

## INSTRUCTIONS TO CANDIDATES:

### Read these instructions carefully.

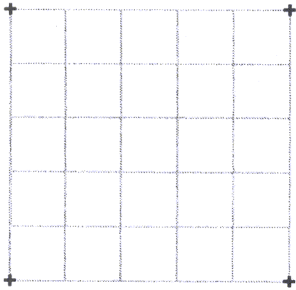
1. ■ Write your name, CEED Registration number and the Examination Centre in the space provided on the cover page of this answer book.
  - Make sure that you sign in the space provided on the cover page.
  - Entering your name or registration number anywhere else (other than in the space provided on the cover page) is strictly forbidden.
  - No distinctive mark of any sort is to be put anywhere in the answer book.
  - Violation of these instructions or adoption of malpractices in the examination hall will lead to disqualification.
2. Write your answers **ONLY IN ENGLISH**.
3. Write or draw your answers **only in the space provided for each question**.

In some questions, space for rough work has been provided below the question. This should be used for **ROUGH WORK ONLY**. The final answer should be provided **ONLY** in the space marked as "Space for Final answer".
4. Extra pages are provided **at the end of this book for ROUGH work**.  
DO NOT DETACH any of these pages.
5. **DO NOT REMOVE ANY SHEET** from this answer book.
6. Before leaving the examination hall, **submit this question-cum-answer paper to the invigilator**.

**DRAWING AND VISUALISATION**

Question 1.....(5 Marks)

A 5 X 5 grid is shown below as an example.



Draw a 10 X 10 equally spaced grid within the four + marks shown below.

**USE FREEHAND DRAWING ONLY.**

Do not use any instrument like scale (ruler), set square etc to draw.

→You will be evaluated by the quality of freehand drawing.



**DRAWING AND VISUALISATION**

Question 2 .....(15 Marks)

Make a pencil sketch of a transparent glass, half filled with water and a stainless steel spoon in it. **Do not use any instrument like ruler. DO NOT USE COLOURS.**

→ Your drawing will be evaluated by the ability to achieve a realistic three-dimensional effect.

