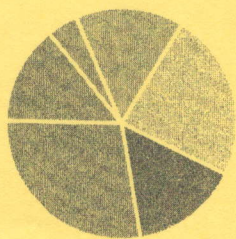


CO- Course Outcomes, **KL-** Knowledge Level, **PO** – Program Outcome

CO1	Analyze the various modes of failure of machine components under different load patterns.
CO2	Design and prepare part and assembly drawings.
CO3	Use design data books and different codes of design.
CO4	Select standard components with their specifications from manufacturer's catalogue.
CO5	Develop drawings on CAD software.

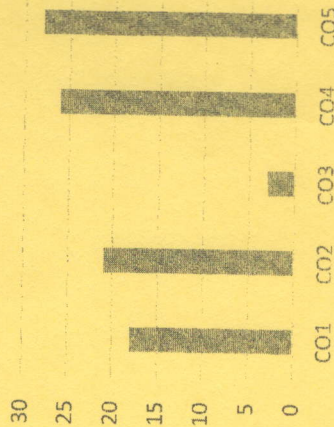
GRAPHICAL REPRESENTATION

Bloom's Level wise Marks Distribution



■ K1 ■ K2 ■ K3 ■ K4 ■ K5 ■ K6

Course Outcome Wise Marks Distribution



ARKAJAIN University
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END TERM EXAMINATION
School of Engineering & IT

Branch	Mechanical Engineering	Program	Diploma
Subject Name	Design of Machine Element	Semester	6th
		Year	2023/ Even
Time: 3 Hour Max. Marks : 70	<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 <u>Mobile Phones</u> or any kind of <u>Written Material, Arguments</u> with the <u>Invigilator</u> or <u>Discussing with Co-Student</u> will come under <u>Unfair Means</u> and will <u>Result in the Cancellation of the Papers.</u> 		
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-xx) – 20 Marks

Q. N 1	QUESTIONS	Marks	COs	KL	PO
i	What is an S-N Curve?	2	CO1	K1	PO2
ii	Define modulus of resilience and proof resilience.	2	1	K1	PO1
iii	How the machine design may be classified?	2	2	K2	PO3
iv	What is meant by working stress and how it is calculated from the ultimate stress or yield stress of material?	2	1	K5	PO2
v	Describe the common materials used in mechanical engineering design.	2	3	K6	PO4
vi	List the important factors that influence the magnitude of factor of safety	2	4	K4	PO5
vii	List out the various phases of design process.	2	1	K1	PO1
viii	Give some methods of reducing stress concentration.	2	2	K2	PO3
ix	Which theory of failure is suitable for the design of brittle materials?	2	1	K5	PO2
x	Differentiate between repeated stress and reversed stress	2	3	K6	PO4

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

Q. No.	QUESTIONS	Marks	COs	KL	PO
2	Elaborate Design philosophy and Procedures with flow chart	5	1	K1	PO1
3	Elaborate the steps and Procedure used in designing Knuckle Joint	5	1	K5	PO2
4	Explain the different types of Bearings	5	4	K4	PO5
5	Define notch sensitivity. State the relation between stress concentration factor, fatigue stress concentration factor and notch sensitivity.	5	1	K1	PO1
6	Elaborate an S-N Curve	5	1	K5	PO2
7	Define shock factor and what does it indicate.	5	4	K4	PO5

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

Q. No.	QUESTIONS	Marks	COs	KL	PO
8	Elaborate the steps and Procedure used in designing Cotter Joint with diagram	10	1	K1	PO1
9	Explain stress strain diagram for Ductile and Brittle Materials.	10	1	K5	PO2
10	Explain "hole basic system" and "shaft basic system" with diagram.	10	4	K4	PO5
11	Which theory of failure is suitable for the design of Ductile and brittle materials? Elaborate.	10	2	K2	PO3
12	Explain steps and Procedure used in designing Design of Screw Jack with diagram	10	1	K1	PO1



O- 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 conservation 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.

GRAFICAL REPRESENTATION

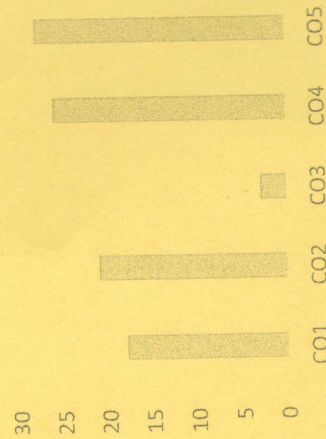
Bloom's Level wise Marks Distribution



■ K1 ■ K2 ■ K3 ■ K4 ■ K5 ■ K6

Course Outcome Wise Marks Distribution

Distribution



Branch	Electrical & Electronics Engineering	Program	Diploma
Subject Name	Building Electrification	Semester	6th
		Year	2023/ Even
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 <u>Written Material, Arguments with the Invigilator or Discussing with Co-Student</u> will comes under <u>Unfair Means</u> and will <u>Result in the Cancellation of the Papers.</u> 		
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-xx) – 20 Marks

Q. N1	QUESTIONS	Marks	COs	KL	PO
i	What is a fuse? Give some examples.	2	CO3	K5	PO4
ii	What is Service Main connection?	2	CO1	K1	PO1
iii	What are the factors affecting the selection of Wiring?	2	CO2	K4	PO2
iv	What is armoured cable?	2	CO3	K5	PO4
v	What is Chisel?	2	CO5	K5	PO3
vi	Mention the various types of Lamp Holders.	2	CO1	K2	PO1
vii	Describe Rat-tail joint in wires.	2	CO1	K3	PO1
viii	Write a brief note on Plumb bob.	2	CO1	K2	PO1
ix	Give the different types of switches based on operation.	2	CO3	K5	PO4
x	Write a short note on MCB.	2	CO3	K5	PO4

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

(Each question 5 Marks)

Q. No.	QUESTIONS	Marks	COs	KL	PO
2	Write short note on: i) Metal Clad cable & ii) Shielded or screened cable Write the various labelling of cables.	5	CO1	K1	PO1
3	What are the different classifications of cables on the basis of construction? Also mention the classification of Cables on the basis of voltage levels.	5	CO3	K5	PO4
4	What is i) Neutral Link & ii) Test Lamp Briefly describe the different types of switches based on operation.	5	CO1	K1	PO1
5	Explain Conduit Wiring System with its advantages & disadvantages.	5	CO2	K2	PO2
6	Write a note on "Distribution Box". Describe fixture joint & knotted tap joint in wires.	5	CO4	K6	PO3
7	What short note on ELCB.	5	CO1	K1	PO1

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

(Each question Carry 10 Marks)

Q.No.	QUESTIONS	Marks	COs	KL	PO
8	Define Service Main line. Also describe Underground service connection with its advantages & disadvantages with proper diagram.	10	CO3	K5	PO4
9	Explain the working of Godown Wiring System & Staircase Wiring System with suitable circuit diagram.	10	CO3	K5	PO4
10	Explain Casing & Capping Wiring System and Cleat Wiring System with its advantages & disadvantages.	10	CO3	K5	PO4
11	Draw the planning flow chart for single phase & three phase supply building wiring installations. Also list the sequence to be followed to prepare estimate for an electrical installation.	10	CO4	K6	PO3
12	Write a note on "Earthing" & its importance. Explain in detail Rod Earthing	10	CO2	K2	PO2



END TERM EXAMINATION
School of Engineering & IT

Branch	Computer Science and Engineering	Program	Diploma
Subject Name	Advance Computer Network	Semester	6 th
		Year	2023/Even

• 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.

