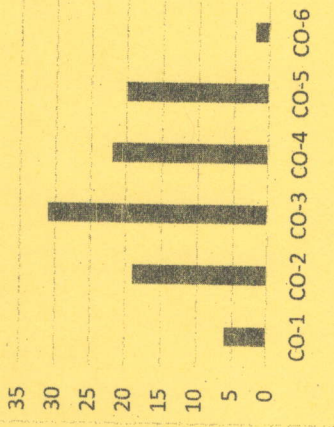
				END TERM EXAMINATION School of Engineering & IT	
Branch	Electrical and Electronics Engineering	Program	Diploma		
Subject Name	Building Electrification	Semester	VI		
		Year	April 2024		
Time: 3 Hour Max. Marks : 70	• Start writing from 2nd page onwards; don't write on the 1st Page Backside • Answer all 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 <u>Mobile Phones</u> or any kind of <u>Written Material, Arguments with the Invigilator or Discussing with Co-Student</u> will come under <u>Unfair Means</u> and will <u>Result</u> in the <u>Cancellation of the Papers.</u>				
Knowledge Level (KL)	K1 : Remembering K2 : Understanding	K3 : Applying K4 : Analysing	K5 : Evaluating K6 : Creating		

CO- Course Outcomes,	KL- Knowledge Level,	PO – Program Outcome
CO1	Identify various wiring tools, accessories, wiring methods, cables and remembering different IEC act	
CO2	Understanding the fundamentals of electrical Installations like requirements, design considerations, testing, estimating and costing..	
CO3	Apply various scheme of illumination, the energy conversation method used in it and design methods of illumination system for building complexes..	
CO4	Select the design procedure, estimation and costing method, safety aspect of electrical installation in a commercial building, hospital, industries..	
CO5	Decide estimation and costing methods of outdoor, indoor substations and different electrification.	
CO6	Justify as per national electrical Code of service connections and its safety aspects according to user requirement and prepare report.	

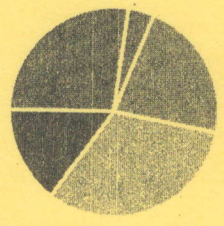
Section A (Each question Carry 02 Marks from Q1-i to Q1-x) – 20 Marks

Q. N1	QUESTIONS	Marks	COs	KL	PO
i	Draw connection diagram of two-way switch *	2	CO1	K2	PO3
ii	Why PVC insulation is preferred over VIR?	2	CO2	K1	PO1
iii	Write two differences between fuse and circuit breaker?	2	CO1	K1	PO3
iv	Define the following term: lumen and lux.	2	CO3	K1	PO3
v	Difference between candle power and lumen?	2	CO3	K2	PO2
vi	What is earthing and write down its importance?	2	CO4	K1	PO3
vii	Why the one hole area of a three-pin plug is larger than other two?	2	CO1	K1	PO2
viii	What are the functions of fuse?	2	CO2	K4	PO1
ix	A 200-V lamp takes a current of 1.2 A, it produces a total flux of 2,860 lumens. Calculate MSCP of the lamp.	2	CO3	K3	PO3
x	Classify the cable according to the types of insulation?	2	CO6	K1	PO2

Course Outcome wise Marks Distribution

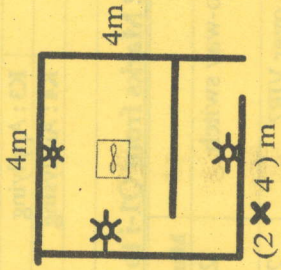


Bloom's level wise Marks Distribution



■ level-1 ■ level-2 ■ level-3
■ level-4 ■ level-5

Section B (Answer any FOUR out of SIX) – 20 Marks
(Each question Carry 5 Marks)

Q. No.	QUESTIONS	Marks	COs	KL	PO
2	Write down the advantages of PVC cable over other types of cable?	5	CO5	K1	PO2
3	Explain characteristics of fuse?	5	CO2	K4	PO4
4	A room with an area of 6×9 m is illustrated by ten 80-W lamps. The luminous efficiency of the lamp is 80 lumens/W and the coefficient of utilization is 0.65. Find the average illumination	5	CO3	K3	PO4
5	Prepare and estimate the material required for wiring the below house. 	5	CO5	K5	PO2
6	Write a short note Earth Tester?	5	CO3	K4	PO5
7	State and Explain Lambert's cosine law?	5	CO3	K3	PO4

