DRAWING AND DESIGN PAPER 1

ANSWERS

KCSE 2010

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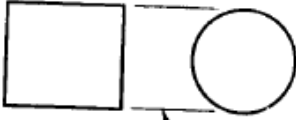
Drawing and Design Paper 1 (

1. (a) It will not add value to the drawing since it would produce the same view as the one initially used though in reverse directions. (1 x 1)
   (b) The tape:
      (i)   tends to peel the top layer of the drawing paper
      (ii) is expensive   (2 x ½)

2. (a) Salary is payment made after a predetermined period/duration and is taxable. Wage is payment to short term worker usually daily or weekly (2 x 1)
   (b) DESIGN: a process of converting an idea into pictorial or drawing form
                                                                     (1 x 1)
      Factors to consider –function
                          -aesthetics   (2 x ½)
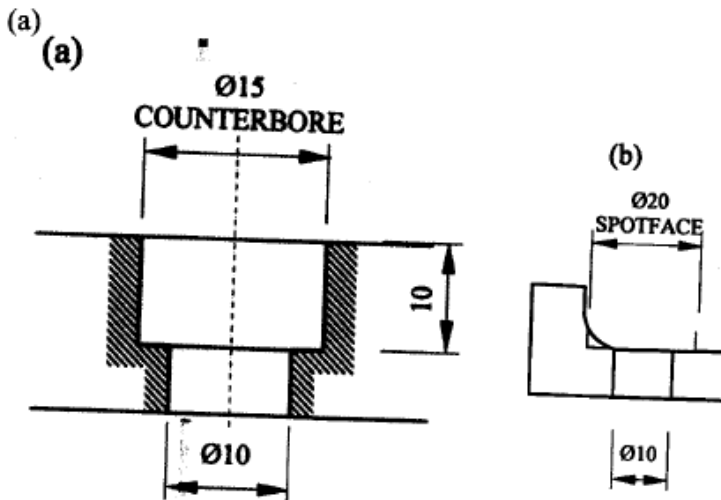
3. (a)

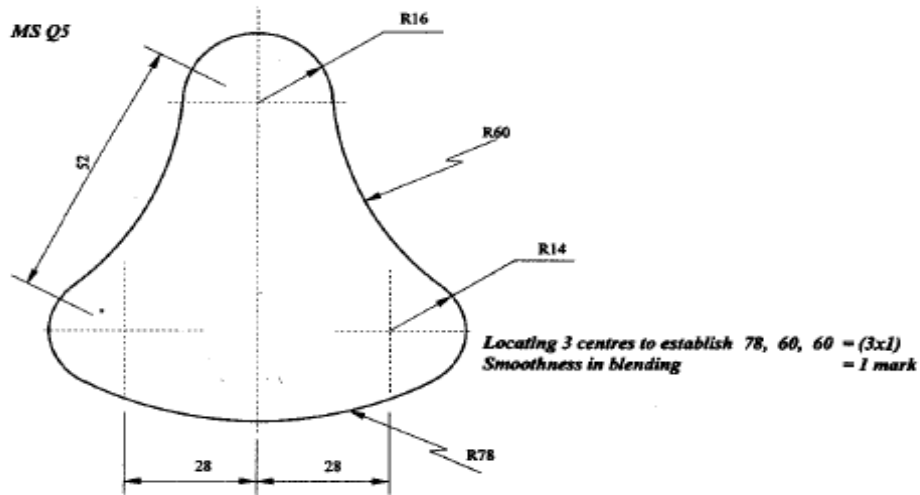Leader lines   Projection lines

   (b) DEFINITIONS
      PLASTICITY: the ability of materials to deform and retain its new shape when load is removed.
      ELASTICITY: the ability of materials to deform under load and return to its original shape when load is removed. (x 1)

4. CONVENTIONS
   (a)

Ø15
COUNTERBORE

(b)

Ø20
SPOTFACE

Counter bore 4 x ½=2
Spot face   4 x ½=2
TOTAL   =4

5.