Time: 3 Hour Max.
Marks : 70

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

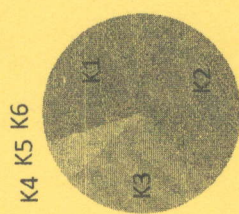
Section A (Each question Carry 02 Marks from Q1-i to Q1-x) – 20 Marks			
Q.N1	QUESTIONS	Marks	PO
i	What is the difference between logical address and physical address?	2	PO3
ii	What is Frame Relay?	2	PO3
iii	How is https different from http?	2	PO1
iv	What is a Gateway? Name its two types.	2	PO4
v	Define LAN and MAN with examples.	2	PO1
vi	What is packet switching?	2	PO3
vii	Explain any 2 classes of IPv4.	2	PO1
viii	With reference to a network, what is bandwidth?	2	PO3
ix	Compare Half Duplex and Full Duplex.	2	PO4
x	How is a Router different from a Repeater?	2	PO1

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

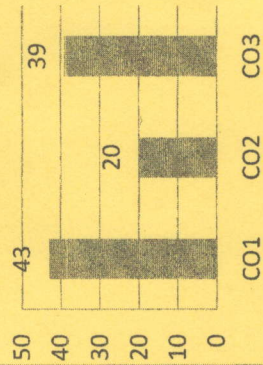
CO1	Understanding core concepts/theories/algorithms of computer networks	PO – Program Outcome
CO2	Some hands-on capability on various network devices and tools	
CO3	Capability to design and implement a computer network	

GRAPHICAL REPRESENTATION

Bloom's Level wise marks distribution



Course Outcome Wise Marks Distribution



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

(Each question 5 Marks)

Q. No.	QUESTIONS	Marks	COs	KL	PO
2	Construct a DVR table for node B in a network having 5 nodes such that A->B=1, B->E=9, E->D=2, C->D=4, A->C=5, C->B=3	5	CO3	K6	PO4
3	Write down the expansion of the terms: TDMA, CDMA, FTP, UDP, POP	5	CO2	K1	PO1
4	Compare the star and mesh architecture.	5	CO3	K2	PO4
5	Explain the components of Routing Table.	5	CO3	K4	PO4
6	What is the difference between ipv4 and ipv6?	5	CO1	K2	PO3
7	Explain with valid points how does firewall acts as a layer of security.	5	CO2	K3	PO1

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

(Each question Carry 10 Marks)

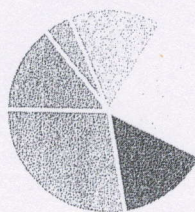
Q. No.	QUESTIONS	Marks	COs	KL	PO
8	Explain the different topologies of the network with neat diagrams of each.	10	CO1	K2	PO3
9	What are the limitations of IPv4? How does IPv6 overcomes these limitations?	10	CO3	K3	PO4
10	What is a Router? Explain the working of a router and its protocol.	10	CO1	K3	PO3
11	How CDMA is different from GSM? Explain the working of Proxy Server.	10	CO3	K1	PO4
12	Write short notes on any 2: Authentication, VPN, VoLTE, GSM.	10	CO1	K2	PO3

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

CO1	Discuss about importance of water and its quality analysis.
CO2	Demonstrate different tests on accessing water quality and sewage characteristics.
CO3	Analyze various physico-chemical and biological parameters of water in case of quality requirements
CO4	Suggest various types of treatment methods required to purify raw water with different contaminants.
CO5	Assess complete water quality assessment for EIA and domestic supplies

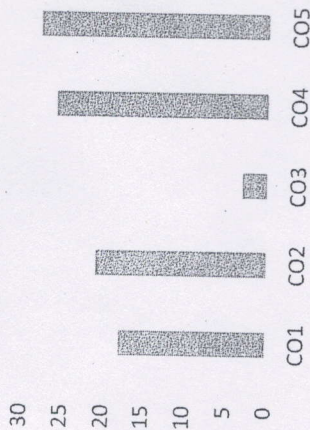
GRAFICAL REPRESENTATION

Bloom's Level wise Marks Distribution



■ K1 ■ K2 ■ K3 ■ K4 ■ K5 ■ K6

Course Outcome Wise Marks Distribution



ARKAJAIN University
Jharkhand

END TERM EXAMINATION
School of Engineering & IT

Branch	Civil Engineering	Program	Diploma
Subject Name	Public Health Engineering	Semester	6th
		Year	2023/ Even

- 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

Time: 3 Hour
Max. Marks : 70

• 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	Write the type of sewerage system.	2	CO1	K1	PO2
ii	Write some objectives of water supply.	2	CO1	K1	PO2
iii	Components of water supply system.	2	CO2	K1	PO5
iv	Explain Provision of free board.	2	CO1	K1	PO6
v	Define future forecasts for sewage discharge	2	CO3	K1	PO2
vi	Explain source of water and Transmission.	2	CO1	K1	PO7
vii	Discuss surface and sub-surface water.	2	CO1	K1	PO2
viii	Explain storage Reservoirs.	2	CO4	K1	PO6
ix	What do you understand by sub Surface sources of water?	2	CO1	K1	PO2
x	Define sewage, Domestic sewage.	2	CO1	K1	PO2

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

Q. No.	QUESTIONS	Marks	COs	KL	PO
2	Explain the following terms i) Sewage ii) sewer iii) Sewerage iv) Sullage v) Drains	5	CO1	K3	PO6
3	Discuss the selection parameter for source of water	5	CO1	K1	PO2
4	Explain biological characteristics of water sample.	5	CO1	K2	PO2
5	Explain storage Reservoirs how it is related to controlling water	5	CO1	K4	PO4
6	Components of sewerage system with net sketch diagram.	5	CO1	K1	PO2
7	Write the Physical and chemical Characteristics of sewage.	5	CO1	K2	PO5

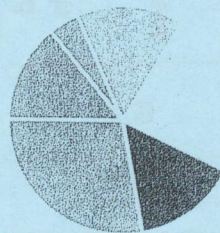
Section C (Answer any THREE out of FIVE) – 30 Marks-
(Each question Carry 10 Marks)

Q. No.	QUESTIONS	Marks	COs	KL	PO
8	Discuss the Quality parameters criteria for Municipal water produced.	10	CO1	K4	PO2
9	Discuss the Physical, Chemical, Microbiological, and Radiological characteristics of water.	10	CO2	K3	PO5
10	Discuss how we can design and plan for sewerage system also design parameters.	10	CO4	K3	PO2
11	What do you understand by water demand discuss various type of water demand. Factor affecting per capita demand.	10	CO3	K4	PO5
12	Write the method of water distribution system. Also explain Gravity and combined gravity system.	10	CO5	K3	PO6

CO- Course Outcomes,	KL- Knowledge Level,	PO – Program Outcome
CO1	Understand design principles reinforced concrete sections.	
CO2	Apply the provisions of IS 456:2000	
CO3	Analyse reinforced concrete beam & column & shear sections	
CO4	Select the most appropriate or economic section under a given condition of load & supports	
CO5	Design reinforced concrete sections	

