WORKSHEET

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Roll No: _____

Class: _____ Section: _____ Date: _____

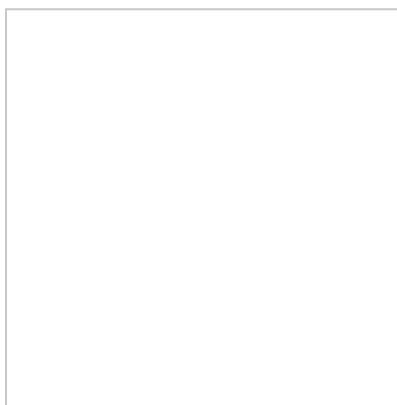**ARTIFICIAL INTELLIGENCE**
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CLASS 10

Unit-1

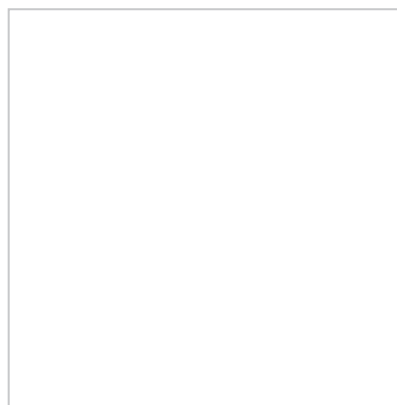## COMMUNICATION SKILLS-II

1. Imagine your teacher is giving instructions in a noisy room. Identify the barrier and suggest a solution.

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   ....

2. Draw any two examples of Visual Communication.

Part A

3. Identify the Methods of Communication from the following pictures:

a.

   ....

b.

   ....

c.

   ....

d.

   ....
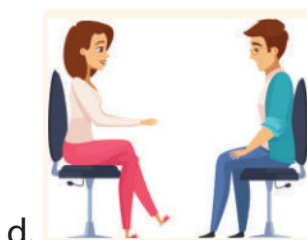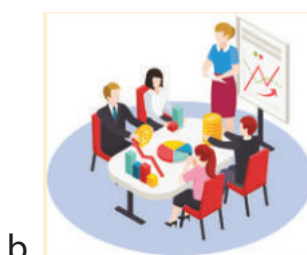
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SELF-MANAGEMENT SKILLS-II

Unit-2

Part A

1. You didn't do well in a class test. How can self-motivation and positive self-talk help you prepare better for the next one?

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2. "Riya sets clear priorities every morning, schedules her tasks effectively and ensures she meets all deadlines while maintaining a good work-life balance." Which self-management skill is clearly visible in the given statement?

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3. "Maya is feeling stressed due to too much homework and pressure from her parents. She tells her friend Meera that she feels tired, worried, and can't sleep well."

If you were Meera, name two stress management techniques you would suggest to Riya and explain how they would help.

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INFORMATION & COMMUNICATION TECHNOLOGY SKILLS-II

Unit-3

Part A

1. Read the following scenarios and determine whether they are scams or not. Justify your answer.

   a. Arjun receives an email saying he has won ₹50,00,000 but is asked to deposit ₹2,000 to claim it. He gets excited and asks for his bank details.

   ....

   ....

   b. Miya sees an online ad offering a smartphone for just ₹499 from an unfamiliar website.

   ....

   ....

2. Write 4 ways of increasing a computer's performance.

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3. "A computer is of no use without software." Justify your answer.

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WORKSHEET

ENTREPRENEURIAL SKILLS-II

1. Amit started his stationery store to escape fixed working hours. From entering the market to expanding into multiple cities, his journey reflects the entrepreneurial career path.

   What motivated Amit to switch from wage employment to entrepreneurship, and how did his business evolve through the stages of enter, survive, and grow?

   ....

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2. Imagine you are starting your own business in your neighbourhood. You observe that many elderly people face difficulty getting groceries and medicines on time.

   Based on the functions of an entrepreneur (making decisions, managing the business, dividing income, taking risks, and creating something new), how would you turn this problem into a successful business opportunity?

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3. Arjun quit his job to launch a tech startup but faced financial struggles, long working hours, and high pressure. Despite setbacks, he succeeded through constant innovation and learning. What qualities helped Arjun turn challenges into success?

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Unit-5

GREEN SKILLS–II

1   Identify the goal from the following scenario and explain how it contributes to sustainable development.

Scenario: Sarva Shiksha Abhiyan (SSA) is a nationwide initiative aimed at providing quality elementary education for children up to the age of 14. This program ensures that all children, regardless of background, receive a solid foundation in education, fostering skills necessary for employment and social mobility.