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

Q. No.	QUESTIONS	Marks	COs	KL	PO
8	Two sources of candle power or luminous intensity 200 candela and 250 candela are mounted at 8 and 10 m, respectively. The horizontal distance between the lamp posts is 40 m, calculate the illumination in the middle of the posts	10	CO3	K4	PO4
9	Explain different types of Wiring?	10	CO2	K3	PO2
10	Describe the construction and working principle of MCB?	10	CO5	K1	PO2

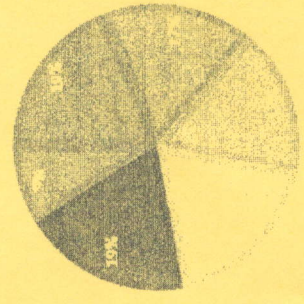
11	Estimate the amount of material required for pipe earthing with neat sketch?	10	CO4	K4	PO4
12	Explain briefly advantages and disadvantages of low voltage fuse	10	CO4	K5	PO5

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

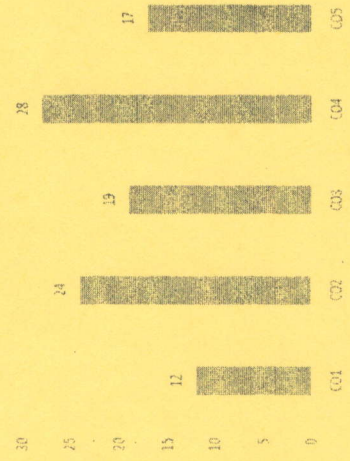
CO1	To study the fundamentals about IoT
CO2	To study about IoT Access technologies
CO3	To study the design methodology and different IoT hardware platforms.
CO4	To study the basics of IoT Data Analytics and supporting services.
CO5	To study about various IoT case studies and industrial applications.

GRAPHICAL REPRESENTATION

BLOOM'S LEVEL WISE MARKS DISTRIBUTION



Course Outcome Wise Marks Distribution



ARKA JAIN University
Jharkhand



END SEM EXAMINATION
School of Engineering & IT

Branch	Electrical and Electronics Engineering	Program	Diploma
Subject Name	Internet of Things	Semester	VI
		Year	April 2023
Time: 3 Hour	<ul style="list-style-type: none"> 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 Phones or any kind of Written Material, Arguments with the Invigilator or Discussing with Co-Student will come under Unfair Means and will Result in the Cancellation of the Papers. 		
Max. Marks : 70			
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 Q1-x) – 20 Marks

Q. N1	QUESTIONS	Marks	COs	KL	PO
i	Define the sensor used in IoT.	2	CO4	K2	PO1
ii	Enlist the name of TCP/IP model layers.	2	CO5	K1	PO1
iii	Write any two applications of Ethernet in IoT.	2	CO1	K1	PO1
iv	How IEEE 802.15.4 is different from IEEE 1901.2a?	2	CO4	K4	PO1
v	Define ZigBee IP.	2	CO4	K3	PO2
vi	List the name of two different microcontroller used in Arduino	2	CO2	K5	PO1
vii	Write any four application of IoT.	2	CO2	K5	PO2
viii	What is Raspberry Pi	2	CO4	K4	PO2
ix	Define the network gateways.	2	CO3	K6	PO2