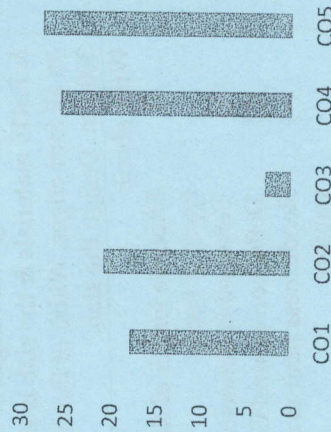
GRAFICAL REPRESENTATION


Bloom's Level wise Marks Distribution



■ K1 ■ K2 ■ K3 ■ K4 ■ K5 ■ K6

Course Outcome Wise Marks Distribution



 ARKAJAIN University Jharkhand	END TERM EXAMINATION School of Engineering & IT				
	Branch	Civil Engineering	Program	Diploma	
Subject Name	Advanced Design of Structures	Semester	6th	Year	2023/ Even
Time: 3 Hour Max. Marks : 70	<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 IS 456:2000 & SP-16 Codebook is allowed. Possession of Mobile Phones or any kind of Written Material, Arguments with the Invigilator or Discussing with Co-Student will comes under <u>Unfair Means</u> 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-xx) – 20 Marks					
Q. N1	QUESTIONS	Marks	COs	KL	PO
i	Write the formula to calculate Bending moment in: i) Simply supported beam with UDL. ii) Simply supported beam with Point load.	2	CO2	K1	PO2
ii	What is the value of Limiting depth factor(K) for Fe250, Fe415, Fe500?	2	CO2	K1	PO2
iii	What is the formula to calculate Effective width of flange for: I) Isolated T beam & L beam II) Continuous T beam & L beam	2	CO2	K1	PO5
iv	What is the minimum %age of Reinforcement Required for Slab in Case of: I) Mild Steel Bars II) HYSD bars	2	CO2	K1	PO6
v	What is the Slenderness Limit to Ensure Lateral Stability for: I) Simply supported Beam II) Cantilever beam	2	CO1	K1	PO2

vi	What are the types of column based on loading?	2	CO2	K1	PO7
vii	Define One way & Two way slab.	2	CO2	K1	PO2
viii	What is the critical section taken in footing in case of Bending (Flexure). One way shear & two way shear?	2	CO1	K1	PO6
ix	What is the maximum spacing of main bars & Distribution bars in Slab?	2	CO1	K1	PO2
x	What is Span/effective depth ratio of Cantilever beam, Simply Supported Beam & Continuous Beam?	2	CO2	K1	PO2

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

Q. No.	QUESTIONS	Marks	COs	KL	PO
2	Explain Footing. Explain different types of footings with diagrams.	5	CO1, CO3	K1, K2	PO6
3	Write all the Codal Provisions For columns based on IS 456:2000.	5	CO1	K1, K2	PO2
4	Explain different types of columns based on their: I) Slenderness ratio II) Reinforcement III) loading	5	CO1	K1, K2	PO2
5	Write Down the Features of Slab.	5	CO2	K1, K2	PO4
6	Explain Staircase & its parts with neat & clean diagram. Also Draw the Types of Staircases.	5	CO2	K1, K2	PO2
7	Find the moment of resistance of a T beam having Web width of 240 mm, effective depth of 400mm, effective flange width of 740mm and flange thickness equal to 100mm. The beam is reinforced with 5-16 mm dia bars, Fe415, use M20 concrete.	5	CO1, CO2	K1, K2	PO5

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

Q. No.	QUESTIONS	Marks	COs	KL	PO
8	Design a spread footing to carry an axial load of 1200KN through a column of size 400X450mm having 4-25mm dia bars. Bearing capacity of soil is 105KN/m ² . Assume footing to be 1.25m Below ground level. Use M20, Fe415.	10	CO5, CO2	K4, K5	PO2
9	Design a RCC slab for a room measuring 4mX5m inside dimension. The slab carries a live load of 2KN/m. & is finished with 20mm thick Granolithic finishing having unit weight of 24KN/m ³ . Use M20 & Fe415 materials & the slab is simply supported on all four edges. Width of the supporting wall is 300mm. Design the slab.	10	CO5, CO2	K4, K5	PO5
10	Write about: i) Effective length of the span in different types of beams ii) Permissible deflection iii) Deflection control Criteria iv) Slenderness limit to ensure lateral stability	10	CO2	K1, K2	PO2
11	A simply supported roof slab of clear size 7mX3m subjected to a live load of 4KN/ m. Use M25 concrete & Fe415 steel. The slab rests on 230mm thick walls all around. Design the slab	10	CO5, CO2	K4, K5	PO5
12	Analyse a T- beam in following cases with Diagrams. i) When the depth of the neutral axis(Xu) lies on the flange section. ii) When the depth of the neutral axis(Xu) lies on the Web section a) $D_f < 3/7X_u$ b) $D_f > 3/7X_u$	10	CO2	K1, K2	PO6



END TERM EXAMINATION
School of Engineering & IT

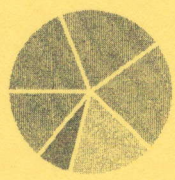
Branch	Computer Science & Engineering	Program	Diploma
Subject Name	Software Testing	Semester	6th
		Year	2022/Even
Time: 3 Hour Max. Marks : 70	<ul style="list-style-type: none"> Start writing from 2nd page onwards; don't write on the 1st Page Backside Answer all Questions of Section A (Compulsory) Answer Any Four out of Six of Section B Answer Any Three out of Five of Section C Possession of <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 in the 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

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

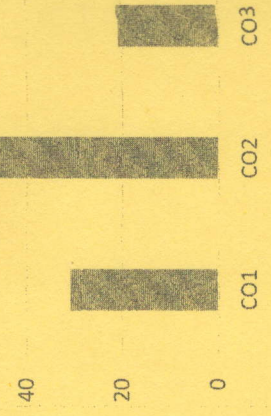
GRAFICAL REPRESENTATION

Bloom's Level Wise Marks Distribution



■ K1 ■ K2 ■ K3 ■ K4 ■ K5 ■ K6

Course Outcome Wise Marks Distribution



Q. N 1	QUESTIONS	Marks	COs	KL	PO
i	What is oracle in test case?	2	CO1	K1	PO2
ii	What is JIRA?	2	CO3	K2	PO3
iii	What do you understand by real time testing?	2	CO1	K3	PO1
iv	What is defect management in testing?	2	CO2	K6	PO4
v	What is meant by test automation?	2	CO3	K4	PO3
vi	What is acceptance testing?	2	CO2	K5	PO2
vii	What is Test Planning?	2	CO2	K2	PO3
viii	What type of testing is functional testing?	2	CO2	K2	PO3
ix	Where automation testing is not suitable?	2	CO3	K1	PO1
x	Why is software testing so hard?	2	CO1	K6	PO4

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

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

(Each question 5 Marks)

Q. No.	QUESTIONS	Marks	COs	KL	PO
2	What is the difference between static testing and dynamic testing?	5	CO2	K3	PO3
3	What is Functional Testing? Types & Examples	5	CO2	K2	PO2
4	What are top-down and bottom-up integration testing explain ?	5	CO2	K1	PO3
5	What is regression testing? When is it performed?	5	CO2	K4	PO2
6	What are the four steps of real time system testing?	5	CO3	K3	PO1
7	What are the 7 stages of testing?	5	CO1	K5	PO4

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

(Each question Carry 10 Marks)

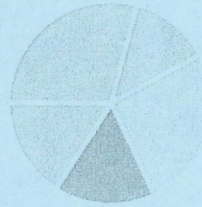
Q. No.	QUESTIONS	Marks	COs	KL	PO
8	Discuss the different levels of testing and their objectives.	10	CO1	K3	PO3
9	What is defect tracking? Explain the process of defect tracking.	10	CO3	K2	PO2
10	What are different types of testing? Explain each of them	10	CO2	K6	PO3
11	What is meant by software project management? Explain in details	10	CO1	K4	PO3
12	What are the steps in defect management process?	10	CO2	K1	PO1

O- Course Outcomes, **KL- Knowledge Level,** **PO - Program Outcome**

CO1	Identify the factors that contributed to the emergence of IoT.
CO2	Understand the application areas of IOT .
CO3	Apply Arduino to get automations as per requirement.
CO4	Analyze the revolution of Internet in Mobile Devices, Cloud & Sensor Networks.
CO5	Evaluate building blocks of Internet of Things and characteristics.
CO6	Design an IoT device to work with a Cloud Computing infrastructure.