**Space for ROUGH WORK**

**Question 2: Space for FINAL SKETCH**

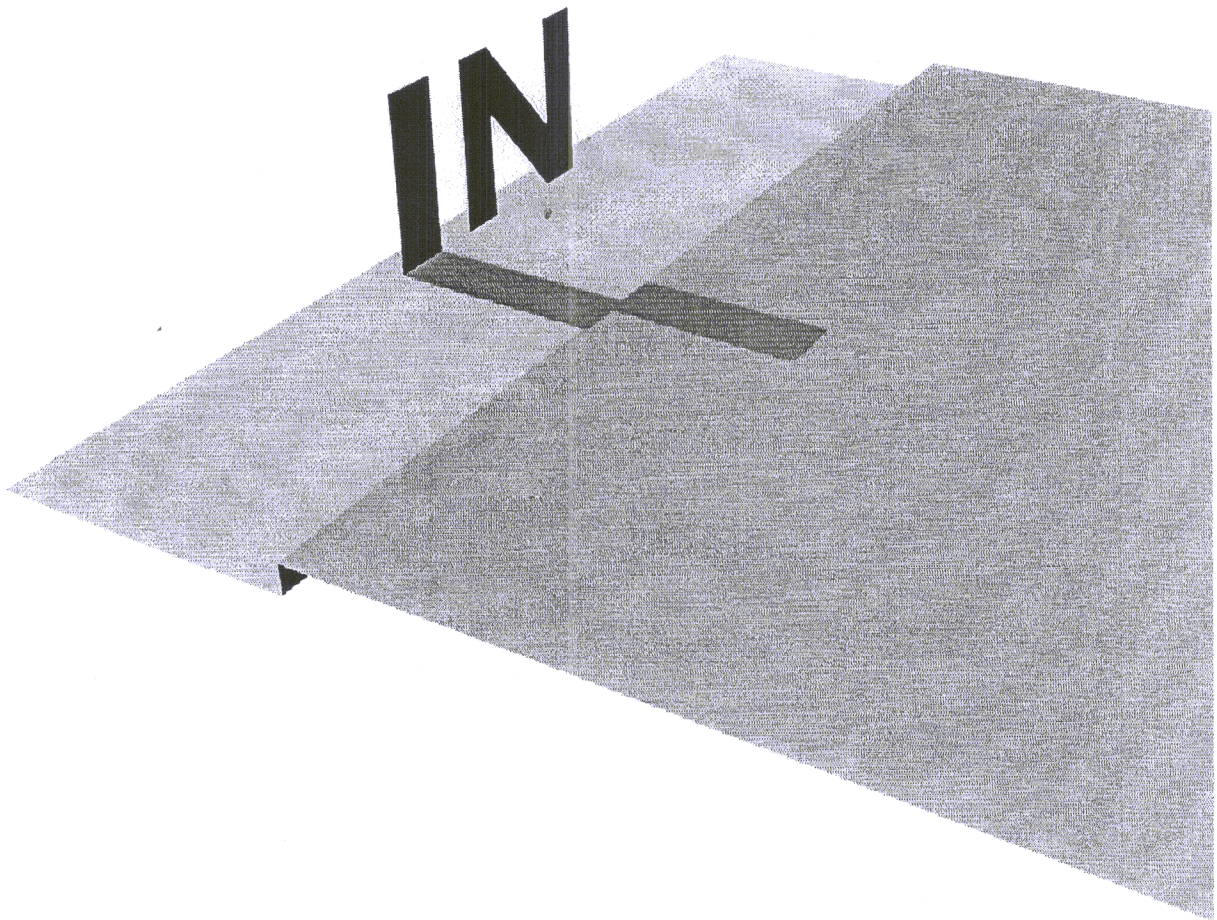
**DRAWING AND VISUALISATION**

**Question 3** .....(10 Marks)

Letter "I" casts a shadow in the visual shown below.

With the same lighting conditions, and the same viewing angle, draw the shadow created by the letter "N".

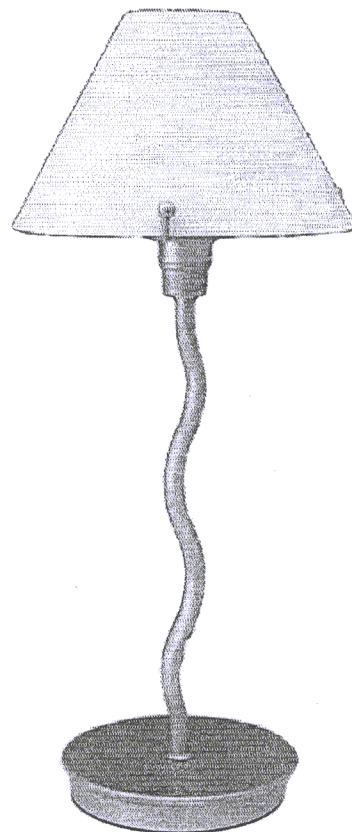
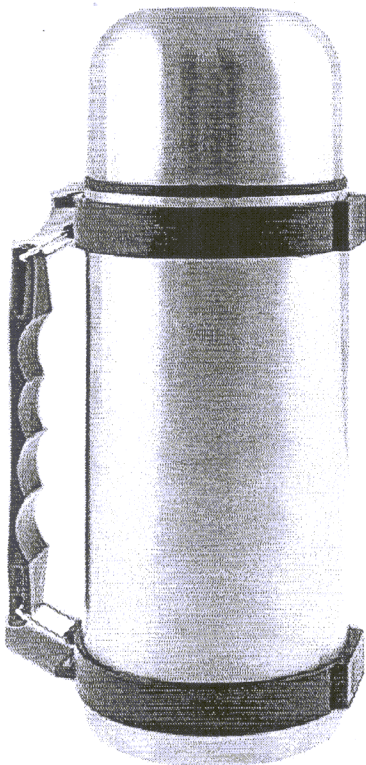
→ You will be evaluated for the ability to visualise the light and shadow effects in the three dimensional space.



**DESIGN ABILITY**

Question 4 .....(15 Marks)

Three products are shown below. **CHOOSE ONE** of them and show the details of the product through sectional views **OR** an exploded diagram so that the construction of the product is clear. Mention the materials recommended for each component.