Q. No.	QUESTIONS	Marks	COs	KL	PO
2	Draw the structure of LoRa WAN Layers.	5	CO1	K5	PO1
3	Explain the Embedded Computing Logic for IoT.	5	CO1	K1	PO1
4	Discuss the IoT Platforms used in Raspberry Pi.	5	CO3	K4	PO2
5	Enlist and explain the common information set which is provided about the IoT access technologies.	5	CO4	K6	PO1
6	Discuss the different communication options used in IEEE 802.15.4-2015.	5	CO4	K2	PO1
7	Explain any five features specified by IEEE 802.11ah for the MAC layer.	5	CO5	K3	PO2
Section C (Answer any THREE out of FIVE) – 30 Marks- (Each question Carries 10 Marks)					
Q. No.	QUESTIONS	Marks	Cos	KL	PO
8	Draw and explain the Building Blocks of IoT.	10	CO2	K5	PO1
9	Explain the entire step used to set up the Arduino IDE on computer and prepare the board to receive the program via USB cable.	10	CO2	K2	PO2
10	Draw and explain the ZigBee IP protocol stack for IoT.	10	CO3	K1	PO2
11	Write the short notes on the followings: (i) Smart washing machine (ii) Challenges faced by IoT industry	10	CO5	K3	PO1
12	Draw and explain the IEEE 802.15.4 MAC Format for IoT.	10	CO4	K4	PO1

Draw the frame format of LoRa WAN MAC.

2

CO3

K6

PO2

Section B (Answer any FOUR out of SIX) – 20 Marks
(Each question Carries 5 Marks)

Q. No.

QUESTIONS

Marks

COs

KL

PO

2

Draw the structure of LoRa WAN Layers.

5

CO1

K5

PO1

3

Explain the Embedded Computing Logic for IoT.

5

CO1

K1

PO1

4

Discuss the IoT Platforms used in Raspberry Pi.

5

CO3

K4

PO2

5

Enlist and explain the common information set which is provided about the IoT access technologies.

5

CO4

K6

PO1

6

Discuss the different communication options used in IEEE 802.15.4-2015.

5

CO4

K2

PO1

7

Explain any five features specified by IEEE 802.11ah for the MAC layer.

5

CO5

K3

PO2

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

Q. No.

QUESTIONS

Marks

Cos

KL

PO

8

Draw and explain the Building Blocks of IoT.

10

CO2

K5

PO1

9

Explain the entire step used to set up the Arduino IDE on computer and prepare the board to receive the program via USB cable.

10

CO2

K2

PO2

10

Draw and explain the ZigBee IP protocol stack for IoT.

10

CO3

K1

PO2

11

Write the short notes on the followings:
(i) Smart washing machine (ii) Challenges faced by IoT industry

10

CO5

K3

PO1

12

Draw and explain the IEEE 802.15.4 MAC Format for IoT.

10

CO4

K4

PO1

04/05/2024 M 260



ARKA JAIN University
Jharkhand

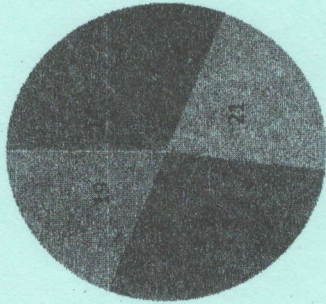


END SEM EXAMINATION
School of Engineering & IT

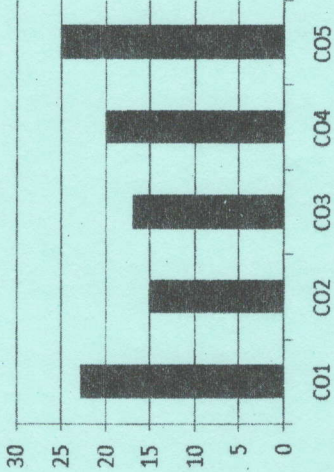
Course Outcomes	CO1	Understanding the dynamic role of entrepreneurship and small businesses.
	CO2	Organizing and Managing a Small Business
	CO3	Financial Planning and Control
	CO4	Forms of Ownership for Small Business
	CO5	Strategic Marketing Planning

GRAFICAL REPRESENTATION

Bloom's Level Wise Mark Distribution



Course Outcome Wise Mark Distribution



Branch	ME, CSE & EEE	Program	Diploma
Subject Name	Entrepreneurship and Start-ups	Semester	VI
		Year	April 2024

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 Phones or any kind of Written Material, Arguments with the Invigilator or Discussing with Co-Student will come 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 02 Marks from Q1-i to Q1-x) - 20 Marks