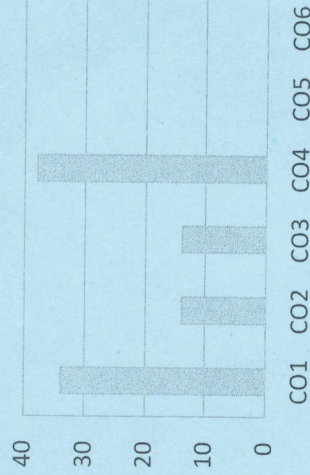
GRAPHICAL REPRESENTATION

Bloom's level wise Marks Distribution



level-1 = level-2 = level-3
level-4 = level-5 = level-6

Course Outcome wise Marks Distribution



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University
Jharkhand

END TERM EXAMINATION
School of Engineering & IT

Branch	Electronics and Electrical Engineering	Program	Diploma
Subject Name	Internet of things	Semester	6th
		Year	2023/Even
Time: 3 Hour Max. Marks : 70	<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 <u>Written Material</u>, <u>Arguments with the Invigilator</u> or <u>Discussing with Co-Student</u> will come under <u>Unfair Means</u> and will <u>Result in the Cancellation</u> of the Papers. 		
Knowledge Level (KL)	K1 : Remembering K2 : Understanding	K3 : Applying K4 : Analysing	K5 : Evaluating K6 : Creating

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

Q. N	QUESTIONS	Marks	COs	KL	PO
1					
i	Define IOT? Mention some advantages of IOT.	2	CO1	K1	PO2
ii	Define IEEE 802.11 standard.	2	CO1	K2	PO3
iii	What are the advantages of IoT?	2	CO4	K3	PO1
iv	What do you mean by BLE (Bluetooth Low Energy)?	2	CO3	K2	PO4
v	What are sensors and Actuators? Define briefly	2	CO2	K3	PO3
vi	Define HTTP and why it is used?	2	CO4	K3	PO2
vii	What is Sketch in Arduino IDE?	2	CO2	K2	PO3
viii	What is Raspbian? What is the function of Raspbian.	2	CO4	K2	PO3

ix	Name the different types of sensors in IoT	2	CO3	K1	PO1,
x	Write the functions of Analog pins in Arduino Board.	2	CO4	K2	PO4

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

Q. No.	QUESTIONS	Marks	COs	KL	PO
2	What is Protocol? Explain IPV4 and IPV6 in details.	5	CO2	K3	PO3
3	Draw and name the protocols layers with a neat diagram.	5	CO4	K2	PO2
4	Draw and explain Raspberry Pi Board pins.	5	CO3	K2	PO3
5	Sketch the python programming on Arduino IDE for DHT Sensor	5	CO4	K2	PO2
6	Explain Software Defined Networking with a neat diagram.	5	CO3	K3	PO1
7	Explain Network functions virtualization with a neat diagram.	5	CO2	K2	PO4

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

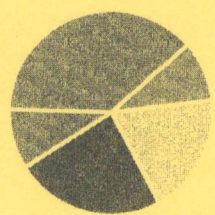
Q. No.	QUESTIONS	Marks	COs	KL	PO
8	What is IOT? Explain using physical design of IOT.	10	CO1	K3	PO3
9	Explain IOT Network Technologies.	10	CO4	K2	PO2
10	Sketch the python programming on Arduino IDE for Traffic control system	10	CO1	K2	PO3
11	Write the python programming for interacting DHT22, Relay and Fan with Raspberry Pi.	10	CO4	K3	PO3
12	Write short notes on i) CoAP ii) XMPP iii) AMQP	10	CO1	K1	PO1

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

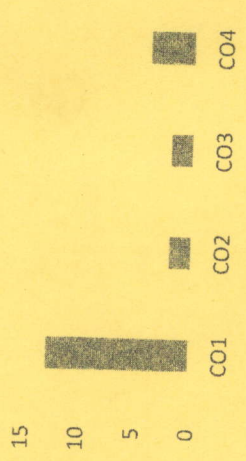
CO1	Students able to makes 3D printing special, and when to use 3D printing vs. alternative options.
CO2	Students able to understand familiarize themselves with the 3D printing process and how it works
CO3	Students learn how to visualize and plan projects before getting started, so they can be more efficient
CO4	Students spend several days familiarizing themselves with several software programs and combining them to accomplish tasks
CO5	Students put all their knowledge together to design and 3D print prototypes

GRAFICAL REPRESENTATION


Bloom's Level wise Marks Distribution



Course Outcome Wise Marks Distribution



■ K1 ■ K2 ■ K3 ■ K4 ■ K5 ■ K6 ■ Course Outcome Wise Marks Distribution

 ARKAJAIN University Jharkhand		END TERM EXAMINATION School of Engineering & IT	
Branch	Mechanical Engineering	Program	Diploma
Subject Name	3-D Printing	Semester	6 th
		Year	2023/ Even
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 comes under <u>Unfair Means</u> and will <u>Result in the Cancellation of the Papers.</u>		
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-xx) – 20 Marks

Q. N1	QUESTIONS	Marks	COs	KL	PO
i	What is the full form of LOM in 3-d Printing	2	CO1	K1	PO2
ii	Write the definition of prototype	2	1	K1	PO1
iii	CAD stands for _____	2	2	K2	PO3
iv	Write the application of 3-D printing	2	1	K5	PO2
v	What is the alternative name for RP	2	3	K6	PO4
vi	What is the full name of FDM?	2	4	K4	PO5
vii	Name any two Rapid prototyping machine name	2	1	K1	PO1
viii	RP stands for _____	2	CO1	K1	PO2
ix	Which kind of laser is used to cut the sheets in LOM?	2	1	K5	PO2
x	what is Stereo-lithography	2	3	K6	PO4

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

(Each question 5 Marks)

Q. No.	QUESTIONS	Marks	COs	KL	PO
2	Describe the process flow of Cubic's Laminated Object Manufacturing	5	1	K1	PO1
3	Describe the process flow of Stratasys' Fused Deposition Modeling.	5	1	K5	PO2
4	What are the advantages and disadvantages of solid-based systems compared with liquid-based systems?	5	4	K4	PO5
5	Explain how RP systems can be applied to Manufacturing and production sector	5	1	K1	PO1
6	What are the typical RP applications in engineering and analysis?	5	1	K5	PO2
7	Describe the principles relating to the SLS® process.	5	4	K4	PO5

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

(Each question Carry 10 Marks)

Q. No.	QUESTIONS	Marks	COs	KL	PO
8	Explain how RP systems can be applied to traditional industries like the jewelry, coin and tableware industries.	10	1	K1	PO1
9	Describe the process flow of MULTI-JET MODELING SYSTEM.	10	1	K5	PO2
10	What are the advantages of Rapid Prototyping	10	4	K4	PO5
11	What are the three stages of Rapid prototyping	10	2	K2	PO3
12	What are the typical RP applications in engineering and analysis?	10	1	K1	PO1

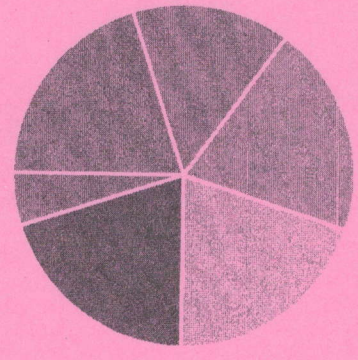
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CO- Course Outcomes, **KL-** Knowledge Level, **PO** – Program Outcome