Question 4: Space for Rough Work

**Question 4: Space for Final Work**



**DESIGN ABILITY**

Question 5 .....(15 Marks)

Describe with visuals, a step-by-step procedure to make a cup of tea, in maximum SEVEN steps. Supplement your visuals with appropriate text.

→You will be evaluated by your ability to articulate clearly the sequential instructions and ability to design visual based instructions.

**Space for Rough Work**

**Question 5: Space for Final Work**

Question 5: Space for Final Work

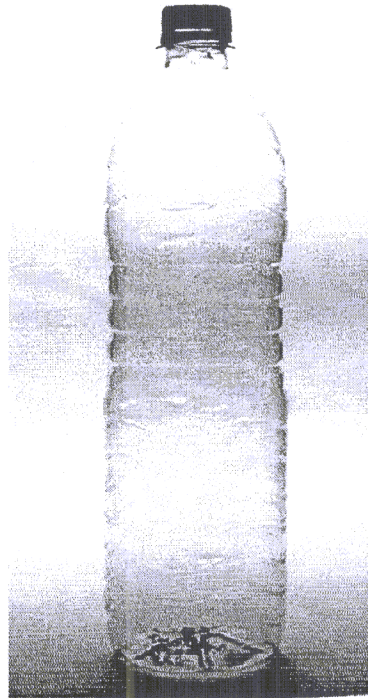
Question 5: Space for Final Work

**CREATIVITY**

Question 6 .....(10 Marks)

List ten different uses for discarded empty mineral water bottle as shown below.  
Explain your ideas with short notes and sketches in the space provided.

→You will be evaluated by the variety of uses, practicality and innovation.



