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Class Test-1, Summer 2025

Course Code: CIS121, Course Title: Introduction to Industry 4.0

Time: 25 Minutes | Marks: 15

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Section: CIS 22A | Date: 29.05.2025

1. **What was the major advancement in the First Industrial Revolution?**
   (a) Steam engine (b) Electric motor (c) Computer (d) Internet
2. **When were computers and electronics first used in manufacturing?**
   (a) First Industrial Revolution (b) First Industrial Revolution
   (c) Third Industrial Revolution (d) Fourth Industrial Revolution
3. **Which of the following best describes the goal of Industry 4.0?**
   (a) Reducing use of machines (b) Increasing manual labor
   (c) Smart manufacturing systems (d) Relying on steam-powered production
4. **In which area of Industry 4.0 are autonomous robots commonly used?**
   (a) Remote Monitoring (b) Industrial Simulations (c) Smart Logistics (d) Predictive Analysis
5. **Which Industrial Revolution introduced automation?**
   (a) First (b) Second (c) Third (d) Fourth

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6. **What are some common data types in Python? How do you use variables? Give examples.** [4]

Some common data types in Python are-

1. int
2. double
3. string
4. boolian

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Variable is a identifier where data can be stored. To use a variable first we need to declare a data type. Example - int n.5
Here 'int' is the data type and 'n' is the variable.

7. A manufacturing company wants to upgrade its traditional production line to a smart factory using Artificial Intelligence (AI).
   Explain the benefits and drawbacks of implementing Artificial Intelligence (AI) in the manufacturing company. [6]

There are several benefits and drawbacks of implementing Artificial Intelligence (AI) in the manufactoring company —

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Benefits —

1. Improved protuctivity: AI helps to improve production and reduce delays.
2. Efficiency: Smart systems like AI opti optimize the resources and energy.
3. Decision Making: Aritificial Intelligence has massive amount of data which can benefit the business and decide things that a human can't.
4. Lower cost: Lower manaual work, Lower human errors and ~~lost~~ lower budget.

Drawbacks —

1. Expensive: Big amount of AI replacement need huge investments.
2. Job-replacement: ~~Aut~~ AI can take the place of low-skilled works in the factory.
3. Security issue: Risk of getting hacked the system.
4. Maintainance: Higher technology needs expert care and update.

There are still more or less benefits and drawbac but these are the main advantages and problem they wi face.

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