MAHARASHTRA STATE BOARD OF TECHNICAL EDUCATION
(Autonomous)
(ISO/IEC - 27001 - 2005 Certified)
SUMMER – 13 EXAMINATION
Subject Code: **17205**   <u>**Model Answer**</u>

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<u>**Important Instructions to examiners:**</u>

1) **The answers should be examined by key words and not as word-to-word as given in the model answer scheme.**

2) **The model answer and the answer written by candidate may vary but the examiner may try to assess the understanding level of the candidate.**

3) **The language errors such as grammatical, spelling errors should not be given more Importance <u>(Not applicable for subject English and Communication Skills).</u>**

4) **While assessing figures, examiner may give credit for principal components indicated in the figure. The figures drawn by candidate and model answer may vary. The examiner may give credit for any equivalent figure drawn.**

5) **Credits may be given step wise for numerical problems. In some cases, the assumed constant values may vary and there may be some difference in the candidate's answers and model answer.**

6) **In case of some questions credit may be given by judgement on part of examiner of relevant answer based on candidate's understanding.**

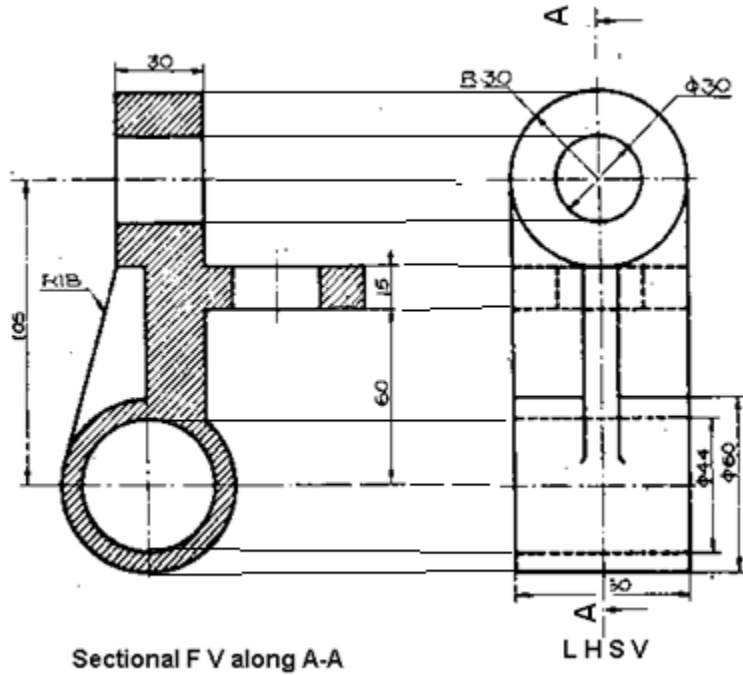7) **For programming language papers, credit may be given to any other program based on equivalent concept.**

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Q 1 a) Draw sect. FV & LHSV

For Sect FV : 5 marks　　　　　　　　　**LHSV: 5 marks**

Sectional F V along A-A　　　　　　　L H S V

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Q 1 b)   Draw sect. FV, TV & RHSV (<u>Imp note: Read dim 125 as 100 mm</u>)