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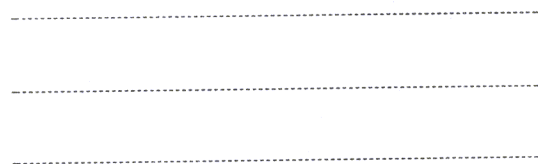
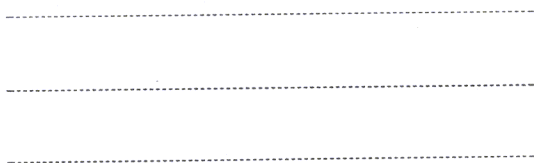
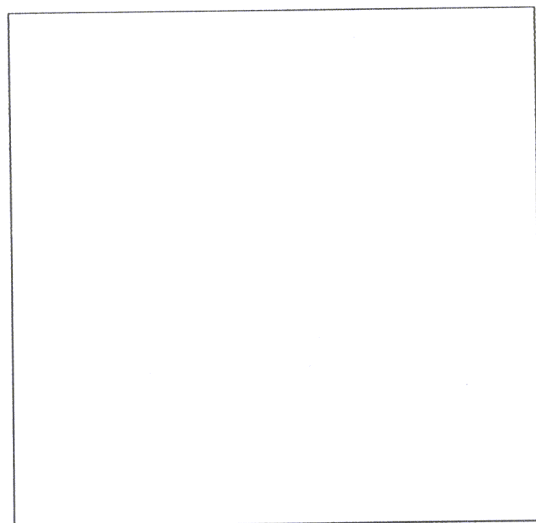
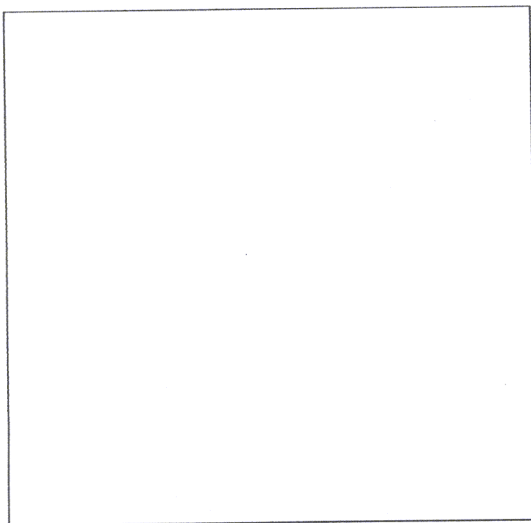
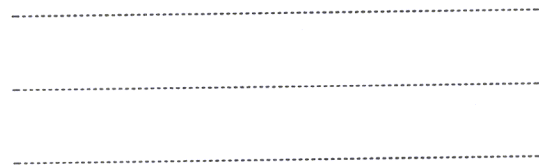
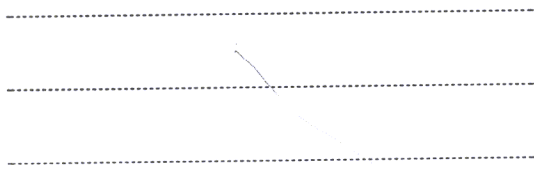
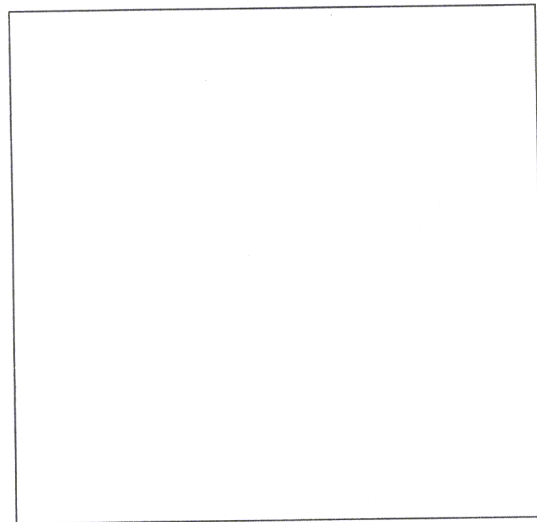
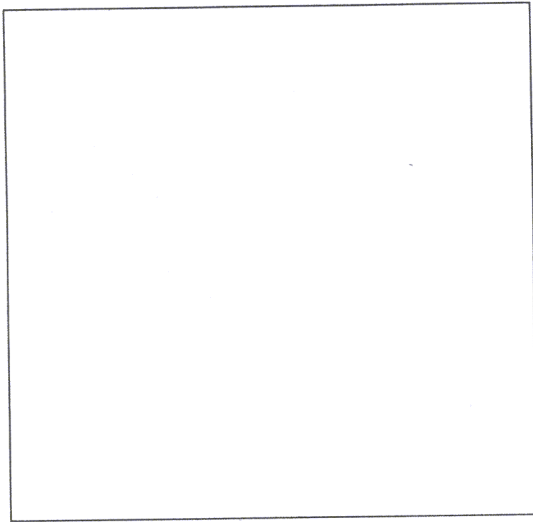
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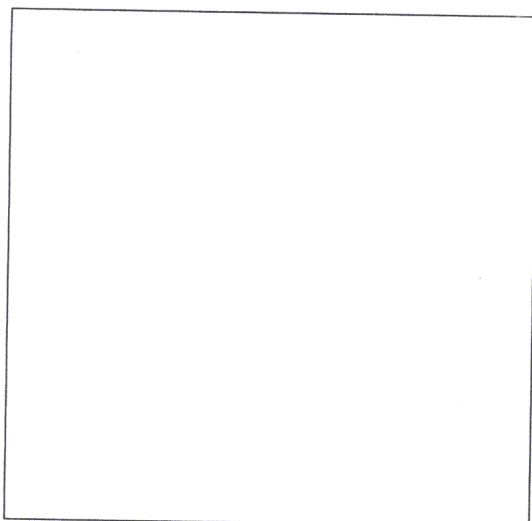
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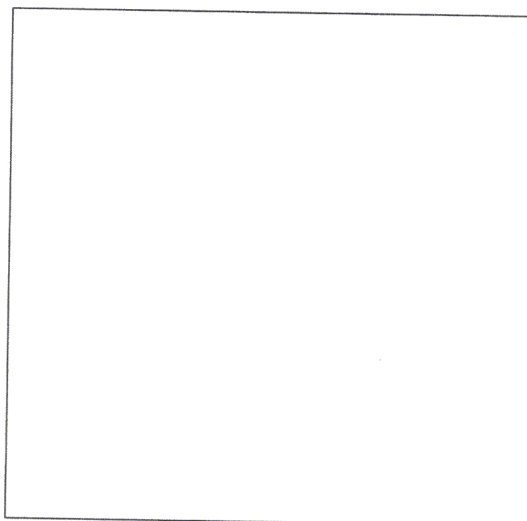
Question 6