MS Q5

R16

R60

R14

52

Locating 3 centres to establish 78, 60, 60 = (3x1)
Smoothness in blending = 1 mark

28   28

R78

6. **(a)**

(i)   =0.625
(ii)   =0.11   } 3 x 1
(iii)   =0.75

(b)
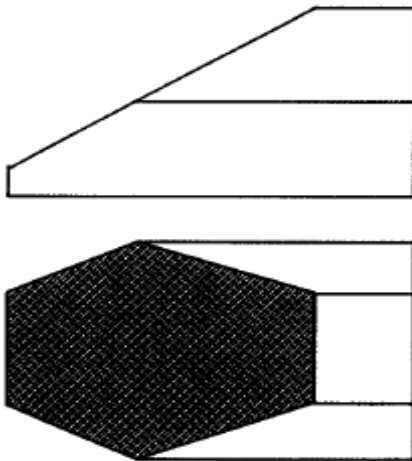
END ELEVATION
    2 faces (2 x ½)   *= 1*
    Hatching   *= ½*
PLAN
    4 faces (4 x ½)   *= 2*
    Hatching   *= ½*
    TOTAL   *= 4*

7.
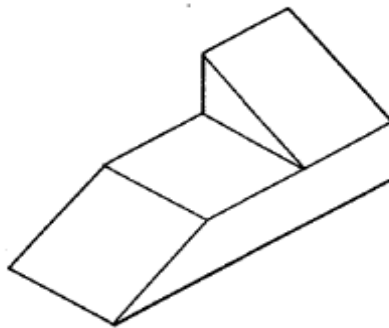
5 faces x ½   *= 2 ½*
Correct lowest point X   *= ½*

TOTAL   *= 3*

8.

MS Q 8

Both oblique = 1
Correct cavalier = 1
Correct cabinet = 1
TOTAL   = 3

L

W

CAVALIER PROJECTION

½ L

W

CABINET PROJECTION

9.

PICTURE PLANE

Station point

Vanishing point

Correct sketch   = 1
Picture plane   = ½
Station point   = ½
Vanishing point = ½
Ground level   = ½
TOTAL   = 3
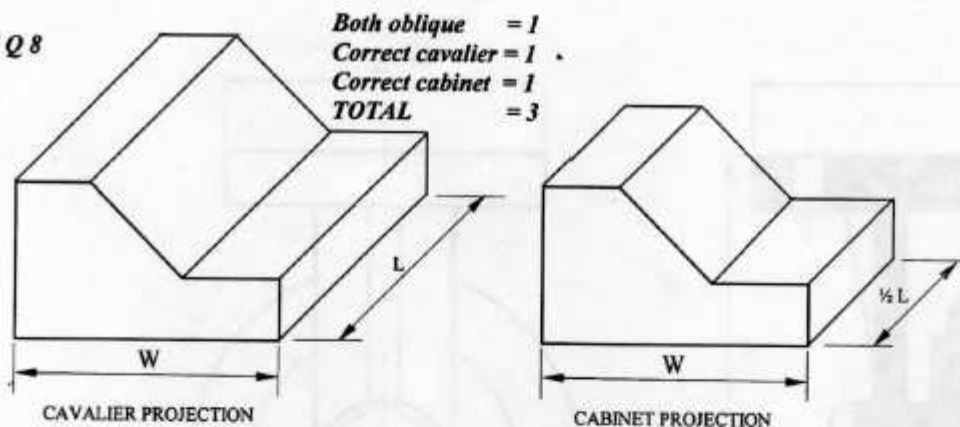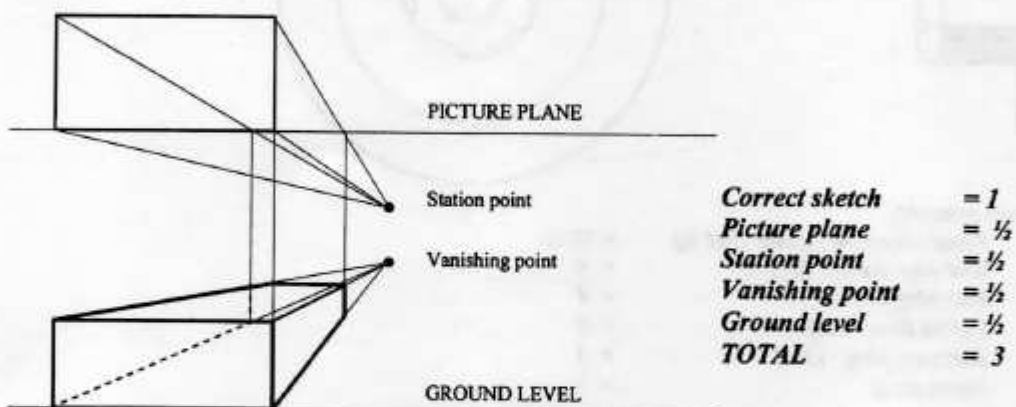
GROUND LEVEL

GROUND LEVEL
The sketch could vary but the concept should be correct

10.