For Sect FV : 4 marks   TV : 2 marks   RHSV: 4 marks
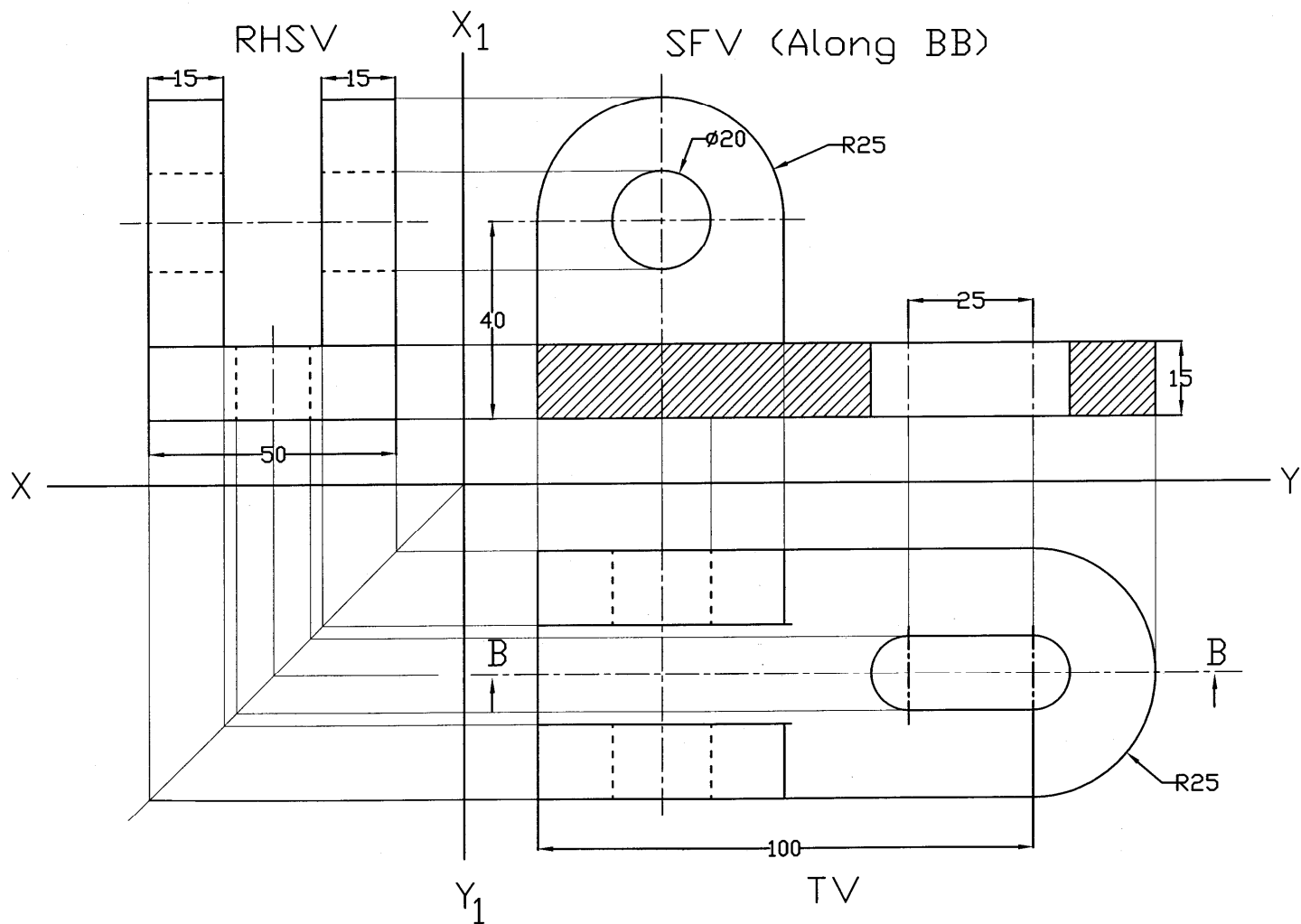
Q 2 a) Problem on Projection of lines

