

**Mahatma Gandhi Mission University**  
**Jawaharlal Nehru Engineering College, Aurangabad.**  
**Class: TY (Electrical & Comp.) CA-II (2023-24) Part-II**

**Subject: Industrial Automation**  
**Max Marks: 10**

**Subject Code - 21UEE605E**  
**Duration: 30 Min.**

**N.B.:- Solve any two questions.**

Sr. No.	Question	Marks	CO
1	What are various communication standards applied in Automation system.	05	CO2
2	Explain the features of SCADA System.	05	CO2
3	Describe the Direct digital control.	05	CO1
4	With proper figure explain Data Logger.	05	CO2

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**EXAM: CA-2 (2023-24) Part-II**

**Class:** TY (ECE)  
**Subject:** Power Electronics (PE)

**Max Marks:** 10  
**Duration:** 30 Minutes

**N.B.:- Solve any Two Questions.**

Q.No.	Question	Marks	CO	BL
1	Draw and explain 3-Phase inverter.	05	4	1
2	Describe the 1-Phase full bridge inverter.	05	4	1
3	Draw and explain the current source inverter	05	4	1
4	Draw and describe the series inverter	05	4	1

\*\*\*\*\* Technology is best when it brings people together \*\*\*\*\*

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**EXAM: CA-2 (2023-24) Part-II**

Class: TY (E&CE)  
Subject: Digital Signal Processing (PE)

Max Marks: 10  
Duration: 30 Minutes

**N.B.:- Solve any Two Questions.**

Q.No.	Question	Marks	CO	BL
1	Illustrate the properties of Discrete Fourier Transform	05	3	3
2	Explain the properties of Z Transform	05	3	2
3	Obtain Inverse Z Transform of, $X(Z) = 1/(1-1.5z^{-1}+0.5z^{-2})$	05	3	4
4	Solve using circular convolution, $X_1(n) = \{2 \ 1 \ 2 \ 1\}$ , $X_2(n) = \{1 \ 2 \ 3 \ 4\}$	05	3	4

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CA-2 Examination

Year: T.Y.B. Tech

Electrical Engineering

Sem: VI

Subject: Digital Image Processing

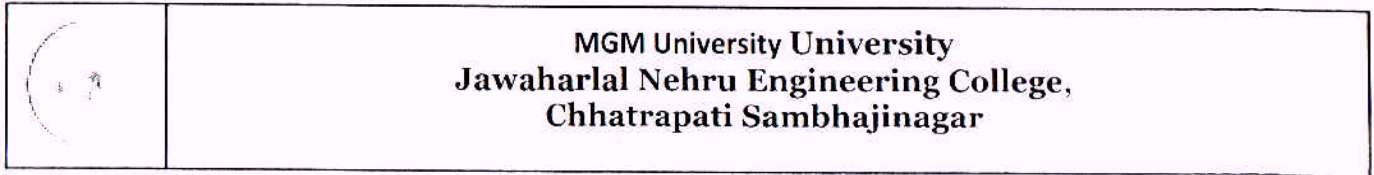
Subject Code: 20UEE608E

Marks:10

Duration:-30 min

Solve any two.

Questions	CO	BL	Mk
The original image is 256x256 pixels, single-band grayscale),8-bits per pixel. This file is 65,536 bytes (64k). After compression the image file is 6,554 bytes. Calculate compression ratio.	C04	L3	5
Explain all steps of HUFFMAN compression algorithm with an numeric example.	CO4	L2	5
What is image compression? Explain any four variable length coding compression schemes	C03	L2	5
Explain about Image compression model?	CO4	L2	5
What is data redundancy? Explain three basic data redundancy?	CO4	L2	5



Class: Third Year ECEX    Class Test: CA2    Date: 04-04-2024    Total Marks: 10

Subject: Artificial Intelligence

Sr. Q1	Solve any two of the following Questions (5 Marks)	CO	Level
1.	<p>1 "L = ['yellow', 'red', 'blue', 'violet', 'green', 'black'], what will the statement: L[2:4] return?"</p> <p>(a) ['red', 'blue', 'green']</p> <p>(b) ['blue', 'green', 'black']</p> <p>(c) ['yellow', 'red']</p> <p>(d) ['blue', 'violet']</p> <p>2. What is the use of "halt" inbuilt predicated?</p> <p>(a) used to suspend the prolog system.</p> <p>(b) used to terminate the Prolog system.</p> <p>(c) used to resume the prolog system.</p> <p>(d) None of above</p> <p>3. Prolog is not a strongly typed language</p> <p>(a) TRUE</p> <p>(b) FALSE</p> <p>4. The scope of a variable in Prolog is a single clause (i.e., a fact or rule) or a single query.</p> <p>(a) TRUE</p> <p>(b) FALSE</p> <p>5. "Unification is transitive (i.e., assuming that t1, t2 and t3 are arbitrary Prolog terms, if t1 unifies with t2 and t2 unifies with t3 then t1 must unify with t3. "</p> <p>(a) TRUE</p> <p>(b) FALSE</p>	CO4	3
2.	Name some data types of prolog and explain how backtracking is done in prolog language.	CO3	2
3.	Why do we use prolog language? Name the areas in which prolog is used.	CO4	3

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