SUKELLEMO EXAMS

449/1

DRAWING AND DESIGN

PAPER 1

TIME 2 ½ HOURS

Name.....Index no.....

INSTRUCTIONS

You should have the following for this examination

i) Drawing instruments

ii) 3 no size A3 drawing papers

This examination comprises of three sections A, B and C. Answer all questions in section A and B. Choose any TWO questions in section C.

All dimensions are in millimetres unless specified otherwise.

FOR EXAMINERS USE ONLY

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Marks														

TOTAL MARKS

Answer all questions in this section.

1. (a)List **FOUR** characteristics of an entrepreneur (2mks)

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……
……
……

b) List **THREE** types of templates that will be found in a drawing office (3mks)

i*)* ……

ii) ……

iii*)* ……

2. List (three) 3 computer software used when drawing (3 marks)

i*)* ……

ii) ……

iii*)* ……

3. Explain the meaning of the following terms used in design (4mks)

i) Aesthetics

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……

ii)Ergonomics

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……

iii) Thumbnail sketches.

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iv) Prototype .

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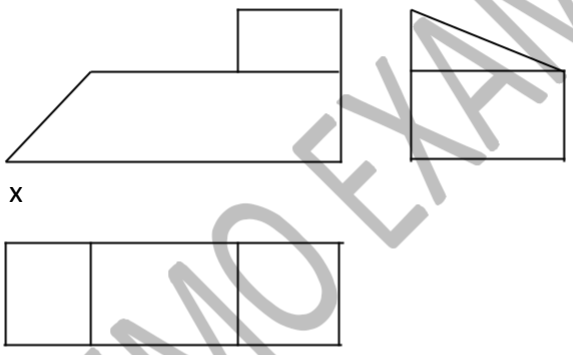
4. Draw the figure 1 below in isometric marking point X nearest to you. (5 marks)



5. List down the process of making a new product. (3marks)

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6. Figure 2 shows two orthographic view of shaped object.

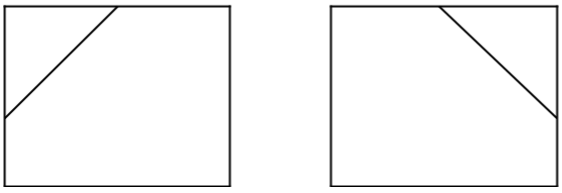

Fig2

7. Figure 3 shows a right cone truncated as shown. Draw the end elevation of the cone in the direction of arrow X. (4mks)

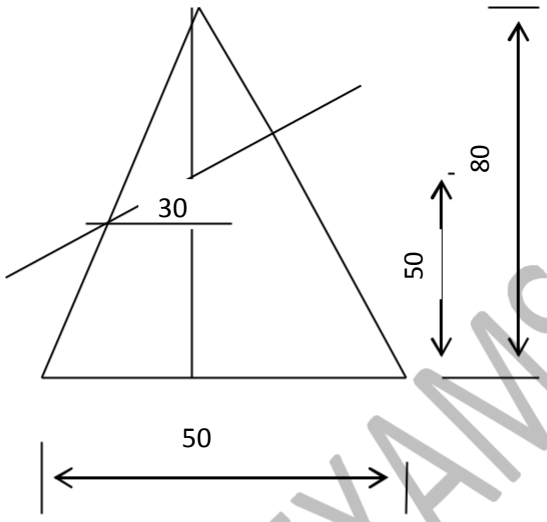

Fig3

8. List three types of templates found in a drawing office. (3marks)

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……
……
……

9. Figure 4 shows a diagonal scale of 1:10 to measure length of 1.0m with the accuracy of
0. 005m.Give the following readings:

i. A
ii. B
iii. C (3 marks)