For   FV : 3 marks   TV : 3 marks   For each Inclination : 1 mark

Inclination of line with HP = θ = 32^0 &   with VP = φ = 48^0
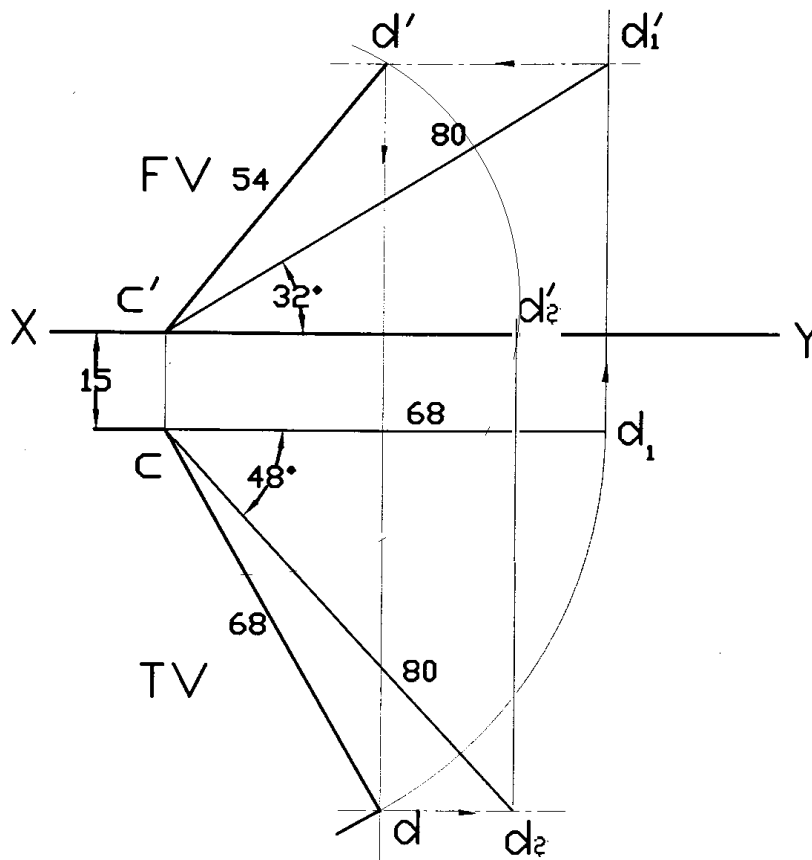
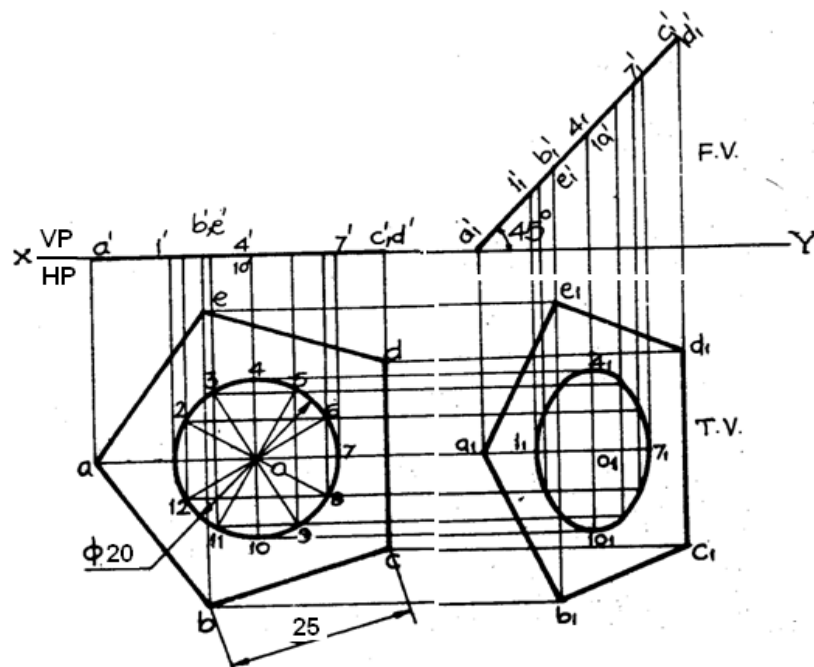## Q 2 b) i) Circular plate problem