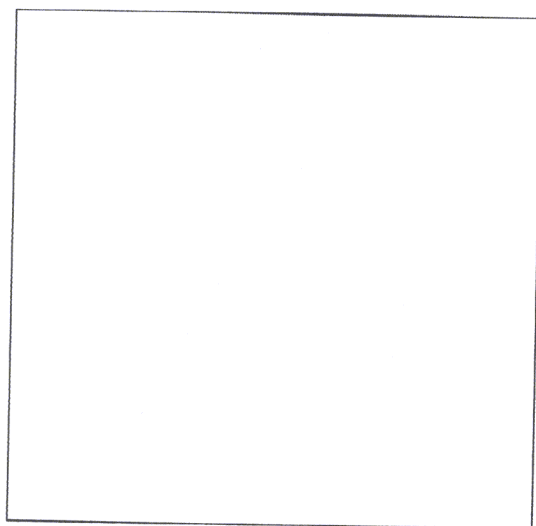
Question 6



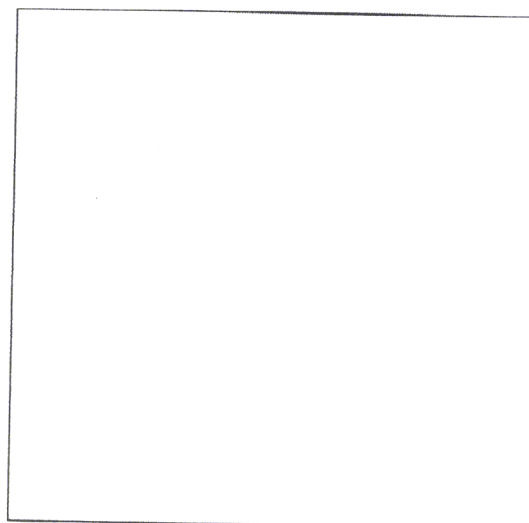
Three horizontal dashed lines for writing.



Three horizontal dashed lines for writing.



Three horizontal dashed lines for writing.



Three horizontal dashed lines for writing.