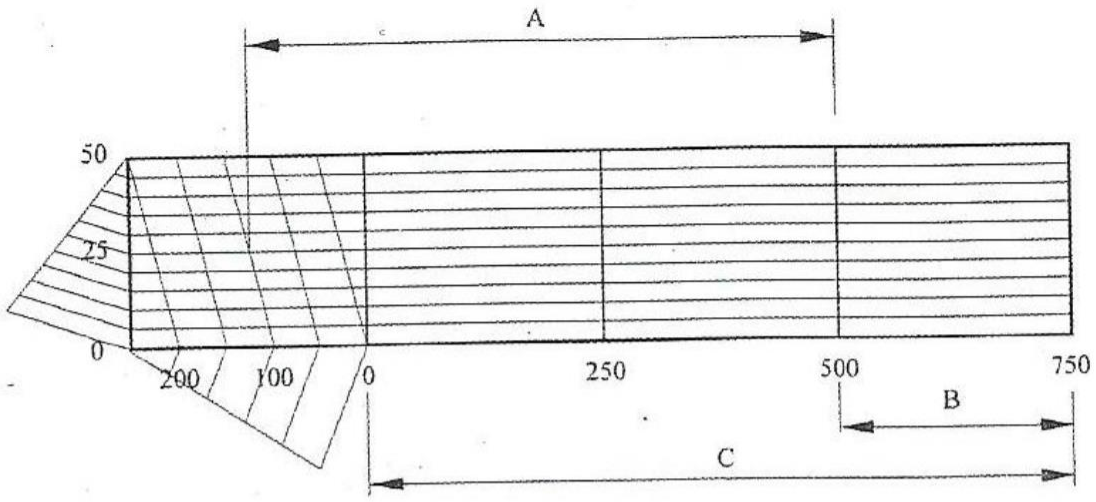
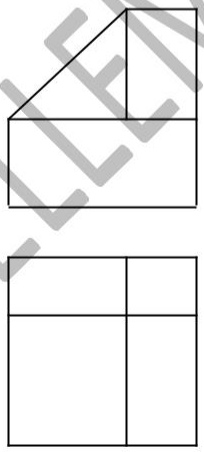


Fig4

10. Show the figure 5 below in oblique drawing. (3 marks)

Fig5



11.

SECTION B (30 marks)

This question is compulsory. Candidates are advised to spend not more than one hour on this question.

Figure 7 shows parts of a machine component drawn in first angle projection. Assemble the parts and draw, FULL SIZE, the following:

(a) sectional front elevation along the cutting plane B-B;
(b) end elevation;
(c) insert three leading dimensions.

Unspecified dimensions are left to the candidate's discretion. Hidden details are not required.