For   stage I : 3 marks   **For   stage II : 5 marks**
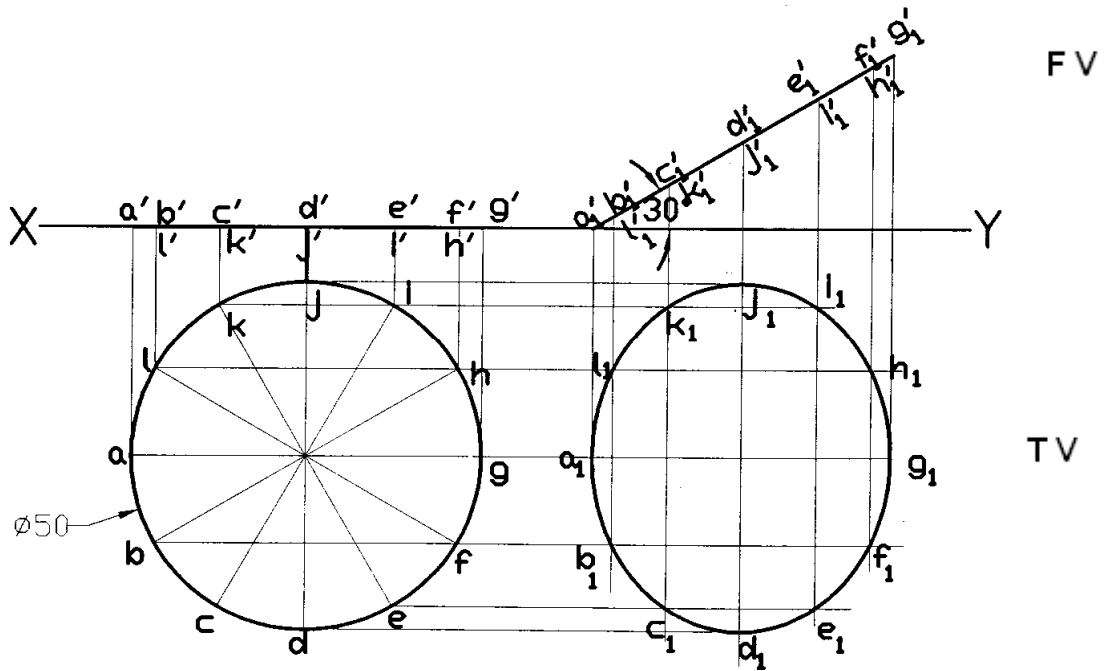
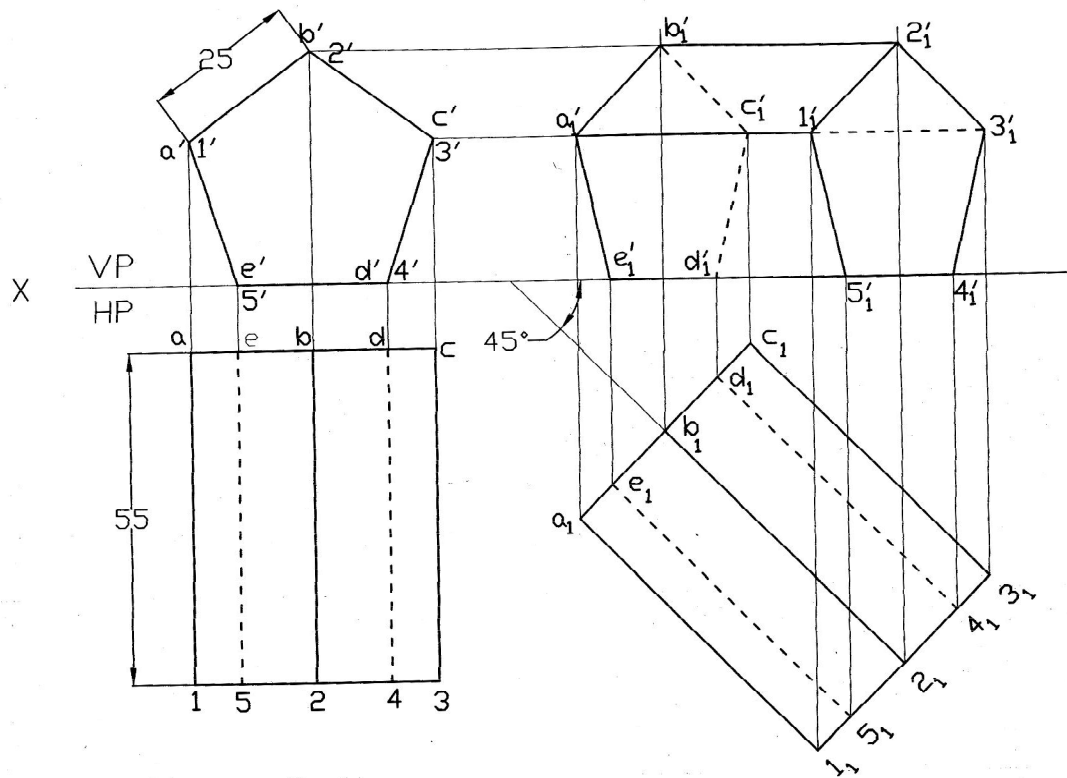## Q 2 b) ii) Pentagonal plate problem

