4.21.1 drawing and design Paper 1 (449/1)

1. (a) - Size should be standard
   - White colour / good colour for contract / colour
   - Texture/good quality
   - Paper gauge/thickness
   - Ink must not run on it/ blooting factor
   - The edges should be perpendicular to each other

   any 4 x 1 = 2 marks

(b) (i) A0 - 1188 x 840
(ii) A3 - 420 x 297

2 x 1 = 2 marks

(c) - maintain right angle between blade and stock
   - maintain straightness of blade edge
   - store such that the blade is in a vertical position
   - avoid dropping or storing in direct sunlight
   - Only use it for the intended purpose

   any 2 x 1 = 2 marks

2. (a) - word processing - draw plus
   - corel draw - sketch up
   - Archi-CAD - punch card
   - Auto-CAD - Inviscape
   - Paint - Real draw
   - Mat lab - Auto desk
   - Adobe

   any 6 x 1 = 3 marks

(b) Definition
   - Mock-up is a scale model of the finished work made in any suitable material.
   Purpose - Mock-up is made and tested to find out whether or not the design is satisfactory
   - Imperfection not seen when drawing may show up clearly in a mock-up

   Definition - 1
   Purpose - 1

   (2 marks)

3. - Ferrous e.g steel
   - Nonferrous e.g copper, level, aluminium, silver, gold
   - Alloys eg. brass, bronze solder

   Naming 3 x 1
   Examples 3 x 1

   3 marks
4. (a) (i) \( A = 45 \times 2 = 90 \) (ii) Angle \( = 25^\circ \)

| (i) Measuring | - | 1 |
| Tabulation | - | 1 |
| (ii) Angle | - | 1 |

(3 marks)

5. (a) Fixed assets are properties e.g buildings, machines, and other equipment or facilities that have monetary value. 1 mark

(b) Deficit is the amount by which expenditure is greater than income. 1 mark

(c) Liabilities is financial obligation 1 mark
6. **SOLUTION**

7 faces, $7 \times \frac{1}{2} = 3\frac{1}{2}$
Assembly $2 \times 1 = 2$
Oblique $= \frac{1}{2}$

$= 6$ marks

7.

**Diagram**

Plan $= 1$
Hatching $= 1$
Projection $= 1$
Plotting points $= 1$
True shape $= 1$

$= 5$ marks
Correct square $3 \times \sqrt{2} = 1 \frac{1}{2}$
Correct points $3 \times \frac{1}{2} = 1 \frac{1}{2}$
Locus of end of string $= 6$ mks
9.

10.

- Angle of projection = ½ mark
  - Front elevation = 1 ½ marks
  - End elevation = 2 marks
  - Plan = 2 marks

Total = 6 marks
6 faces sectional 6 faces sectioned 3 faces unsectioned $6 \times \frac{1}{2} \times \frac{1}{2} = 6 \times \frac{1}{2} = 3 \times \frac{1}{2} = 2 \frac{1}{2}$
Plan

{ Hidden details = 1
  Hatching = 1

 Develop t.- Full length = 2
- Projection = 3
- Intersection pts = 3
  (lower truncation)
- Intersection pts = 1
- Folding lines = 1
- Compete development = 2

= 15 marks
Layout

vanishing point

projection lines

Faces, 10 x 1/2 = 5

= 15 marks

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