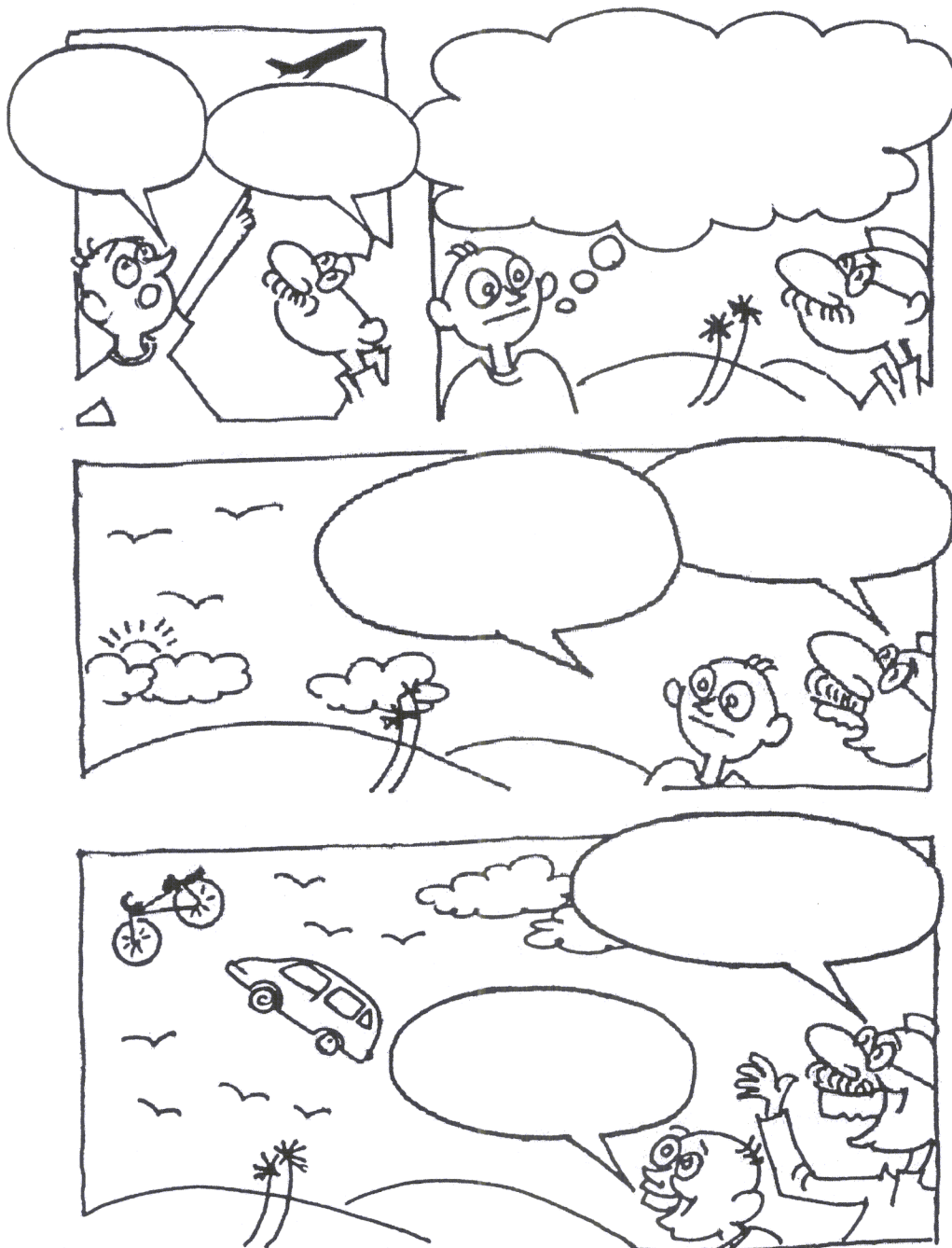
**CREATIVITY**

Question 7 .....(10 Marks)

Fill in the text bubbles in the comic strip given below to make a story.  
Suggest a title for the story.

→ You will be assessed by the relevance of your comments and the connection between visuals and written text.

**TITLE :** .....





**COMMUNICATION SKILLS**

## Question 8 .....(10 Marks)

Read the following passage carefully. Write a summary of the given passage in **FIVE sentences** in the space provided on the opposite page.

→ You will be judged by your ability to comprehend and summarise the passage given to you.

Ergonomics / human factors is a multidisciplinary activity striving to assemble information on people's capacities and capabilities for use in designing jobs, products, workplaces, and equipment. In the United States the military and aerospace industries have generally accepted human factors principles, but most other industries have been less quick to understand the benefits.

The probable benefits of well-designed jobs, equipment, and workplaces are improved productivity, safety, health and increased satisfaction for the employees. Removing unnecessary effort from jobs or reducing demands by improving the way in which information is transferred between people or between product and people (inspection) allows for greater productivity and, ultimately, higher profitability.

The terms *ergonomics* and *human factors* are often used synonymously. Both describe the interaction between the operator and the job demands, and both are concerned with trying to reduce unnecessary stress in the workplace. Ergonomics, however, has traditionally focused on *how work affects people*. This focus includes studies of their physiological responses to physically demanding work; environmental stressors such as heat, noise, and illumination; complex psychomotor assembly tasks; and visual-monitoring tasks. The emphasis has been on ways to *reduce fatigue* by designing tasks within people's work capacities. In contrast, human factors, as practiced in the United States, has traditionally been more interested in the man-machine interface, or human engineering. It has focused on people's behavior as they interact with equipment, workplaces, and their environment, as well as on human size and strength capabilities relative to workplace and equipment design. The emphasis of human factors is often on designs that *reduce* the potential for human *error*.

**Question 8**

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**4:** \_\_\_\_\_  
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**5:** \_\_\_\_\_  
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**SOCIAL AWARENESS**

Question 9 .....(10 Marks)

As an Indian designer, how would you tackle the issues mentioned below?  
Choose **ANY TWO** topics and describe in NOT MORE THAN **FIFTY WORDS**.

1. Pesticides in soft drinks
2. Child Labour
3. Adult Literacy

**Question 9**

**SPACE FOR ROUGH WORK**

**SPACE FOR ROUGH WORK**

SPACE FOR ROUGH WORK