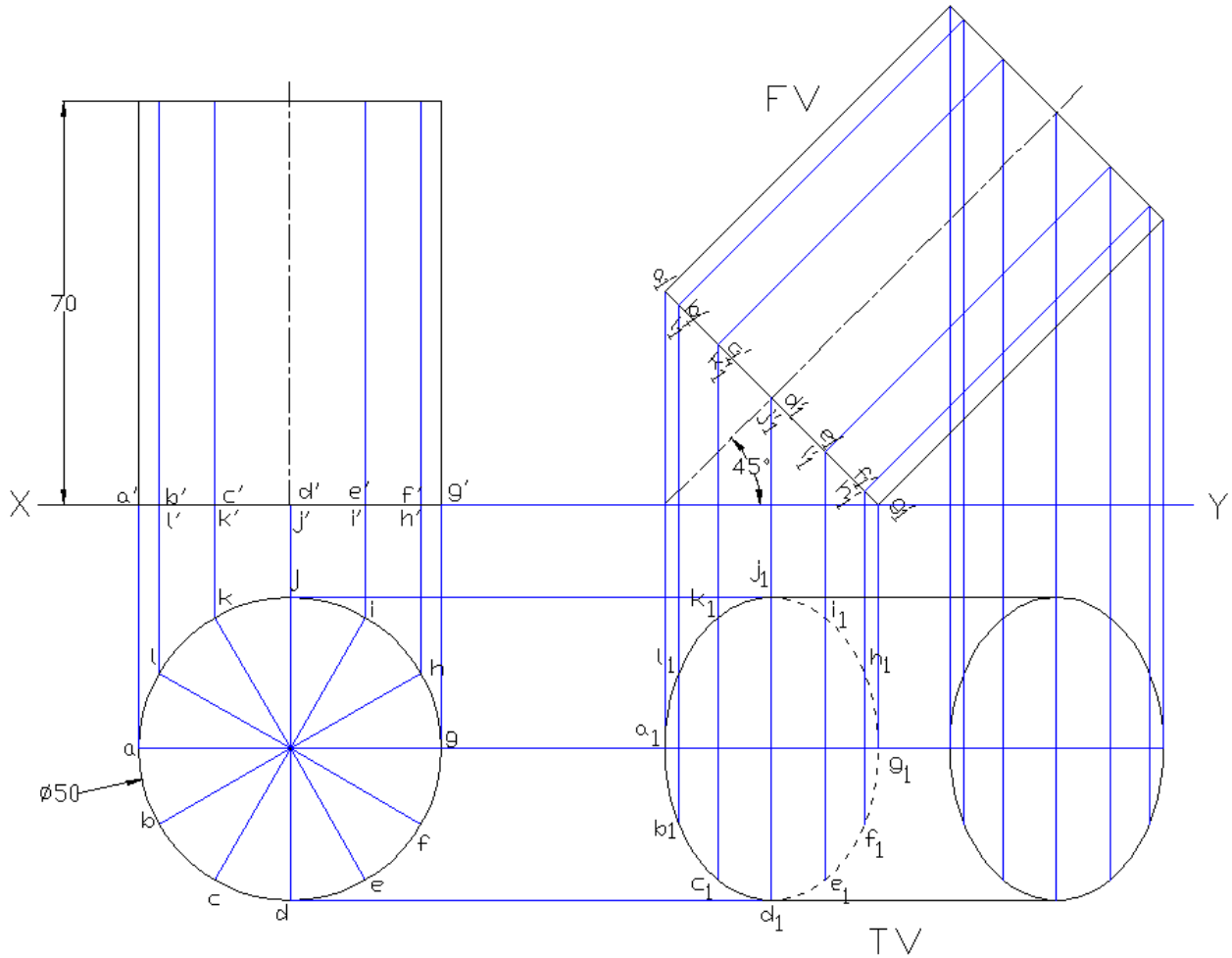**For   stage I : 3 marks**   **For   stage II : 5 marks**

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Q 3 a)   Pentagonal Prism problem