Q.N1	QUESTIONS	Marks	COs	KL	PO
i	What do you mean by Entrepreneurship?	2	CO1	K1	PO1
ii	Define feasibility test.	2	CO5	K2	PO3
iii	How to Identify the target market?	2	CO5	K3	PO5
iv	Define motivation?	2	CO4	K1	PO1
v	Why competition evaluation is needed?	2	CO1	K4	PO2
vi	Define bankruptcy.	2	CO1	K1	PO1
vii	Highlight the advantages of License for any business.	2	CO1	K4	PO5
viii	What is the function of MUDRA project?	2	CO1	K1	PO1
ix	What is a risk analysis?	2	CO1	K3	PO1
x	Write the full form of PMEGP	2	CO1	K2	PO2

Section B (Answer any FOUR out of SIX) - 20 Marks
(Each question Carry 5 Marks)

Q. No.	QUESTIONS	Marks	COs	KL	PO
2	What are the methods and sources of Idea generation?	5	CO4	K3	PO1
3	Explain the organization structure with flow chart.	5	CO2	K1	PO2
4	Explain the Contents and guidelines for report preparation.	5	CO1	K2	PO3
5	Draw a flow chart for any Business Plan. Elaborate briefly.	5	CO3	K1	PO2
6	Discuss the role of Online education in economy.	5	CO5	K1	PO5
7	Explain the Classification of Entrepreneurs.	5	CO4	K2	PO4

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

Q. No.	QUESTIONS	Marks	COs	KL	PO
8	Differentiate between entrepreneurs and managers.	10	CO1	K3	PO1
9	Explain the Strategy Development for Businesses.	10	CO1	K4	PO1
10	How financial institutions help in Entrepreneurial Development. Give an example.	10	CO2	K5	PO3
11	Define NABARD. Explain its importance and role in development.	10	CO2	K5	PO5
12	Define entrepreneur. Explain the characteristic & traits of an entrepreneur	10	CO2	K1	PO3

Branch	ME, CSE & EEE	Program	Diploma
Subject Name	Indian Constitution	Semester	VI
		Year	April 2024

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 Four out of Six of Section B
- Answer Any Three out of Five of Section C
- Possession of Mobile Phones or any kind of Written Material, Arguments with the Invigilator or Discussing with Co-Student will come 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 Marks from Q1-i to Q1-x) – 10 Marks

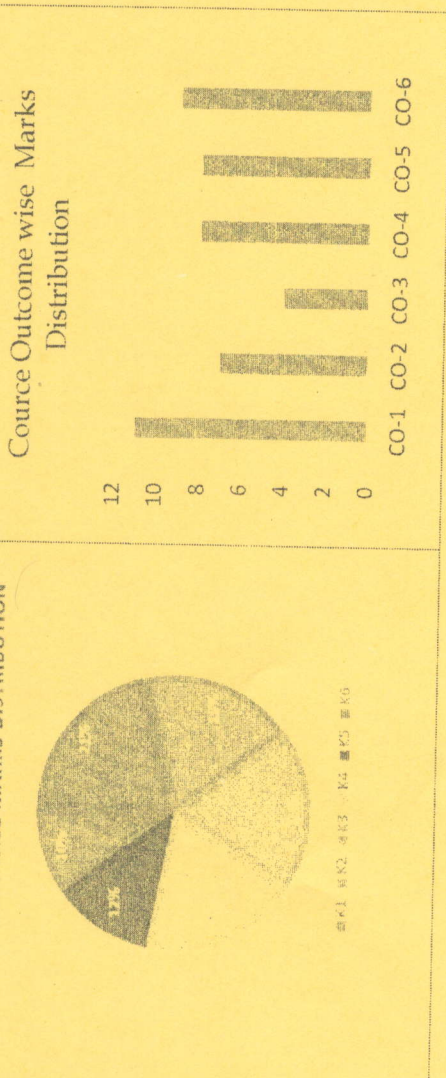
Q. N1	QUESTIONS	Marks	Cos	KL	PO
i	Who was the first Prime Minister of India?	1	CO1	K2	PO1
ii	How many articles are in Constitution of India?	1	CO3	K1	PO2
iii	When was the Constituent Assembly of India formed, and who was its first president?	1	CO1	K1	PO2
iv	What is the role of municipal corporation in local governance?	1	CO1	K3	PO2
V	Who was the chairman of the drafting committee of the Indian Constitution?	1	CO4	K1	PO1
vi	When constitution of India came into effect?	1	CO2	K2	PO1
vii	Name any two Directive Principles of State Policy mentioned in the Constitution.	1	CO2	K3	PO1
viii	Who is the constitutional head of the Indian Union?	1	CO3	K4	PO1
ix	What is the role of a state election commission in the electoral process?	1	CO1	K5	PO2
x	What is the significance of local administration in the context of governance?	1	CO2	K4	PO1