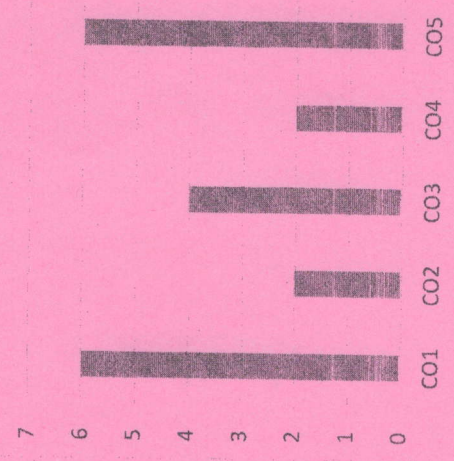
CO1	Understanding the dynamic role of entrepreneurship and small businesses
CO2	Organizing and Managing a Small Business
CO3	Financial Planning and Control
CO4	Forms of Ownership for Small Business
CO5	Strategic Market Planning

GRAPHICAL REPRESENTATION

Bloom Taxonomy's Wise Marks Distribution



Course Outcome Wise Marks Distribution



■ K1 ■ K2 ■ K3 ■ K4 ■ K5 ■ K6

ARKAJAIN University
Jharkhand

Branch	MECHANICAL ENGG.	Program	Diploma
Subject Name	Entrepreneurship and Start up	Semester	6th
		Year	2023/ Even

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 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

END TERM EXAMINATION
School of Engineering & IT

Q. N1	QUESTIONS	Marks	COs	KL	PO
i	Define Entrepreneurship.	2	CO1	K2	PO1
ii	Mention two qualities of an entrepreneur.	2	CO1	K4	PO6
iii	Explain Competition Valuation.	2	CO5	K3	PO6
iv	Write any two differences between an entrepreneur and business manager.	2	CO1	K5	PO6
v	What do you mean by large scale enterprise?	2	CO1	K1	PO1
vi	Mention two advantages of market analysis.	2	CO1	K2	PO1
vii	What do you understand by primary market research?	2	CO1	K4	PO6
viii	What is the advantage of starting a business?	2	CO5	K3	PO6
ix	Differentiate between creativity and innovation	2	CO1	K5	PO6
x	What is the importance of a business goal?	2	CO1	K1	PO1

(Each question 5 Marks)

Q.No.	QUESTIONS	Marks	COs	KL	PO
2	Explain the importance of Entrepreneurship.	5	CO2	K3	PO1
3	Create a table mentioning the similarities between entrepreneur and business manager.	5	CO2	K6	PO8
4	How is a business plan beneficial for start-up?	5	CO1	K2	PO1
5	What makes a successful entrepreneur?	5	CO1	K5	PO1
6	Explain about different types of partnership	5	CO3	K2	PO1 0
7	Why is a stable capital investment important for a start up?	5	CO4	K4	PO1

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

Q.No.	QUESTIONS	Marks	COs	KL	PO
8	Discuss the advantages and disadvantages of Market Research.	10	CO3	K2	PO1 0
9	What is a business plan? Explain its importance.	10	CO4	K4	PO1
10	What are the steps to follow to finalize a business idea for a start-up?	10	CO2	K3	PO1
11	Explain the different types of entrepreneurship.	10	CO4	K4	PO1
12	Discuss the advantages and disadvantages of Market Research.	10	CO3	K2	PO1 0

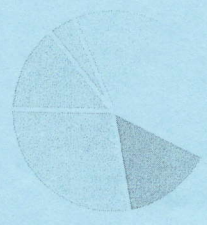
1575

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

CO1	Get Acquainted with basic information on Various type of disasters.
CO2	Apply the disaster concepts to management.
CO3	Apply the relationship between Development and Disasters
CO4	Formulate the Precautions and awareness regarding Various disaster and get familiarized with organisation in India dealing with organisation in India dealing with Disaster.
CO5	

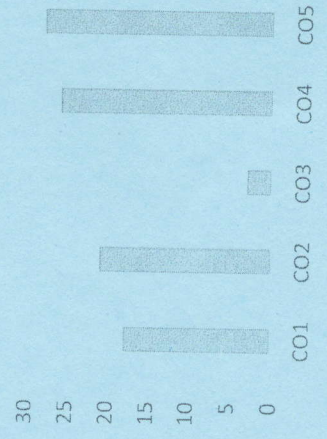
GRAFICAL REPRESENTATION

Bloom's Level wise Marks Distribution



■ K1 ■ K2 ■ K3 ■ K4 ■ K5 ■ K6

Course Outcome Wise Marks Distribution



ARKAJAIN University Jharkhand		END TERM EXAMINATION School of Engineering & IT	
Branch	Civil Engineering	Program	Diploma
Subject Name	Disaster Management	Semester	6th
		Year	Even
Time: 3 Hour Max. Marks : 70	<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 <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

Section A (Each question Carry 02 Marks from Q1-i to Q1-xx) – 20 Marks		QUESTIONS	Marks	COs	KL	PO
Q. N1						
i	Draw the disaster management cycle.		2	CO1	K1	PO2
ii	Define Disaster Management.		2	CO1	K2	PO3
iii	Explain the governmental structure for Disaster.		2	CO1	K2	PO3
iv	Write the Name of different disaster.		2	CO1	K4	PO2
v	Write the general effect of disaster.		2	CO2	K1	PO2
vi	Define Combating of Flood Disaster.		2	CO1	K2	PO3
vii	Explain the impact of Cyclones		2	CO2	K4	PO1
viii	Define Avalanche and Role of incidence Response Team.		2	CO1	K6	PO2
ix	Explain Disaster Mitigation in Details		2	CO1	K2	PO4
x	Define Disaster Management.		2	CO1	K4	PO2

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

Q. No.	QUESTIONS	Marks	COs	KL	PO
1	Write the Major objective of disaster management.	5	CO3	K2	PO2
2	Explain the different elements of disaster management.	5	CO3	K2	PO3
3	Write the role of incidence Response team. In case of disaster.	5	CO3	K4	PO3
4	Explain the disaster management cycle and its advantages	5	CO3	K1	PO4
5	Write the difference between Natural and artificial Disaster.	5	CO3	K2	PO2
6	Discuss various steps which Should be taken in combating the Flood disaster.	5	CO3	K4	PO3

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

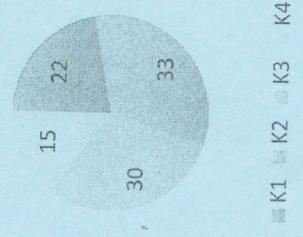
Q. No.	QUESTIONS	Marks	COs	KL	PO
8	Explain the following a) Drought b) Cyclones c) Earthquake d) Tsunami e) Volcanoes	10	CO3	K1	PO2
9	Explain Mitigation and prevention. Give some Measures.	10	CO1	K2	PO3
10	Explain Mapping in case of disaster management.	10	CO2	K3	PO3
11	Write the objective and Elements of disaster Management.	10	CO3	K2	PO4
12	Write the Measures during flood and also explain Rescue operation.	10	CO4	K2	PO4

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

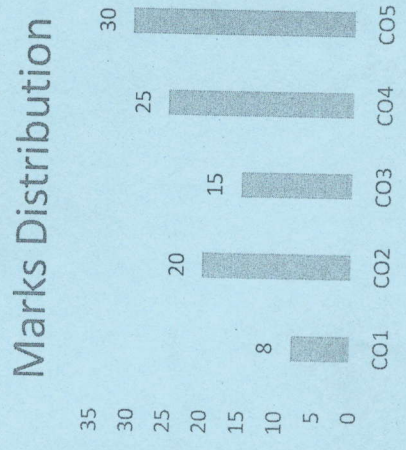
CO1	Identify Energy forecasting, economics, Energy pricing and incentives For energy conservation	Energy forecasting, Energy economics, Energy pricing and incentives For energy conservation
CO2	Understand various options and policy environment regarding energy conservation and energy auditing.	Understand various options and policy environment regarding energy conservation and energy auditing.
CO3	Apply the strategies and policy recommendations on energy conservation and energy auditing.	Apply the strategies and policy recommendations on energy conservation and energy auditing.
CO4	Analyze the viability of energy conservation projects.	Analyze the viability of energy conservation projects.
CO5	Evaluate technology, economics and regulation related issues associated with energy conservation and energy auditing.	Evaluate technology, economics and regulation related issues associated with energy conservation and energy auditing.