F. E.

3 faces x ½   = 1 ½
Hidden details = ½

E. E.

2 faces x ½   = 1
Hidden details = ½

F. E.

3 faces x ½   = 1 ½
Hidden details = ½
3rd angle projection = ½
TOTAL   = 6
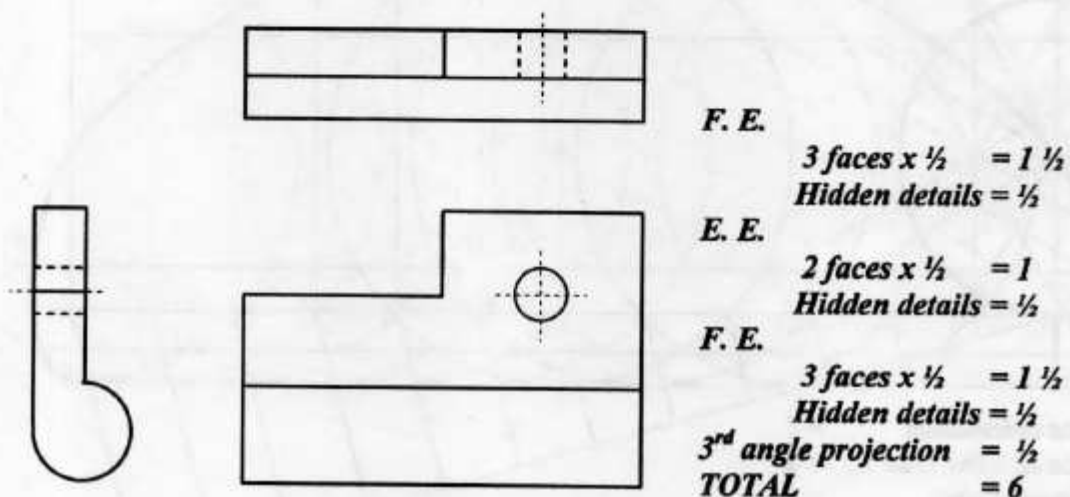
11.
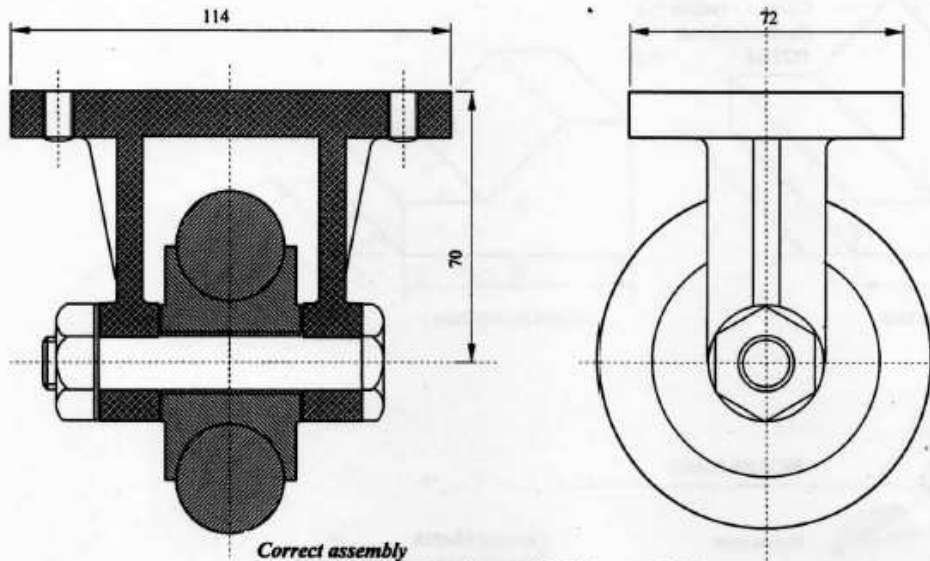
Correct assembly
Front elevation 7 parts (7x1 ½)	= 10 ½
End view 6 parts (6x1 ½	= 9
Hatching (4x1)	= 4
Centre lines (3x1)	= 3
Dimensioning (3x1)	= 3
Neatness ½	= ½
TOTAL	**= 30**