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

CO1	Recall historical background of the Indian constitution.
CO2	Observe importance for building democratic India, the structure of Indian government, the structure of state government, the local Administration
CO3	Develop the knowledge on directive principle of state policy, the knowledge in strengthening of the constitutional institutions like CAG, Election Commission and UPSC for sustaining democracy.
CO4	Analyze the History, features of Indian constitution, the role of Governor and Chief Minister, of state election commission, decentralization of power between central, state and local self-Government.
CO5	Assess Preamble, Fundamental Rights and Duties, Zilla Panchayat, block level organization, various commissions of viz SC/ST/OBC and women.
CO6	Create ideological framework relied upon by the framers of the Constitution of India, the system of government and role of judiciary by discussing and analyzing the rights and duties specified under the Constitution of India.

GRAPHICAL REPRESENTATION

BLOOM'S LEVEL WISE MARKS DISTRIBUTION



Section B (Answer any FIVE out of SIX) – 10 Marks
(Each question Carry 2 Marks)

Q. No.	QUESTIONS	Marks	Cos	KL	PO
2	Name any two Directive Principles of State Policy mentioned in the Constitution.	2	CO1	K2	PO1
3	What is the significance of the council of ministers in the functioning of the state government?	2	CO1	K1	PO2
4	What are the fundamental Rights?	2	CO3	K5	PO2
5	What is the significance of Rajya Sabha?	2	CO4	K3	PO2
6	What is the tenure of the chief election commissioner of India?	2	CO4	K5	PO1
7	Mention any two roles and responsibilities of a chief minister in a state government.	2	CO3	K4	PO1

Section C (Answer any THREE out of FIVE) – 15 Marks
(Each question Carry 5 Marks)

Q. No.	QUESTIONS	Marks	Cos	KL	PO
8	Mention the difference between Directive Principles and Fundamental Rights.	5	CO1	K1	PO1
9	Short note on 'Zila Panchayat'.	5	CO2	K3	PO1
10	What are the powers of the president of India?	5	CO2	K4	PO2
11	What is the state secretariat, and what functions does it perform in the state government?	5	CO4	K2	PO2
12	What are the constitutional powers and functions of a governor in a state?	5	CO3	K6	PO2

Branch	ME, CSE & EEE	Program	Diploma
Subject Name	Indian Constitution	Semester	VI
		Year	April 2024

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 Four out of Six of Section B
- Answer Any Three out of Five of Section C
- Possession of Mobile Phones or any kind of Written Material, Arguments with the Invigilator or Discussing with Co-Student will come 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