GRAFICAL REPRESENTATION

Bloom's Level Wise Marks Distribution



Course Outcomes Wise Marks Distribution



END TERM EXAMINATION
School of Engineering & IT

Branch	Electrical and Electronics Engineering	Program	Diploma
Subject Name	Energy Efficiency and Audit	Semester	6th
		Year	2023/ Even
Time: 3 Hour Max. Marks : 70	<ul style="list-style-type: none"> Start writing from 2nd page onwards; don't Write on the <u>1st Page Backside</u> 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 in the Cancellation of the Papers.</u> 		
Knowledge Level (KL)	K1 : Remembering K2 : Understanding	K3 : Applying K4 : Analysing	K5 : Evaluating K6 : Creating

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

Q. N	QUESTIONS	Marks	CO	KL	PO
1					
i	Classify the types of the energy available on the earth?	2	CO2	K1	PO2
ii	What is the role of Energy Manager?	2	CO2	K2	PO1
iii	Define 'Energy Audit'.	2	CO1	K1	PO3
iv	What is the relation between RPM (speed) and frequency of an induction motor?	2	CO2	K1	PO2
v	Define Motor Efficiency.	2	CO1	K1	PO4
vi	List down the major sources of pollutants in Air?	2	CO1	K2	PO2
vii	What is greenhouse gas effect?	2	CO2	K1	PO5
viii	Define High pressure mercury vapour lamp.	2	CO1	K1	PO6
ix	Differentiate between Energy Conservation and Energy Efficiency?	2	CO2	K1	PO12

x	Identify the energy sources, that are either found or stored in nature.	2	CO1	K1	PO11
Section B (Answer any FOUR out of SIX) – 20 Marks (Each question 5 Marks)					
Q. No.	QUESTIONS	Marks	COs	KL	PO
1	A 4 pole motor is operating at a frequency of 50 Hz. Find the RPM of the motor.	5	CO2	K5	PO3
2	Distinguish between 'preliminary energy audit' and 'detailed energy audit'?	5	CO2	K4	PO2
3	Write a short note on Indian energy scenario.	5	CO3	K4	PO12
4	What is renewable energy and list at least three renewable energy sources?	5	CO3	K4	PO1
5	Explain in brief about the following. a) Primary and secondary energy sources b) Commercial and non- Commercial energy sources	5	CO4	K4	PO2
6	Explain about Lux meters? What is the sector of importance of these meters?	5	CO3	K4	PO1

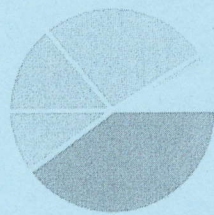
Section C (Answer any THREE out of FIVE) – 30 Marks-
(Each question Carry 10 Marks)

Q. No.	QUESTIONS	Marks	COs	KL	PO
1	What are the factors influencing the speed of Induction Motor.	10	CO5	K3	PO2
2	Define Compressor. Write the types of Compressor. Explain any two with diagram.	10	CO5	K5	PO1
3	How do an Industry, nation and globe would benefit from energy efficiency programs?	10	CO4	K6	PO2
4	Explain in detail the concept of payback period.	10	CO4	K2	PO1 PO12
5	Define Automatic Power factor Controller with its diagram and explanation.	10	CO5	K3	PO2 PO3

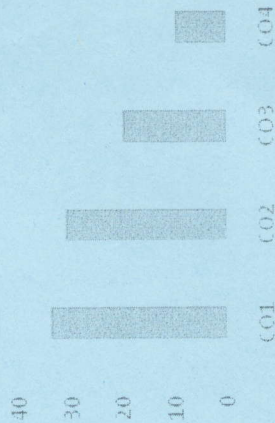
CO- Course Outcomes,	KL- Knowledge Level,	PO – Program Outcome
CO1	Protect data and respond to threats that occur over the Internet	
CO2	Design and implement risk analysis, security policies, and damage assessment	
CO3	Plan, implement and audit operating systems' security in a networked, multi-platform and cross platform environment	

GRAFICAL REPRESENTATION

Bloom's Level Wise Marks Distribution



Course Outcome Wise Marks Distribution



ARKAJAIN
University
Jharkhand

END TERM EXAMINATION
School of Engineering & IT

Branch	Computer Science & Engineering	Program	Diploma
Subject Name	Cyber Security Law,	Semester	6th
		Year	2023/Even

- 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

Time: 3 Hour
Max. Marks: 70

• 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 02 Marks from Q1-i to Q1-xx) – 20 Marks		QUESTIONS	Marks	COs	KL	PO
Q. N1						
i	Define cybercrime.		2	CO1	K1	PO2
ii	Differentiate Target cybercrime and Tool cybercrime.		2	CO1	K1	PO1
iii	Who are categorized under cyber criminals?		2	CO2	K1	PO2
iv	Shortlist the characters of cyber criminals.		2	CO1	K1	PO1
v	Define DNS Spoofing.		2	CO1	K1	PO2
vi	Define Trojan horse.		2	CO1	K2	PO3
vii	What are the types of Passive attacks		2	CO1	K1	PO4
viii	Identify the concept between conventional & cyber-crime.		2	CO2	K1	PO2
ix	Explain Botnets- a fuel for cybercrimes		2	CO2	K3	PO3
x	Discuss the technology development in cybercrime		2	CO1	K4	PO4

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

Q. No.	QUESTIONS	Marks	COs	KL	PO
2	Examine the difference between a virus and worm and explain in details.	5	CO1	K2	PO4
3	Analyse the various types of cyber-attacks.	5	CO1	K2	PO3
4	What do you understand by the salient features of Indian IT act?	5	CO3	K2	PO2
5	Illustrate the classification between cyber forensics and investigation.	5	CO3	K4	PO1
6	Demonstrate about Encryption techniques.	5	CO1	K5	PO2
7	Why cyber security is more essential value for a modern day society?	5	CO2	K5	PO2

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

Q. No.	QUESTIONS	Marks	COs	KL	PO
8	Explain difference between rights and responsibility in cyber world.	10	CO4	K5	PO4
9	Apply the identity theft hack and how can be key loggers be used to commit a cyber-crime.	10	CO3	K5	PO2
10	Analyze the best practices & challenges in cyber security	10	CO1	K6	PO3
11	Describe in detail about the ethical principles and its process of cyber ethics	10	CO2	K2	PO1
12	Evaluate the copyright infringement risks associated with using social media.	10	CO2	K5	PO3

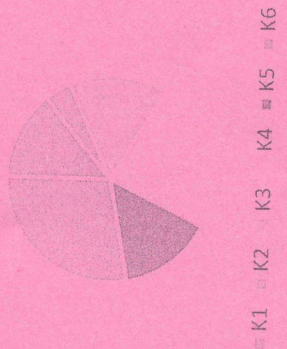
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CO- Course Outcomes, **KL- Knowledge Level,** **PO – Program Outcome**

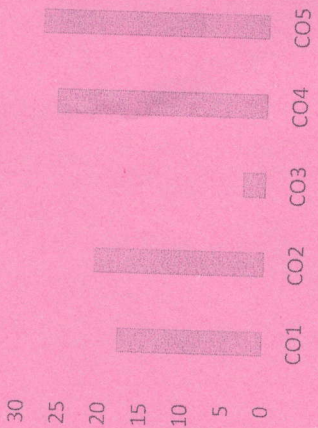
CO1	Define the principles of different Sustainable development framework
CO2	Apply the sustainable development principles during the planning of Developmental activities.
CO3	Analyse various case studies in order to identify the determinants and Indicators of sustainable development.
CO4	Address the national and global environmental, economic and social issue and different sustainable development framework
CO5	Develop model on sustainable development.