For   stage I : 3 marks   For   stage II : 5 marks

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Q 3 b)   Cylinder problem

For   stage I : 3 marks   For   stage II : 5 marks

Q 3 c) Cone problem

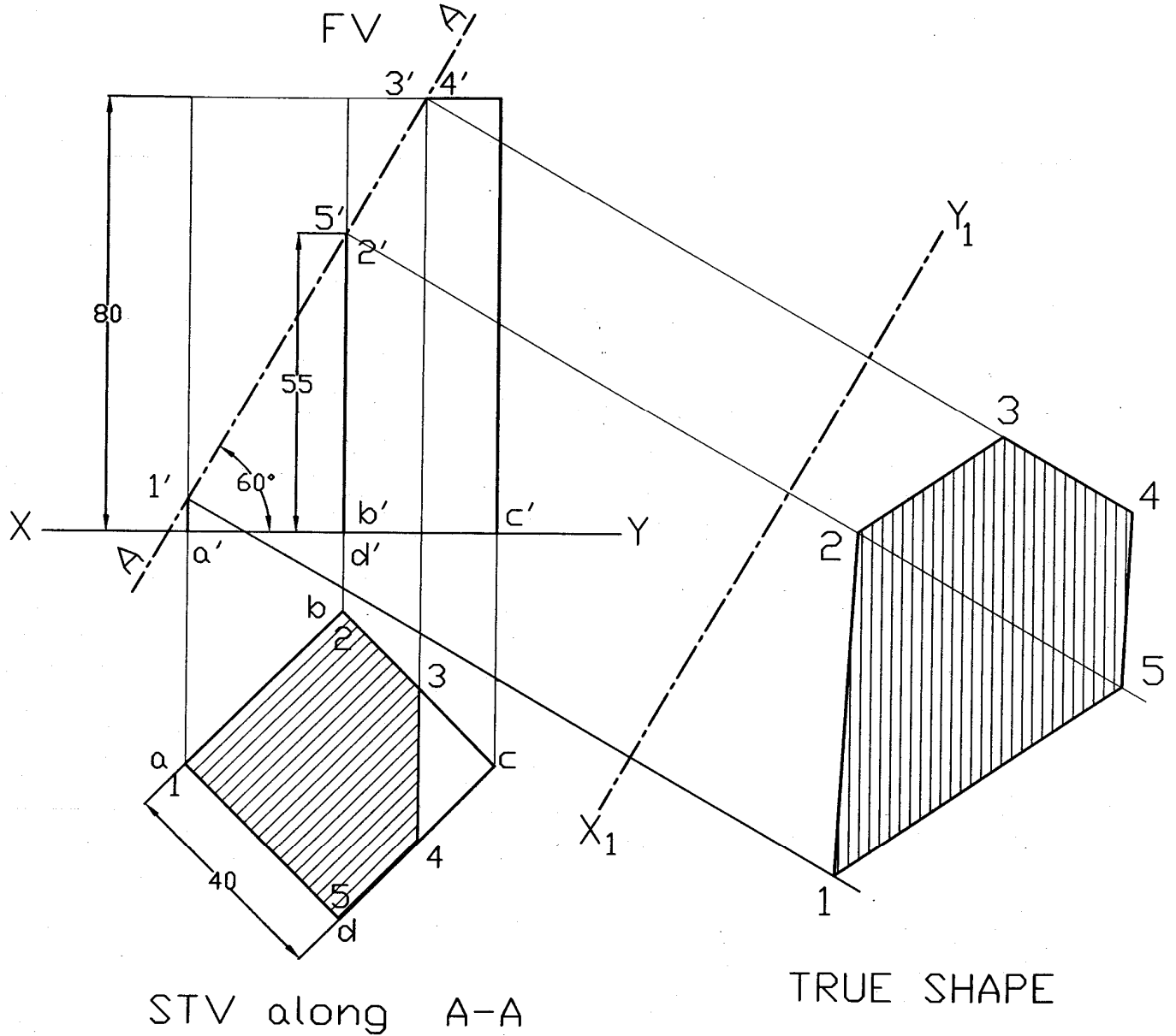**For   stage I : 3 marks   For   stage II : 5 marks**
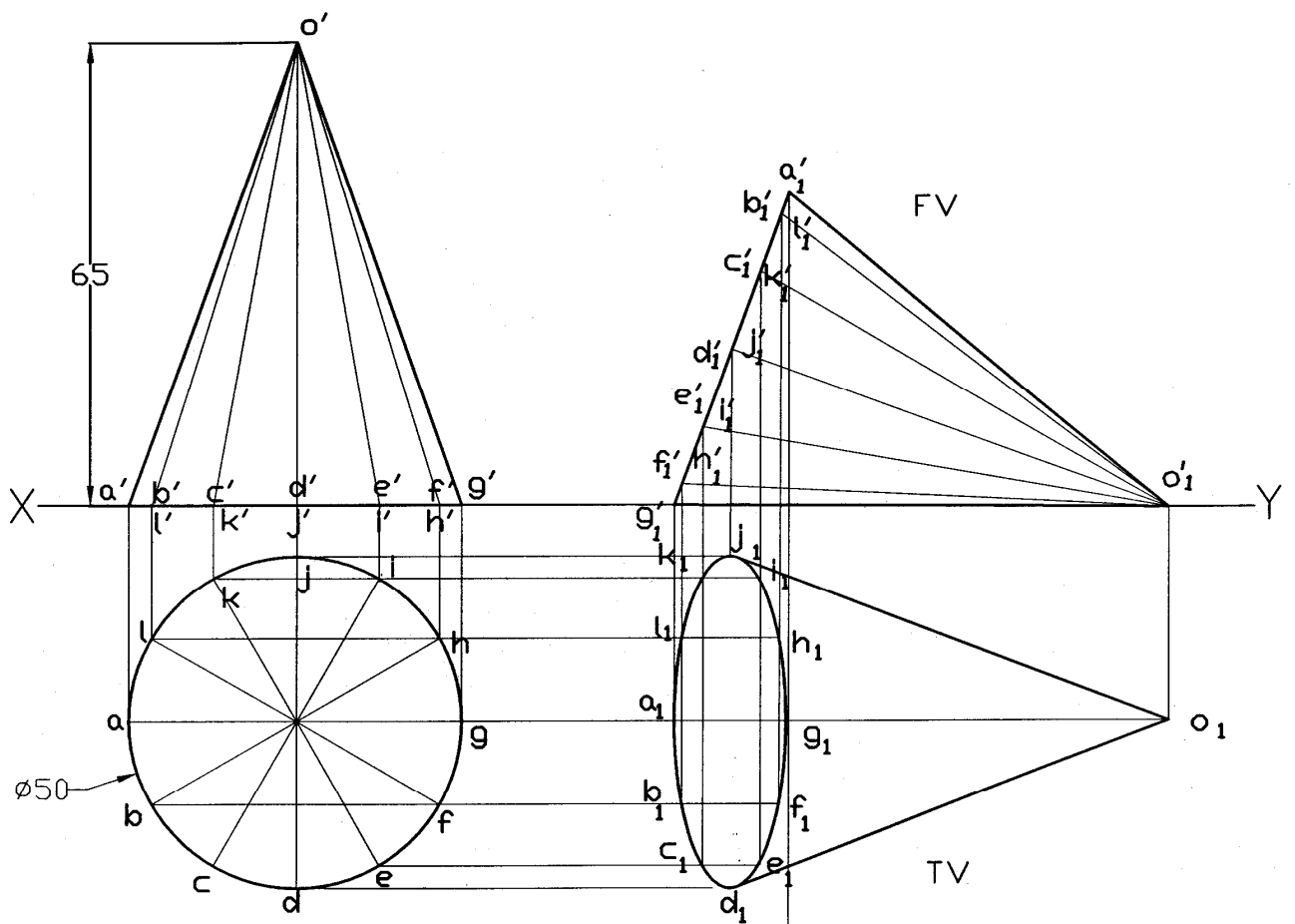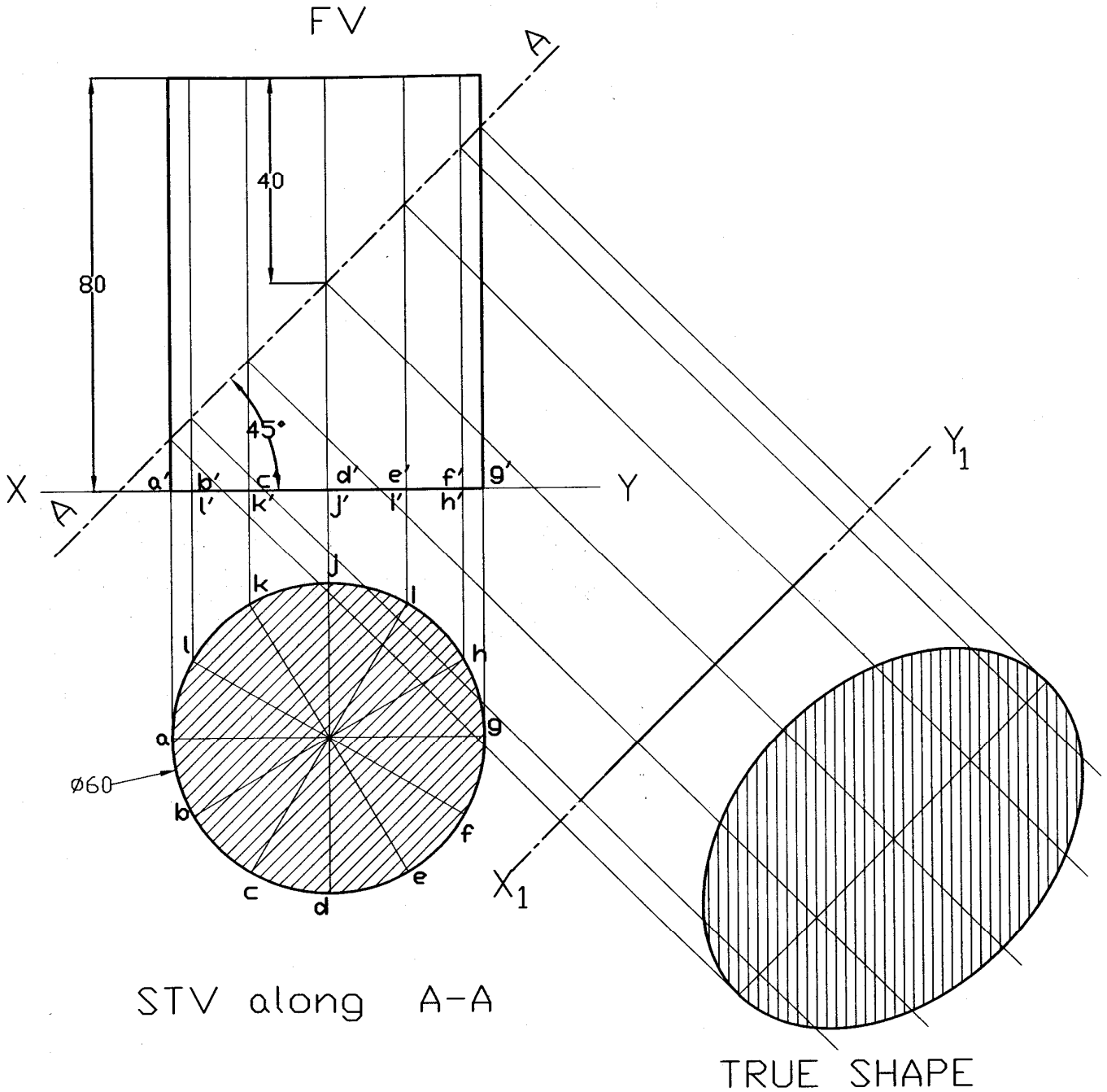
Q 4 a)   Sq. Prism problem (Section of solid)