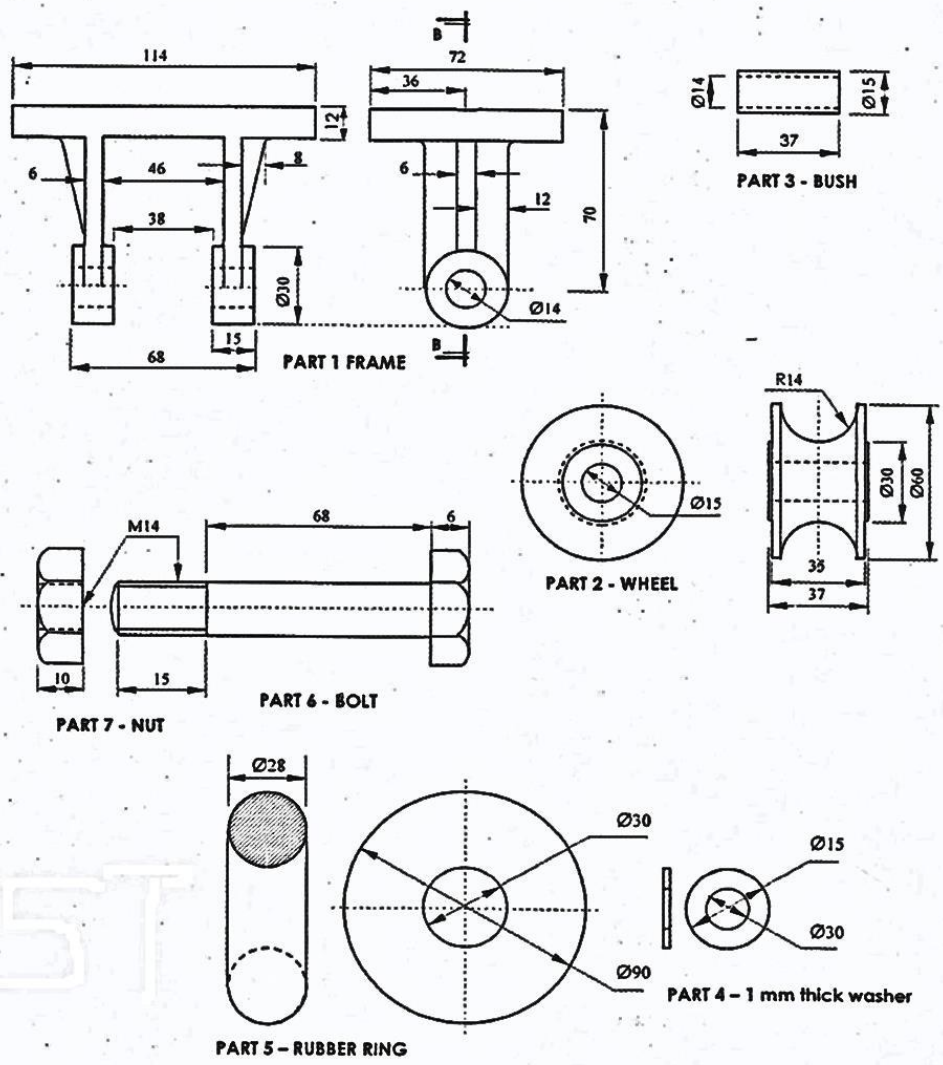


Figure 7

12. In the mechanism shown in figure6 , the crank EF rotates abount centre E while GH oscillates about G.

Plot the locusof P for one complete revolution of EF.

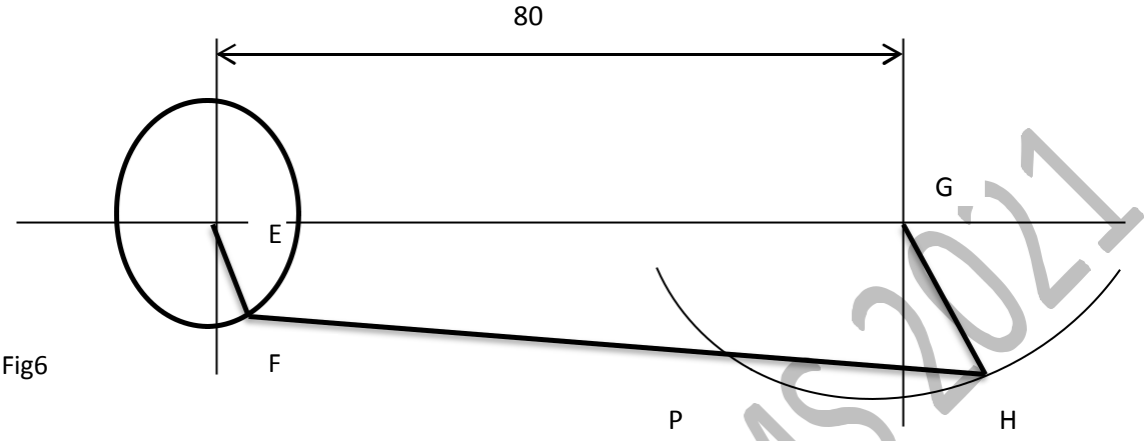


Fig6

EF=20

GH=30

FP=45.