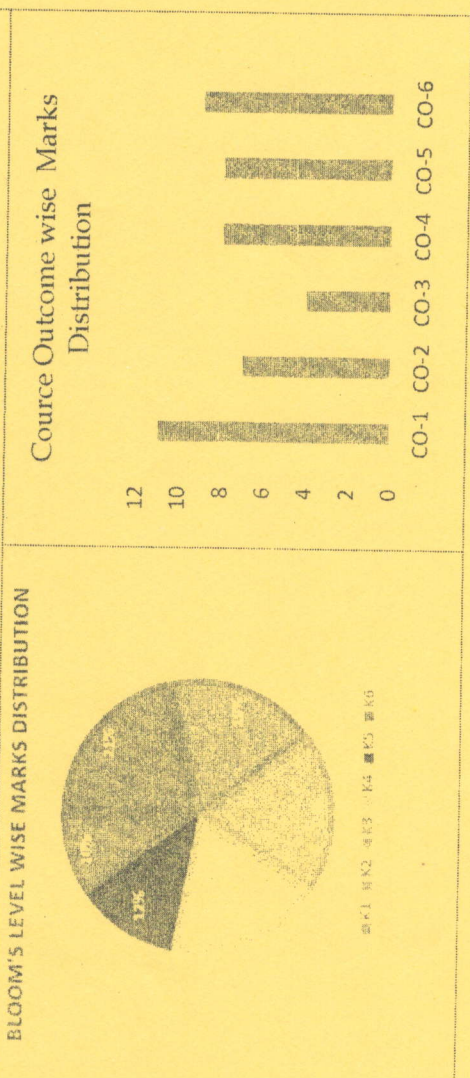
Section A (Each question Carry 01 Marks from Q1-i to Q1-x) – 10 Marks

Q. N 1	QUESTIONS	Marks	CoS	KL	PO
i	Who was the first Prime Minister of India?	1	CO1	K2	PO1
ii	How many articles are in Constitution of India?	1	CO3	K1	PO2
iii	When was the Constituent Assembly of India formed, and who was its first president?	1	CO1	K1	PO2
iv	What is the role of municipal corporation in local governance?	1	CO1	K3	PO2
V	Who was the chairman of the drafting committee of the Indian Constitution?	1	CO4	K1	PO1
vi	When constitution of India came into effect?	1	CO2	K2	PO1
vii	Name any two Directive Principles of State Policy mentioned in the Constitution.	1	CO2	K3	PO1
viii	Who is the constitutional head of the Indian Union?	1	CO3	K4	PO1
ix	What is the role of a state election commission in the electoral process?	1	CO1	K5	PO2
x	What is the significance of local administration in the context of governance?	1	CO2	K4	PO1

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

CO1	Recall historical background of the Indian constitution.
CO2	Observe importance for building democratic India, the structure of Indian government, the structure of state government, the local Administration
CO3	Develop the knowledge on directive principle of state policy, the knowledge in strengthening of the constitutional institutions like CAG, Election Commission and UPSC for sustaining democracy.
CO4	Analyze the History, features of Indian constitution, the role of Governor and Chief Minister, of state election commission, decentralization of power between central, state and local self-Government.
CO5	Assess Preamble, Fundamental Rights and Duties, Zilla Panchayat, block level organization, various commissions of viz SC/ST/OBC and women.
CO6	Create ideological framework relied upon by the framers of the Constitution of India, the system of government and role of judiciary by discussing and analyzing the rights and duties specified under the Constitution of India.

GRAPHICAL REPRESENTATION



Section B (Answer any FIVE out of SIX) – 10 Marks
(Each question Carry 2 Marks)

Q. No.	QUESTIONS	Marks	Cos	KL	PO
2	Name any two Directive Principles of State Policy mentioned in the Constitution.	2	CO1	K2	PO1
3	What is the significance of the council of ministers in the functioning of the state government?	2	CO1	K1	PO2
4	What are the fundamental Rights?	2	CO3	K5	PO2
5	What is the significance of Rajya Sabha?	2	CO4	K3	PO2
6	What is the tenure of the chief election commissioner of India?	2	CO4	K5	PO1
7	Mention any two roles and responsibilities of a chief minister in a state government.	2	CO3	K4	PO1

Section C (Answer any THREE out of FIVE) – 15 Marks-
(Each question Carry 5 Marks)

Q. No.	QUESTIONS	Marks	Cos	KL	PO
8	Mention the difference between Directive Principles and Fundamental Rights.	5	CO1	K1	PO1
9	Short note on 'Zila Panchayat'.	5	CO2	K3	PO1
10	What are the powers of the president of India?	5	CO2	K4	PO2
11	What is the state secretariat, and what functions does it perform in the state government?	5	CO4	K2	PO2
12	What are the constitutional powers and functions of a governor in a state?	5	CO3	K6	PO2