



**SREENIVASA INSTITUTE of TECHNOLOGY and MANAGEMENT STUDIES  
(AUTONOMOUS)**

**DEPARTMENT OF MANAGEMENT STUDIES  
MANAGEMENT INFORMATION SYSTEM**

**QUESTION BANK**

**II MBA / IV - SEMESTER**

**REGULATION: R22**



**COMPILED BY**

**FACULTY INCHARGE**

**PROGRAMME**

**: MR.A.Y.VINAY SAJEEV KUMAR**

**ASSISTANT PROFESSOR**

**: MBA**



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## DEPARTMENT of MANAGEMENT STUDIES

QUESTION BANK

INDUSTRY 4.0 (22AUD241)

II MBA IV Semester

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22AUD241 INDUSTRY 4.0

**Pre-requisites:** Course on Industry 4.0

### **Course Educational Objectives:**

**CEO1:** To provide an overview of industry 4.0 and technology-based innovations.

**CEO2:** To Align the theory and concepts with Industrial application of computers

**CEO3:** To Introduce the basic concepts of Industry 4.0, Artificial Intelligence, Big Data and Internet of Things.

**CEO4:** To Discuss and demonstrate the applications and tools of Industry 4.0.

**CEO5:** To Impart knowledge on innovation types, stages of innovation process, and competitive advantage

### **UNIT - I Introduction to Industry 4.0 and Technologies**

Industry 4.0 - Need – Reason for Adopting Industry 4.0 - Definition – Goals and Design Principles

### **UNIT - II Technologies of Industry 4.0**

Big Data – Artificial Intelligence (AI) – Industrial Internet of Things - Cyber Security – Cloud – Augmented Reality – Mixed Reality.

### **UNIT - III Big Data**

Data: Terminologies - Big Data Definitions - Essential of Big Data in Industry 4.0 - Big Data Merits and Advantages - Big Data Components: Big Data Characteristics - Big Data Processing Frameworks - Big Data Applications - Big Data Tools - Big Data Roles - Learning Platforms

### **UNIT - IV IOT**

Internet of Things (IoT): Introduction to IoT - Architecture of IoT - Technologies for IoT - Security in IoT.

### **UNIT - V Applications of IoT**

Applications of IoT – Manufacturing – Healthcare – Education – Aerospace and Defense – Agriculture – Transportation and Logistics – Impact of Industry 4.0 on Society: Impact on Business, Government, People



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On successful completion of the course, students will be able to		POs related to COs
CO1	<b>Explain</b> the basic concepts of Industry 4.0 and new technologies in decision making	PO1, PO2, PO4, PSO1, PSO2
CO2	<b>Outline</b> the features of Artificial Intelligence and application domains	PO1, PO2, PO4, PO5, PSO1, PSO2
CO3	<b>Summarize</b> the Big data domain stack and Internet of Things Identify the applications and Tools of Industry 4.0	PO1, PO2, PO4, PO5, PSO1, PSO2
CO4	<b>Develop</b> innovative ideas based on technology	PO1, PO2, PO4, PO5, PSO1, PSO2
CO5	<b>Apply</b> the knowledge in various industries based on technology to take effective and efficient managerial decision.	PO1, PO2, PO4, PO5, PSO1, PSO2

### Text Books:

1. Industry 4.0: The Industrial Internet of Things Paperback, 1/e, Alasdair Gilchris, 2017.
2. Handbook of Industry 4.0 and SMART Systems, Diego Galar Pascual, Pasquale Daponte, Uday Kumar, 2020.

### Reference Books:

1. IoT Reference Architecture, Alasdair Gilchrist, 2016.
2. Introducing Industry 4.0, Alasdair Gilchrist, 2016.

### Online Learning Resources:

<https://nptel.ac.in/courses/106105195>

<https://archive.nptel.ac.in/courses/106/105/106105195/MA>



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### QUESTION BANK

Question No.	Questions	PO Attainment
<b>UNIT – 1: INTRODUCTION TO INDUSTRY 4.0 AND TECHNOLOGIES</b>		
<b>PART-A (Two Marks Questions)</b>		
1	Define Industry 4.0	PO1
2	What are the key technologies of Industry 4.0?	PO1
3	List out some benefits of Industry 4.0	PO1
4	What are challenges for Industry 4.0?	PO1
5	What are the Reasons for Adapting Industry 4.0	PO1
<b>PART-B (Ten Marks Questions)</b>		
1	Elaborate the Need and scope of Industry 4.0 in Current Scenario	PO1
2	List out the Goals of Industry 4.0	PO1
3	Examine the design principles of Industry 4.0	PO2



# SITAMS



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QUESTION BANK

INDUSTRY 4.0 (22AUD241)

### QUESTION BANK

Question No.	Questions	PO Attainment
<b>UNIT – 2: TECHNOLOGIES OF INDUSTRY 4.0</b>		
<b>PART-A (Two Marks Questions)</b>		
1	What are the key technologies of Industry 4.0?	PO1
2	Define Big data	PO1
3	Define Artificial Intelligence.	PO1
4	What is Cybersecurity?	PO1
5	Define Cloud.	PO1
<b>PART-B (Ten Marks Questions)</b>		
1	Explain the characteristics and types of big data.	PO1
2	Elaborate the types of cyberthreats and analyze the possible solutions for these cyberthreats.	PO1, PO2
3	Illustrate the use of mixed reality in present scenario	PO1, PO2



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### QUESTION BANK

Question No.	Questions	PO Attainment
<b>UNIT – 3: BIG DATA</b>		
<b>PART-A (Two Marks Questions)</b>		
1	Define data.	PO2
2	Define big data	PO2
3	List out the types of big data.	PO2
4	List the advantage & disadvantages of big data	PO2
5	Explain the features of big data	PO2
<b>PART-B (Ten Marks Questions)</b>		
1	Examine the essentials of big data in industry 4.0	PO1, PO2
2	Determine how can Apache Hadoop be used to analyze large datasets.	PO1, PO2
3	Outline the key components of Apache Spark, and how do they interact?	PO1, PO2



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### QUESTION BANK

Question No.	Questions	PO Attainment
<b>UNIT – 4: IOT</b>		
<b>PART-A (Two Marks Questions)</b>		
1	Define IOT.	PO1
2	What are key components of IOT?	PO1
3	List out the applications of IOT?	PO8
4	What are the benefits of IOT?	PO8
5	What are some challenges of IOT?	PO8
<b>PART-B (Ten Marks Questions)</b>		
1	What are the components of IoT architecture, and how do they interact with each other?	PO1, PO2
2	Explain how different technologies support IoT systems.	PO1, PO2, PO8
3	How can IoT devices be secured against cyber-attacks?	PO1, PO2, PO8



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### QUESTION BANK

Question No.	Questions	PO Attainment
<b>UNIT – 5: APPLICATIONS OF IOT</b>		
<b>PART-A (Two Marks Questions)</b>		
1	List out the Applications of IoT	PO4
2	What is the role of IoT in smart homes?	PO4
3	What is the role of IoT in industrial automation?	PO4
4	What is the role of IoT in Retail and supply chain?	PO4
5	What is the role of IoT in Environmental monitoring?	PO4
<b>PART-B (Ten Marks Questions)</b>		
1	Breakdown the key benefits and challenges of integrating IoT into healthcare systems.	PO4
2	How can Industry 4.0 technologies be applied to solve societal challenges?	PO4
3	Outline the different ways Industry 4.0 affects business strategies, workforce dynamics, and governance models.	PO4

\*\* ALL THE BEST \*\*



# SITAMS