12.
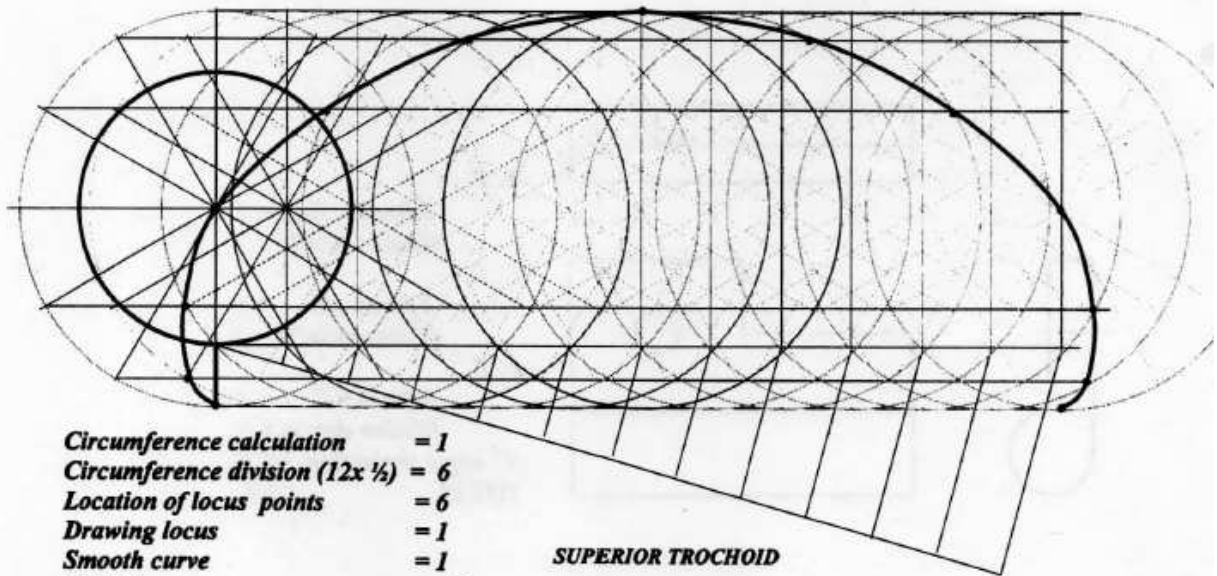
Circumference calculation	**= 1**
Circumference division (12x ½)	**= 6**
Location of locus points	**= 6**
Drawing locus	**= 1**
Smooth curve	**= 1**
TOTAL	**= 15**

SUPERIOR TROCHOID

13.

