K. K. Wagh Institute of Engineering Education & Research, Nashik

(An Autonomous Institute From A.Y. 2022-23)

WINTER-2025	
Exam Seat No.:	
Academic Year:2025-2026	Semester:V
Class:TY	Program:B.Tech
Branch Code:ELE	Pattern:2023
Name of Course:Electrical and Electronics Automation	Course Code:2306381
Max. Marks:60	Duration:2.30 Hrs.

Instructions: Candidates should read carefully the instructions printed on the Question Paper and on the cover page of the Answer Book, which is provided for their use.

1. This question paper contains 2 page(s).
2. Answer to each new question is to be started on a new page.
3. Assume suitable data wherever required, but justify it.
4. Draw the neat labelled diagrams, wherever necessary.
5. The last columns indicates the Course Outcome and level of Blooms Taxonomy of the Question/sub-question.

Marks CO

Question No. 1

1a) Draw symbols for followings. (6) CO1

1. SPST 2. DPST 3. TPST 4. Form C

5. SPDT 6. DPDT 7. TPDT 8. Form D

Question No. 2

2a) Write difference in between Relay and contactor with symbols. (6) CO2

Question No. 3

3a) (8) CO3

SR	Title	SR	Description
1	Stay Put Mechanism	A	NO in Series
2	NOR Gate	B	NO in Parallel
3	NOT Gate	C	Selector Switch
4	AND Gate	D	Only NC
5	EXNOR Gate	E	NC in Series
6	EXOR Gate	F	NC in Parallel
7	OR Gate	G	(NO1 & NO2) OR (NC1 & NC2)
8	NAND Gate	H	(NO1 & NC2) OR (NC1 & NO2)

OR

3b) Design the following Logic. (8) CO3

A Lamp L1 is controlled by 3 Way Switch S3 and two nos. of 2-way Switches S1 and S2. If S3 is in Centre Deactivated position, S1 and S2 will control the Lamp L1 in OR Fashion. If S3 is Left activated then S1 and S2 will control Lamp L1 in AND Fashion. If S3 is Right activated then S1 and S2 will Control the Lamp in EXOR Fashion

3c)	Write difference in between MCB and MCCB.	(8)	CO3

OR

3d)	Write down types/modes of counters and there working functions.	(8)	CO3

Question No. 4

4a)	Draw power circuit and control circuit of Star Delta starter.	(8)	CO3

OR

4b)	What is time switch and time totaliser.	(8)	CO3
4c)	How to connect 2 sensors in series and parallel with help of relay.	(8)	CO3

OR

4d)	Write Functions of Electromechanical relay with control circuit of each one.	(8)	CO3

Question No. 5

5a)	What is optical/IR sensor and its types with short explanation.	(8)	CO4

OR

5b)	What is timer and its types with short description.	(8)	CO4
5c)	Write down types/modes of counters and there working functions.	(8)	CO4

OR

5d)	What is use of encoder in industrial application and types with short description.	(8)	CO4

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