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2.   Give examples for the initiatives taken by the government of India for the following SDGs:

a.   Quality Education—Goal 4

....

b.   Clean Water and Sanitation—Goal 6

....

c.   Decent Work and Economic Growth—Goal 8

....

3.   "Humans have caused more damage to the planet and the environment in the last two decades than ever before." Justify the statement.

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REVISITING AI PROJECT CYCLE & ETHICAL FRAMEWORKS FOR AI

Unit-1

A. **Name the three domains of AI with real life examples.**

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B. **Correct the following statements by changing single term:**

1. Google images is an application of Google that can identify objects in images by analysing a photo taken from the real world.

....

2. Face lock in smartphones uses the front speaker and computer vision algorithms to map and store facial features securely.

....

3. NLP is used in agriculture for tasks like monitoring crops, detecting pests, and estimating yields.

....

C. **An image is provided below. Please write a concise analysis of it:**
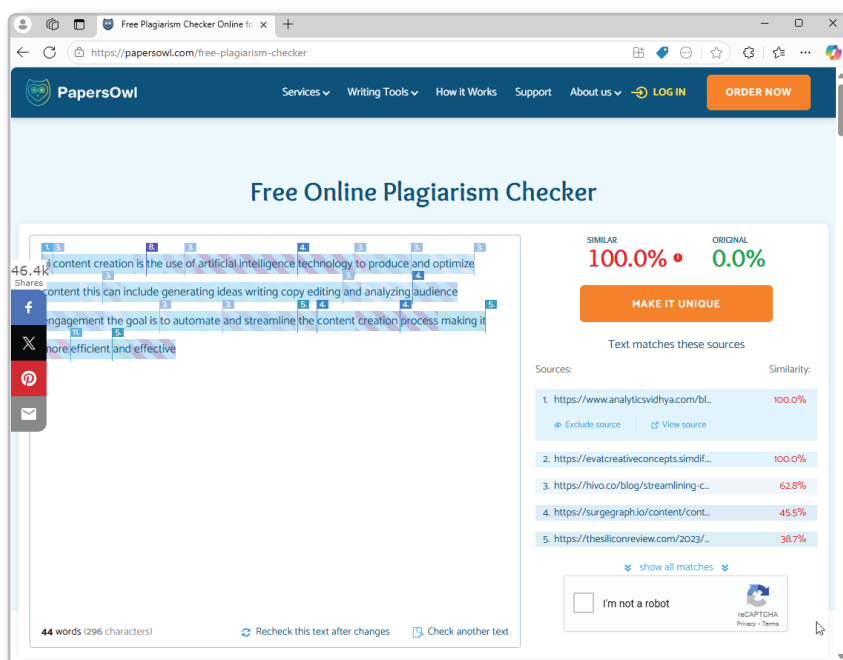
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Part B

WORKSHEET

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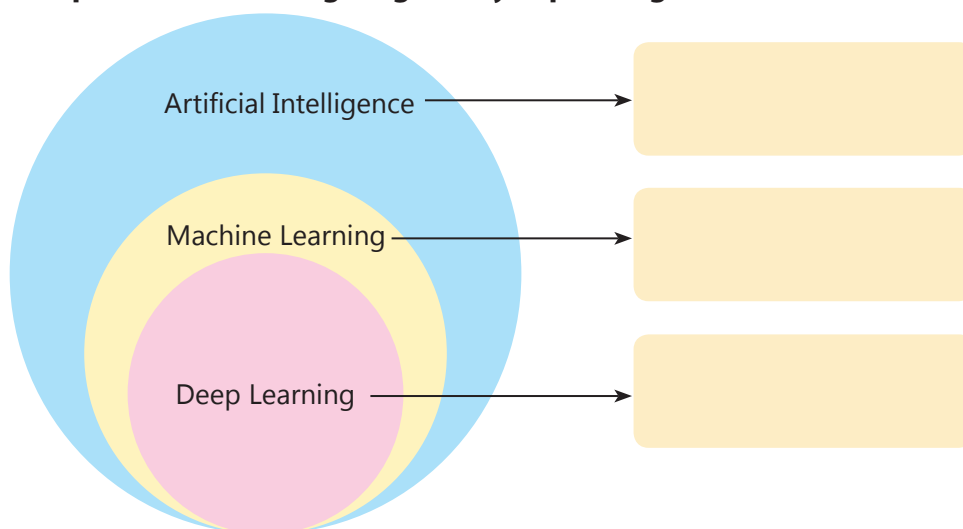
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Unit-2

CLASS 10

ADVANCED CONCEPTS OF MODELING IN AI

**A.** **Complete the following diagram by explaining the terms in the following arrows.**

Artificial Intelligence ➝ [ ]

Machine Learning ➝ [ ]

Deep Learning ➝ [ ]

Part B

B. **Expand the terms:**

1. ANN

....