GRAFICAL REPRESENTATION

Bloom's Level wise Marks Distribution



Course Outcome Wise Marks Distribution



22/15



ARKAJAIN University Jharkhand		END TERM EXAMINATION School of Engineering & IT	
Branch	Civil Engineering	Program	Diploma
Subject Name	Sustainable Development	Semester	6th
		Year	Even
Time: 3 Hour Max. Marks : 70	<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 <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 in the Cancellation of the Papers.</u> 		
Knowledge Level (KL)	K1 : Remembering K2 : Understanding	K3 : Applying K4 : Analysing	K5 : Evaluating K6 : Creating

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

Q.N1	QUESTIONS	Marks	COs	KL	PO
i	What are the main challenges to achieving sustainable development?	2	CO1	K1	PO2
ii	Principles of sustainable development?	2	CO1	K2	PO3
iii	Define Sustainable development.	2	CO1	K2	PO3
iv	How we can Promote sustainable development.	2	CO1	K4	PO2
v	What is the relationship between sustainable development and environmental conservation?	2	CO2	K1	PO2
vi	Write the factor governing sustainable development.	2	CO1	K2	PO3
vii	What are the Main features of sustainable development.	2	CO2	K4	PO1
viii	Explain Social and Economical sustainability.	2	CO1	K6	PO2
ix	Write the factor governing sustainable development.	2	CO1	K2	PO4
x	Write the pillars of sustainable development.	2	CO1	K4	PO2

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

Q. No.	QUESTIONS	Marks	COs	KL	PO
1	Explain the basic Economic principles of sustainable development.	5	CO3	K2	PO2
2	Explain Social and Economical sustainability.	5	CO3	K2	PO3
3	Write the main features environmental issue regarding sustainable of development	5	CO3	K4	PO3
4	What is the Role of Natural resources in Sustainable Development?	5	CO3	K1	PO4
5	Explain the millennium Development goals in India.	5	CO3	K2	PO2
6	How can sustainable development be achieved in practice?	5	CO3	K4	PO3

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

Q. No.	QUESTIONS	Marks	COs	KL	PO
8	Write the short notes on a) Biodiversity b) Climate change c) Renewable Resources and its benefits.	10	CO3	K1	PO2
9	What are the Main features of sustainable development. Explain Sustainability and explain which concept it works.	10	CO1	K2	PO3
10	What are the Sustainable goals in India explain briefly.	10	CO2	K3	PO3
11	What are the global initiatives on sustainable Development?	10	CO3	K2	PO4
12	How can sustainable development contribute to poverty reduction and social equity?	10	CO4	K2	PO4

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

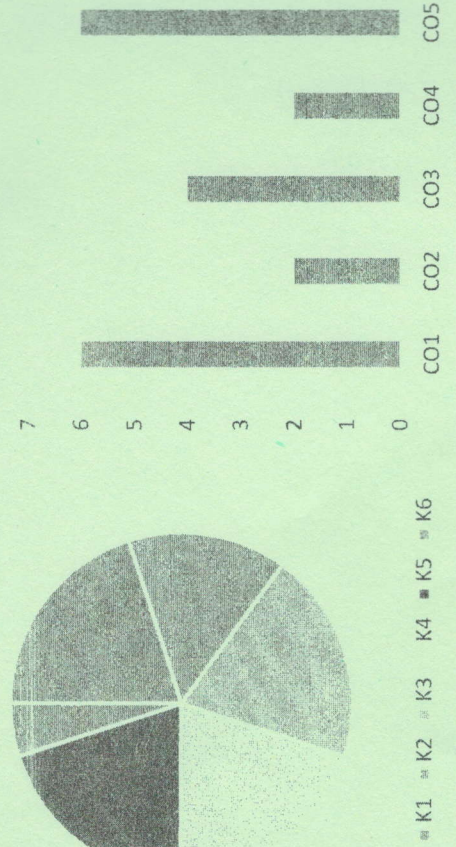
CO1	Recall historical background of the Indian constitution.
CO2	Observe importance for building democratic India, the structure of Indian government, the structure of state government, the local Administration.
CO3	Develop the knowledge on directive principle of state policy, the knowledge in strengthening 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 selfGovernment.
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 Taxonomy's Wise Marks Distribution



Course Outcome Wise Marks Distribution



■ K1 ■ K2 ■ K3 ■ K4 ■ K5 ■ K6



END TERM EXAMINATION
School of Engineering & IT

Branch	CSE/ EEE/ CIVIL	Program	Diploma
Subject Name	Indian Constitution	Semester	6th
		Year	2023/ Even
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 <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 in the Cancellation of the Papers.</u> 		
Max. Marks : 70	Knowledge Level (KL)	K1 : Remembering K2 : Understanding	K3 : Applying K4 : Analysing K5 : Evaluating K6 : Creating

Section A (Each question Carry 02 Marks from Q1-i to Q1-xx) – 20 Marks					
Q. N I	QUESTIONS	Marks	COs	KL	PO
i	Who is a Governor?	2	CO1	K1	PO2
ii	When was Indian Constitution framed?	2	CO1	K3	PO1
iii	Which articles deal with Fundamental Duties?	2	CO1	K2	PO2
iv	Give two functions of Chief Secretary Election Commission.	2	CO3	K6	PO1
v	Give two features of District Administration group.	2	CO2	K2	PO2
vi	When can there be a vacancy in President's office?	2	CO3	K4	PO3
vii	State one difference between Constitution of Indian 1949 and the previous one.	2	CO4	K2	PO4
viii	Which articles deal with Fundamental Rights?	2	CO1	K4	PO2
ix	What is Right to Equality?	2	CO1	K2	PO3
x	What is the tenure of the Prime Minister?	2	CO4	K2	PO4

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

(Each question 5 Marks)

Q. No.	QUESTIONS	Marks	COs	KL	PO
2	List down the keywords in the Preamble?	5	CO1	K6	PO4
3	What do you mean by Fundamental Duties?	5	CO2	K3	PO3
4	State the eligibility of Prime Minister.	5	CO2	K4	PO2
5	State any five basic structural features of Indian Constitution.	5	CO3	K5	PO1
6	State any five features of Objective Resolution given by Nehru.	5	CO4	K2	PO2
7	What are the administrative and military powers of the President?	5	CO4	K1	PO2

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

(Each question Carry 10 Marks)

Q. No.	QUESTIONS	Marks	COs	KL	PO
8	Explain the background of the Morley Minto Reform.	10	CO1	K5	PO4
9	Explain the main features of Act 1919.	10	CO2	K6	PO2
10	Explain the Simon Commission Report.	10	CO4	K3	PO3
11	Explain the Structure of Indian Union.	10	CO4	K6	PO1
12	Explain the background of the Morley Minto Reform.	10	CO1	K5	PO4

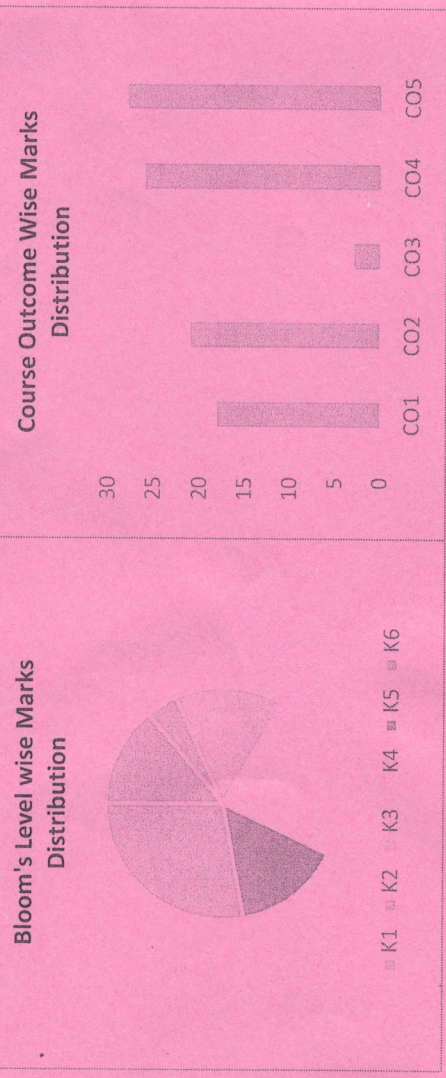


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CO- Course Outcomes,	KL- Knowledge Level,	PO – Program Outcome
CO1	Analyze the various modes of failure of machine components under different load patterns.	
CO2	Design and prepare part and assembly drawings.	
CO3	Use design data books and different codes of design.	
CO4	Select standard components with their specifications from manufacturer's catalogue.	
CO5	Develop drawings on CAD software.	

