Roll No.												

PRESIDENCY UNIVERSITY

BENGALURU

End - Term Examinations – MAY 2025

Date: 30-05-2025 **Time:** 01:00 pm – 04:00 pm

School: SOM-PG	**Program:** MBA	
Course Code: MBA3049	**Course Name:** Industry 4.0	
Semester: IV	**Max Marks**: 100	**Weightage**: 50%

CO - Levels	CO1	CO2	CO3	CO4	CO5
Marks	06	16	44	34	-

Instructions:

(i) Read all questions carefully and answer accordingly.

(ii) Do not write anything on the question paper other than roll number.

Part A

Answer ALL the Questions. Each question carries 3 marks. **10Q x 3M=30M**

1.	Label the characteristics of Smart Products in Industry 4.0.	**3 Marks**	**L1**	**CO1**
2.	State the full forms of the following terms of Industry 4.0 (a) M2M (b) CPS (c) IIoT	**3 Marks**	**L1**	**CO1**
3.	List three (3) types of Cloud Services.	**3 Marks**	**L1**	**CO2**
4.	Define the term: "Robotic Process Automation (RPA)" with suitable examples.	**3 Marks**	**L1**	**CO2**
5.	Describe the benefits of Sales 4.0	**3 Marks**	**L1**	**CO3**
6.	Discuss the importance of Robotics with suitable examples.	**3 Marks**	**L2**	**CO3**
7.	Explain what is a "Digital Platform" with a suitable example.	**3 Marks**	**L2**	**CO3**
8.	Data is the new fuel of the 21st century. Considering this context, explain the significance of data in industry 4.0 with suitable examples.	**3 Marks**	**L2**	**CO4**

9.	It is just not enough if we only possess technical skills. In light of this context, recognize the Softskills needed to be a successful industry 4.0 professional.	**3 Marks**	**L2**	**CO4**
10.	To be a successful professional in the era of Industry 4.0, identify the technical skills needed.	**3 Marks**	**L2**	**CO4**

Part B

Answer the following Questions. **Total Marks 40M**

11.	**a.**	Define the concept of the Industrial Revolution and explain the key characteristics of each revolution.	**10 Marks**	**L3**	**CO2**
		Or			
12.	**a.**	Discuss in detail, the benefits of Robotic Process Automation (RPA) with suitable examples.	**10 Marks**	**L3**	**CO2**

13.	**a.**	With every device being connected with other devices and everything going online in real time, there is always a threat of the control falling into the wrong hands. Considering this context, answer the following questions. (a) Explain in detail, the meaning of Cybersecurity. (b) Identify at least four (4) types of Cybersecurity threats, with suitable examples.	**10 Marks**	**L3**	**CO3**
		Or			
14.	**a.**	IIoT is transforming the business at a rapid speed in the era of Industry 4.0. In light of this context, describe five (5) ways how IIoT is achieving this, with suitable examples.	**10 Marks**	**L3**	**CO3**

15.	**a.**	In today's rapidly evolving technological landscape, understanding the essence of Industry 4.0 and its transformative potential is crucial for businesses across various sectors. In light of this context, explain in detail the nine (9) pillars of technological advancements of Industry 4.0, with applicable examples.	**10 Marks**	**L3**	**CO3**
		Or			
16.	**a.**	With the help of a neat sketch, explain the **D-I-K-W Pyramid** and its significance for organizations in the Industry 4.0 era.	**10 Marks**	**L3**	**CO3**

17.	**a.**	India is rapidly making digital transformations in the era of Industry 4.0. Considering this context, explain the challenges of Industry 4.0 in the Indian context, with suitable examples.	**10 Marks**	**L3**	**CO4**
		Or			
18.	**a.**	Discuss some of the risks of an Industry 4.0 solution with applicable example(s).	**10 Marks**	**L3**	**CO4**

Part C

Answer all the Questions. Each question carries 15 marks **2Q x 15M=30M**

19.	**a.**	Acme Automotive (AA) is a well-established automotive manufacturer known for its reliable and affordable vehicles. However, in recent years, the company has been facing challenges in keeping up with the rapid technological advancements in the industry, particularly in the areas of connected cars and digital services. As the demand for connected cars and digital features grew, AA realized the need to embrace cloud computing to stay competitive. The company's legacy systems and on-premises infrastructure were struggling to handle the vast amounts of data generated by the connected vehicles and the various sensors and systems integrated into their production lines. AA formed a cross-functional team to spearhead their cloud computing initiative, including representatives from IT, manufacturing, engineering, and product development. The team conducted extensive research and consultations with leading cloud service providers to understand the available options and their potential benefits. After a rigorous evaluation process, AA partnered with a renowned cloud computing provider to develop their own "AA Connected Cloud" platform. The platform aimed to centralize data storage and processing, enabling seamless integration of data from various sources, including connected vehicles, manufacturing plants, and customer data. The first phase of the project focused on integrating the cloud platform with AA's manufacturing operations. Sensors and IoT devices were deployed across the production lines, capturing real-time data on machine performance, quality control, and inventory levels. This data was then securely transmitted to the AA Connected Cloud, where advanced analytics tools and machine learning models were employed to extract valuable insights. The cloud-based analytics capabilities enabled AA to optimize production schedules, reduce downtime through predictive maintenance, and identify quality issues early on, resulting in significant cost savings and improved efficiency. In the second phase, AA leveraged the cloud platform to enhance their connected car offerings. The platform enabled over-the-air software updates, real-time diagnostics, and seamless integration with smart home devices and personal digital assistants. Customers could now access a range of digital services, such as predictive maintenance notifications, media streaming, and personalized driving experiences.	**15 Marks**	**L3**	**CO3**

		The success of the AA Connected Cloud not only transformed AA's operations but also opened new revenue streams through data-driven services and enhanced customer experiences. The cloud platform's scalability and flexibility allowed AA to continuously innovate and adapt to evolving market demands. **Questions:** **1.** Analyze the key factors that contributed to the successful implementation of the AA Connected Cloud platform, considering the challenges faced by traditional automotive manufacturers in adopting cloud computing. **2.** Evaluate the potential long-term impact of the cloud-based approach on AA's overall business performance, including cost savings, revenue generation, and competitive positioning in the connected car market. **3.** Propose a strategy for AA to continuously enhance and expand the capabilities of their cloud platform, incorporating emerging technologies such as edge computing, artificial intelligence, and blockchain.			

20.	**a.**	Analyze the challenges faced by organizations in evaluating the integration complexities in adopting industry 4.0 technologies with their existing infrastructure and workforce. Propose a comprehensive strategy that organizations can adopt to overcome these challenges and ensure a successful digital transformation.	**15 Marks**	**L3**	**CO4**