

SPRING MID-SEMESTER EXAMINATION-2023-24

School of Electronics Engineering
Kalinga Institute of Industrial Technology
Deemed to be University

4TH Semester

Subject: Industry 4.0 Technologies (EX20001) (Regular)

Format-1**Instructions:-**

- 4 (four) questions are to be attempted.
- Question Paper consists of 4 (four) Sections i.e. **A, B, C and D.**
- Section **A** is Compulsory and to cover the entire mid semester syllabus.
- The Examinee has to attempt any 1 (one) questions from Sections **B, C and D.**

Time: 1.5 hours

Full Marks: 20

The figures in the right-hand side indicate full marks.

All parts of a question should be answered at one place only.

Question No	Section-A	Question	CO Mapping	Marks
Q1.	Question Type (SAT)	Answer the following questions in short.		[1x5]
a		What is preventing Industry 4.0 innovation from being widely adopted?	CO1	
b		State different types of AI and how they differ in terms of application?	CO3	
c		What is big data analytic process, and how does it is functioned in processing and storage?	CO3	
d		Why do industries need digitalization and how it affects the economystatus of a country?	CO1	
e		What difficulties lie ahead in creating a CPS system?	CO3	
Section-B				
Q2.		a) What is the biggest challenge of Industry 4.0in our country? b) What are the 6 main applications ofIndustry 4.0 today?	CO1	[2.5+2.5]
Q3.		How can you implement Industry 4.0 for acompany to achieve value innovation?	CO1	[5]
Section-C				
Q4		a) What are the 5 V's in big data? b) What are the key steps involvedto deploya big data model?	CO3	[2+3]
Q5		How the Augmented reality technologyhelps in the medical application?	CO3	[5]
Section-D				
Q6		a) Explain the different phases for transforming from digital world information to real world tangible product. b) What makes the 4 th Industrial Revolutiondifferent from the 3 rd Industrial Revolution?	CO1	[3+2]

Q7		What is CPS? Differentiate between 5cmodel and RAMI 4.0 model for CPS.	CO3	[5]
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NB: Question with either or option must assess the same CO.

*(Marks_1+Marks_2+Marks_3)=15