GRAPHICAL REPRESENTATION



Branch	Mechanical Engineering	Program	Diploma
Subject Name	Robotics	Semester	6th
		Year	2023/ Even
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 comes under <u>Unfair Means</u> and will <u>Result</u> in the <u>Cancellation</u> 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-xx) – 20 Marks				
Q. N1	QUESTIONS	Marks	COs	KL PO
i	Explain Robot and Industrial Robot with suitable examples.	2	CO1	K1 PO2
ii	Write the application of Industrial Robot	2	1	K1 PO1
iii	Which sensor that is able to detect without any physical contact	2	2	K2 PO3
iv	A robot is a _____ type manipulator	2	1	K5 PO2
v	Write the name of the parts of Industrial robot	2	3	K6 PO4
vi	Write the name of the drive system used in robotics	2	4	K4 PO5
vii	Write the name of different coordinate system used in robotics	2	1	K1 PO1
viii	Write the name of different types of sensor used Industrial Robot	2	2	K2 PO3
ix	Explain the function of actuators in Robot.	2	1	K5 PO 2

x	Write the advantage of using robot in manufacturing	2	3	K6	PO 4
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Section B (Answer any FOUR out of SIX) – 20 Marks
(Each question 5 Marks)

Q. No.	QUESTIONS	Marks	COs	KL	PO
2	What are the various applications of Robots in manufacturing industries?	5	1	K1	PO1
3	What is the function of gripper?	5	1	K5	PO2
4	What is inverse kinematics problem?	5	4	K4	PO5
5	What is meant by range and proximity sensor?	5	1	K1	PO1
6	Explain Robotic Sensors And Vision	5	1	K5	PO2
7	Explain Block Diagram of Functions of Machine Vision System	5	4	K4	PO5

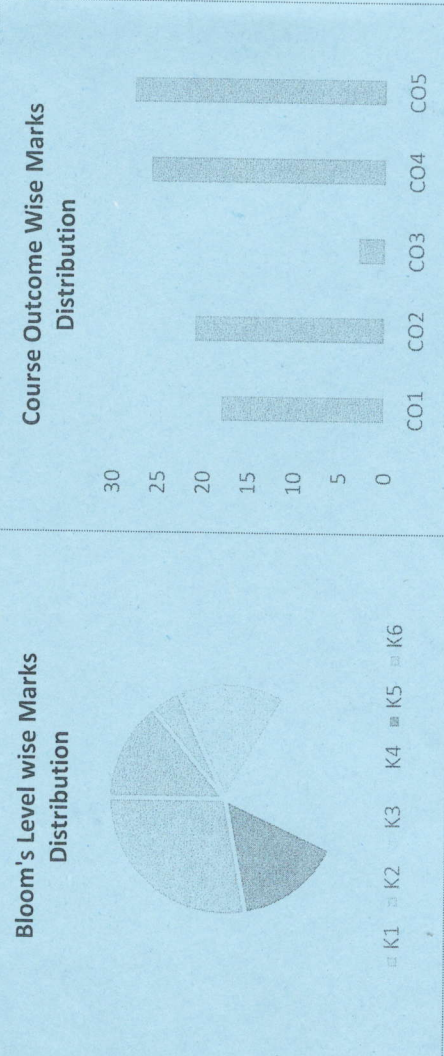
Section C (Answer any THREE out of FIVE) – 30 Marks-
(Each question Carry 10 Marks)

Q. No.	QUESTIONS	Marks	COs	KL	PO
8	Define the term 'Robot'. Explain different Robot types of industrial robot used in manufacturing	10	1	K1	PO1
9	Explain different types of sensors used in Industrial Robot	10	1	K5	PO2
10	Write down the Advantages and disadvantages of using Robot in Manufacturing.	10	4	K4	PO5
11	Explain types of drive system in robot with suitable example.	10	2	K2	PO3
12	Define the term 'Robot'. Explain different Robot types of industrial robot used in manufacturing	10	1	K1	PO1

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CO- Course Outcomes,	KL- Knowledge Level,	PO – Program Outcome
CO1	Define operations management and explain its relationship to productivity. And understand tools and techniques.	
CO2	Describe the importance of forecasting and explain the effective application of the different forecasting approaches and methods	
CO3	Explain layout strategy and how operations managers determine facility arrangements and size.	
CO4	Describe how operations managers achieve a reasonable work environment and set expectations related to employee productivity.	
CO5	Understand make-or-buy decisions, and the selection and integration of suppliers. And how much to order and when to order.	

GRAPHICAL REPRESENTATION



END TERM EXAMINATION
School of Engineering & IT

Branch	Mechanical Engineering	Program	Diploma
Subject Name	Production Operation Management	Semester	6th
		Year	2023/ Even
Time: 3 Hour Max. Marks : 70	<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 <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 in the Cancellation of the Papers.</u> 		
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-xx) – 20 Marks

Q. N1	QUESTIONS	Marks	COs	KL	PO
i	What is production management?	2	CO1	K1	PO2
ii	Explain about product design.	2	CO1	KL2	PO1
iii	What is process planning?	2	CO2	KL1	PO3
iv	Define productivity.	2	CO2	KL1	PO4
v	What are the factors affecting process planning.	2	CO3	KL2	PO3
vi	What do you mean by Quality management?	2	CO4	KL2	PO2
vii	What is scheduling in job?	2	CO3	KL3	PO4
viii	What is forecasting in supply chain management?	2	CO3	KL1	PO2
ix	What is aggressive planning?	2	CO3	KL2	PO2
x	What is operational management?	2	CO2	KL2	PO2

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

Q. No.	QUESTIONS	Marks	COs	KL	PO
2	Distinguish between product development and design.	5	CO1	KL1	PO1
3	Differentiate the relation between product life cycle and process life cycle.	5	CO3	KL4	PO3
4	What is the method of production control?	5	CO2	KL2	PO1
5	Write the various functions of production planning and control.	5	CO3	KL4	PO4
6	What are Industrial Engineering Techniques?	5	CO4	KL1	PO4
7	Explain about various methods in measuring total productivity.	5	CO3	KL4	PO4

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

Q. No.	QUESTIONS	Marks	COs	KL	PO
8	Discuss about TQM management techniques.	10	CO1	KL2	PO1
9	Why do manufacturing industries need "six sigma"? Elaborate.	10	CO3	KL1	PO4
10	What is the need of line production? Explain with a diagram.	10	CO2	KL5	PO1
11	What is the difference between aggressive planning and forecasting? What are their advantages and disadvantages?	10	CO4	KL6	PO4
12	What are Quantitative and Qualitative Forecasting Techniques?	10	CO5	KL3	PO1