FRONT ELEVATION

END ELEVATION - E
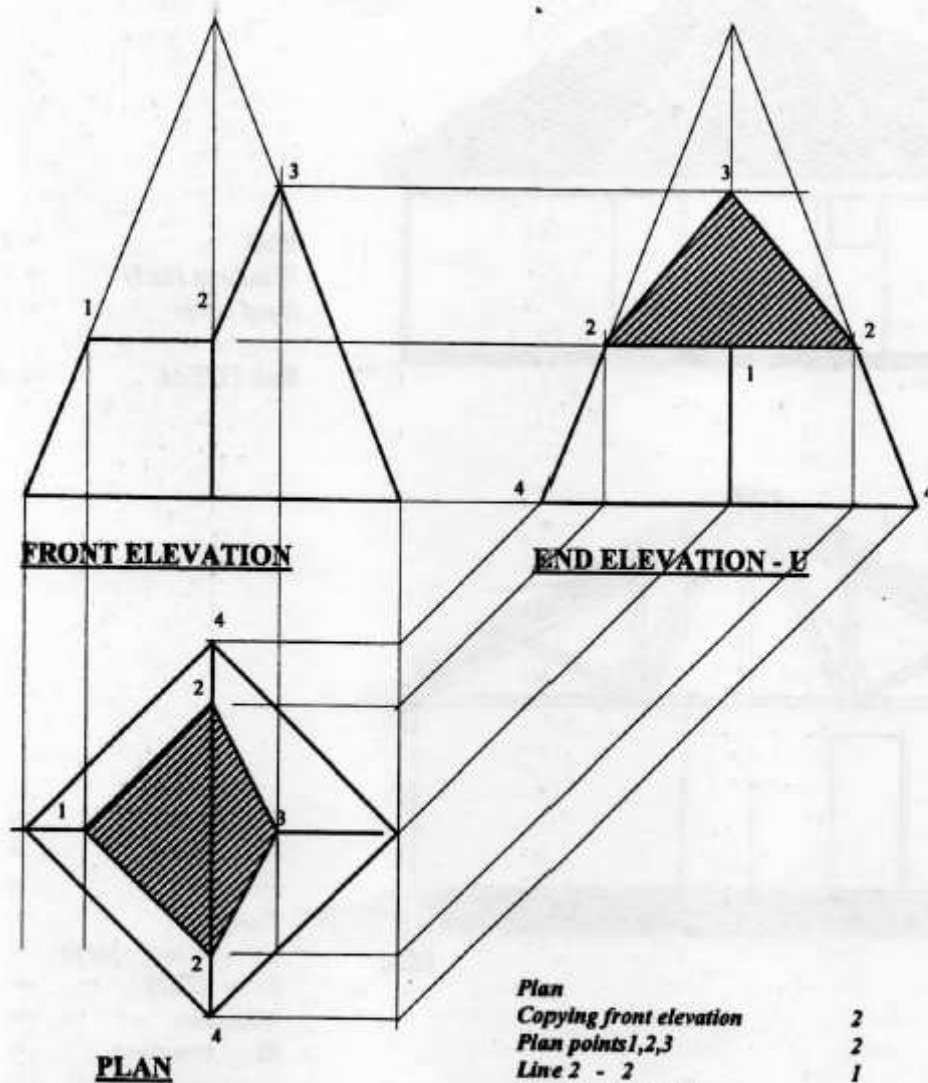
PLAN

Plan	
Copying front elevation	2
Plan points 1,2,3	2
Line 2 - 2	1
Connecting points	2
Hatching	2
End elevation	
Points 1,2,3,2	2
Connecting points	1 ½
Hatching	1 ½
Points /line 4 - 4	1
TOTAL	**15**

14.
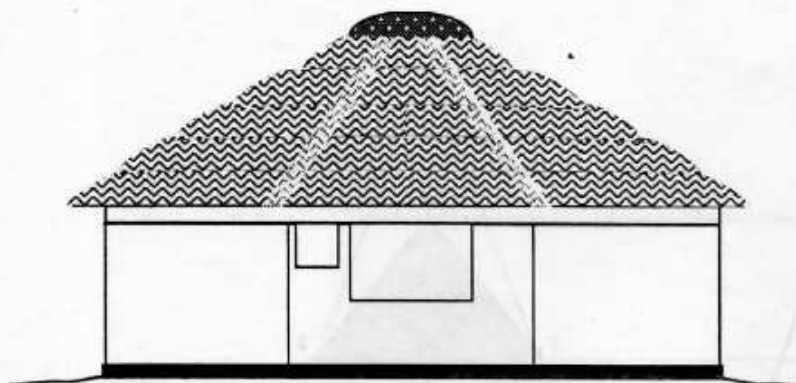
ELEVATION A

Wall	= 1
Windows (2x1)	= 2
Roof cover	= 1
Sub TOTAL	**= 4**
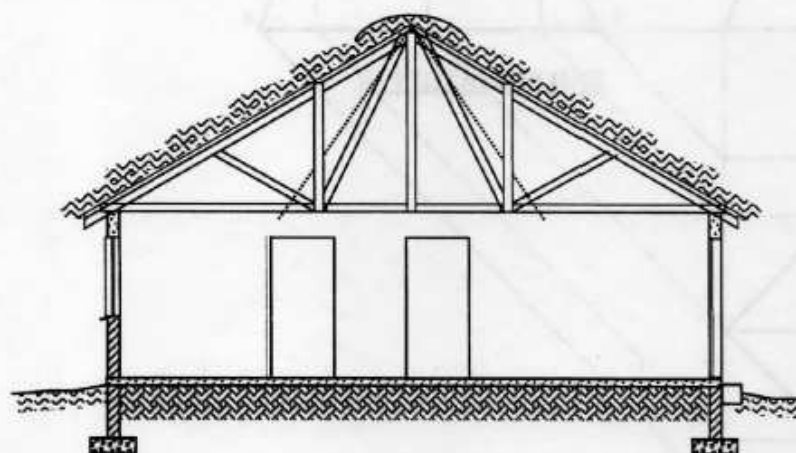
SECTION X - X

Wall	= 1
Foundation	= 1
Hardcore	= 1
Floor	= 1
Ground level/earth	= 1
Door (2x1)	= 2
Windows	= 1
Roof structure	= 1
Roof cover	= 1
Battens and purlins	= 1
Sub TOTAL	**= 11**

GRAND TOTAL = 15