13. The figure7 shows front elevation and incomplete plan of a square based pyramid; (15 marks)

a) complete the plan,

b)true shape of the cut surface,

c) development of the square pyramid

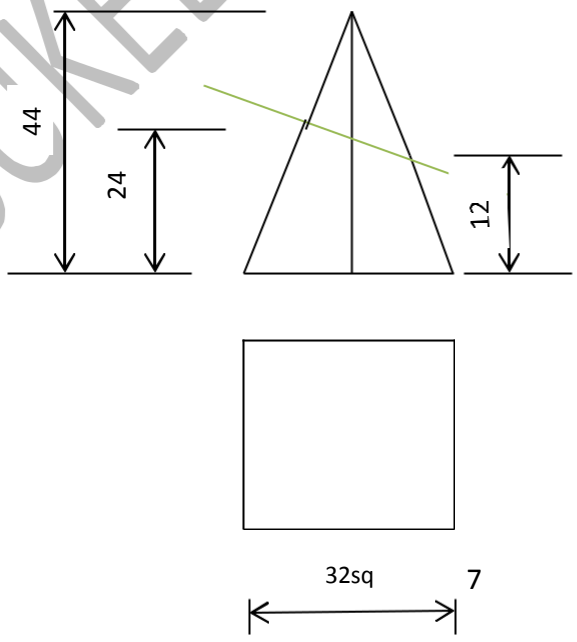


Fig7

14. Figure 8 shown below is a first angle projection of a object. Draw the isometric view of the

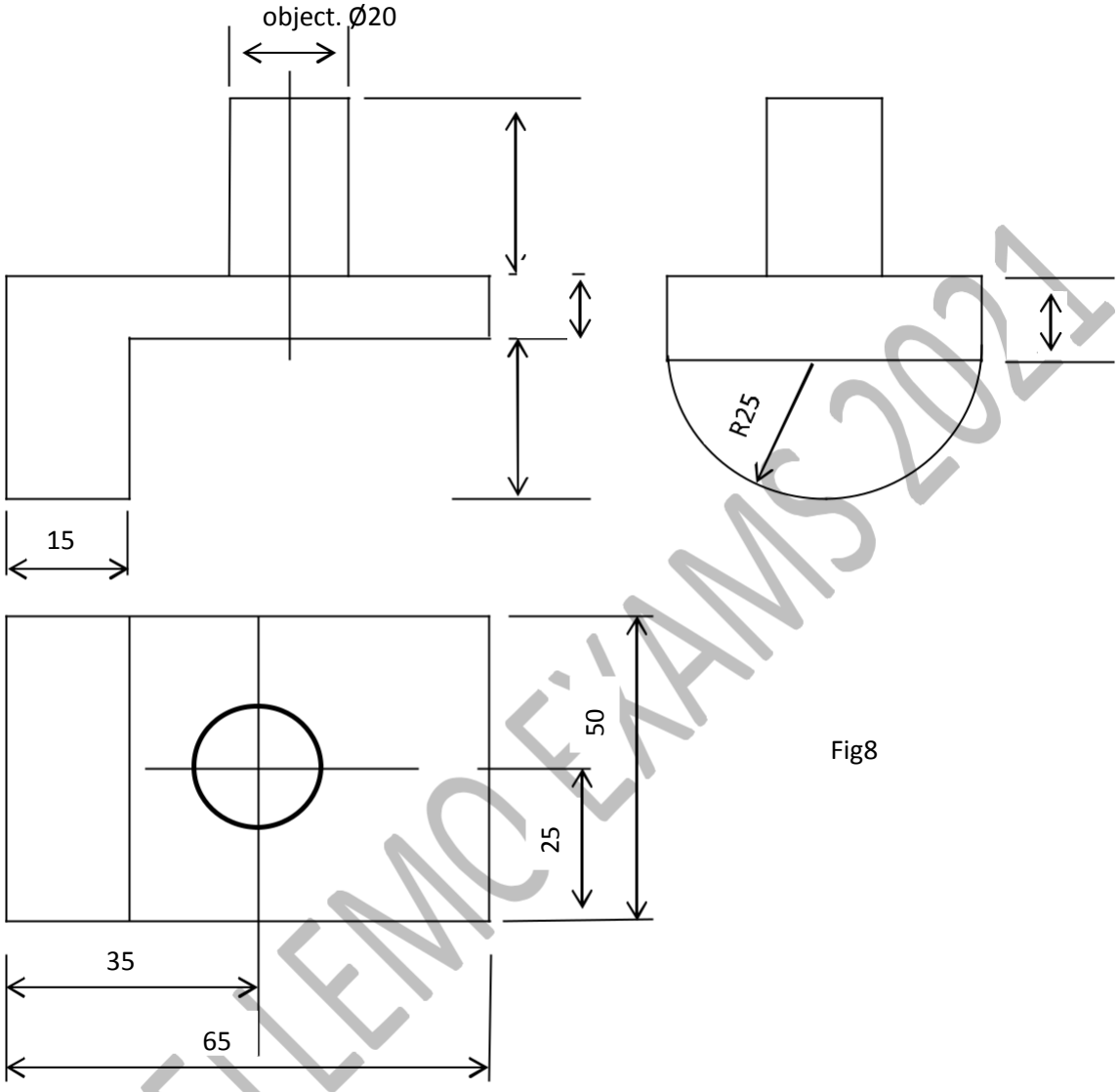


Fig8

Draw the isometric view of the object. (15marks)