....

2. CNN

....

....

C. **Explain the concept that is depicted in the following image:**

Spam ➝ Classification Model ➝ Inbox → Not Spam

Spam ➝ Classification Model

Not Spam ➝ Classification Model ➝ spam → Spam

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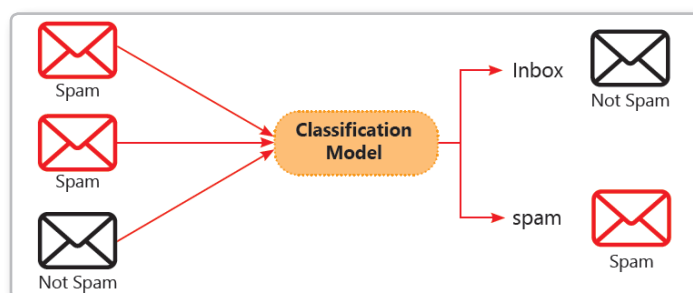
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EVALUATING MODELS

Unit-3

A. **Complete the confusion Matrix with True Positive, False Positive, True Negative and False Negative.**

Confusion Matrix		Predicted	
		Yes	No
Actual	Yes		
	No		

B. **An HR tech company has built a machine learning model to screen job applications. If the model wrongly flags a strong candidate as unsuitable (a False Positive), the company might lose talented applicants, affecting the quality of hires. Since only a small percentage of applications are truly bad, the dataset is highly imbalanced.**

In this situation, should Precision or Recall be prioritized during model evaluation? Justify your answer by discussing the importance of minimizing False Positives and its impact on the recruitment process .
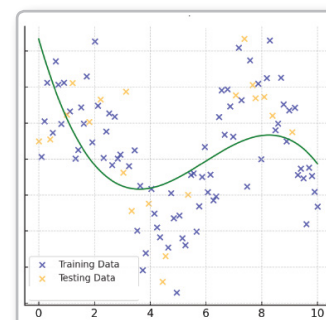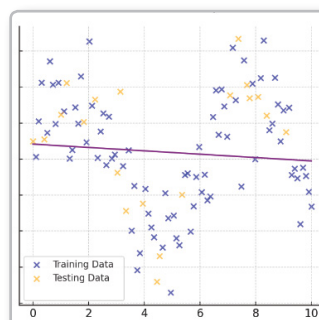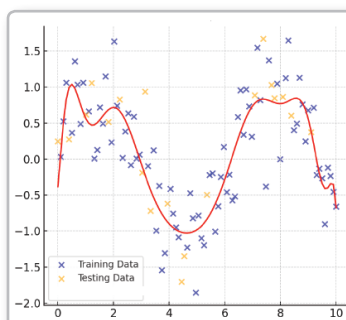
Part B

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C. **Identify what the following image depicts.**

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CLASS 10

Unit-5

Part B

COMPUTER VISION

A. Find the odd one out and state your reason for the following:

1. a. OCR
    b. Instance Segmentation
    c. Classification
    d. Language Translation

    Find the Odd One Out: ....

    Reason: ....

2. a. Object Detection
    b. Instance Segmentation
    c. Augmented Reality
    d. Classification + Localisation

    Find the Odd One Out: ....

    Reason: ....

3. a. India Gate recognition
    b. Face detection in a crowd
    c. Labelling every pixel of an object
    d. Reading a printed paragraph from a book

    Find the Odd One Out: ....

    Reason: ....

B. Suppose you have two images:

- Image A is 640×480 pixels
- Image B is 1920×1080 pixels

Which image will have better clarity? Explain why in 1–2 lines.

....

....

C. Imagine you are traveling to Japan and you see a road sign written only in Japanese. How would OCR and AR technologies in the Google Translate app help you understand the sign?

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CLASS 10

Unit-6

Name: _____

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NATURAL LANGUAGE PROCESSING

A. Identify the following tools from orange.

1. ....

2. ....

3. ....

4. ....

5. ....

6. ....

B. Explain the term sentiment Analysis in NLP. What is its goal?

....

....

C. Name no code/ low code tools that can be used with NLP

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Part B

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