For   FV : 2 marks   STV: 4 marks   True shape : 2 marks

FV

STV along   A–A

TRUE SHAPE

Q 4 b)   Cylinder problem (Section of solid)

For   FV : 2 marks   STV: 4 marks   True shape : 2 marks

STV along   A-A

TRUE SHAPE

Q 4 c)   Tetrahedron problem (Section of solid)

For   FV : 2 marks   STV: 3 marks   True shape : 3 marks

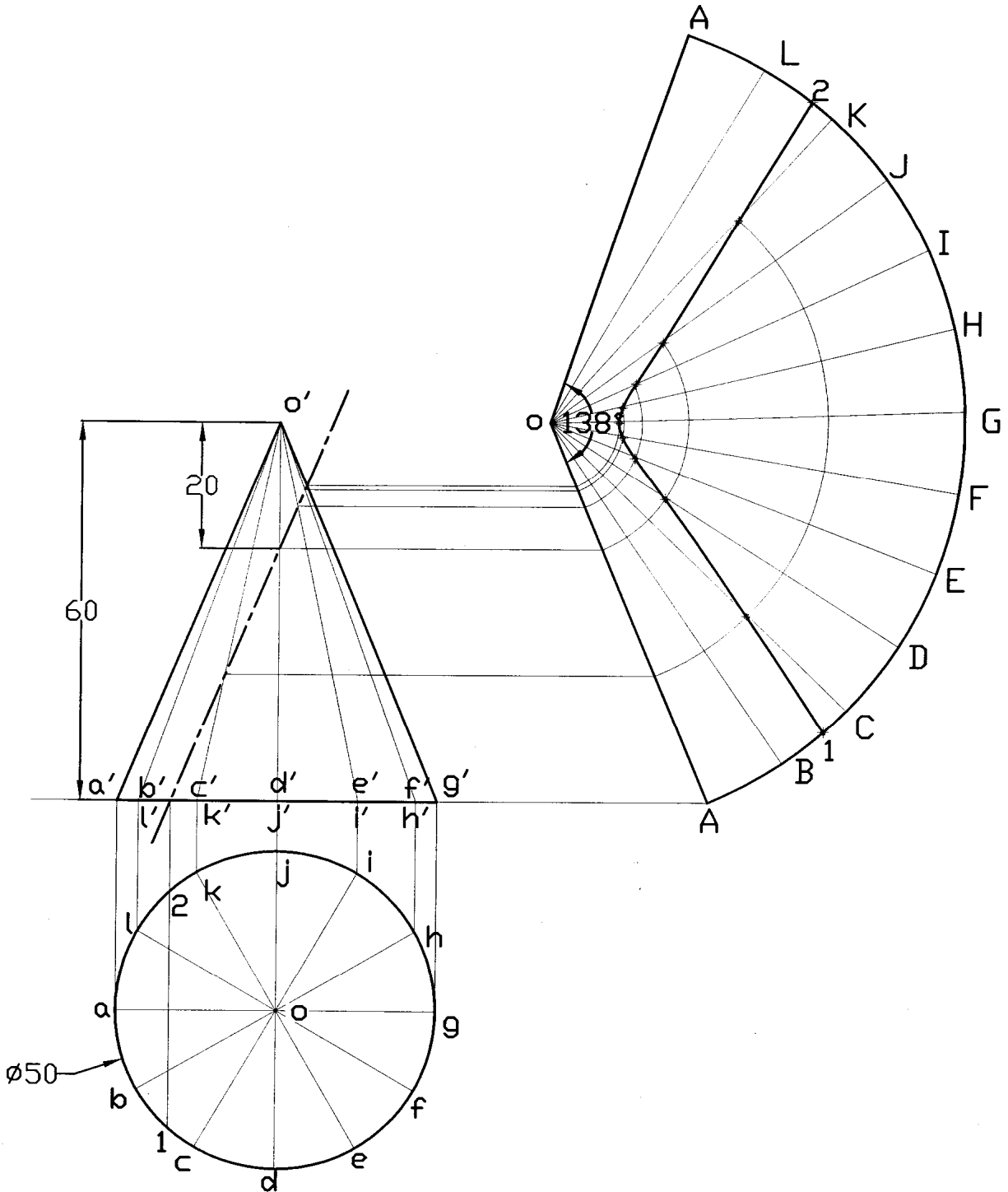### (Note: Cutting plane A-A is found to be inclined 55^0 to HP)
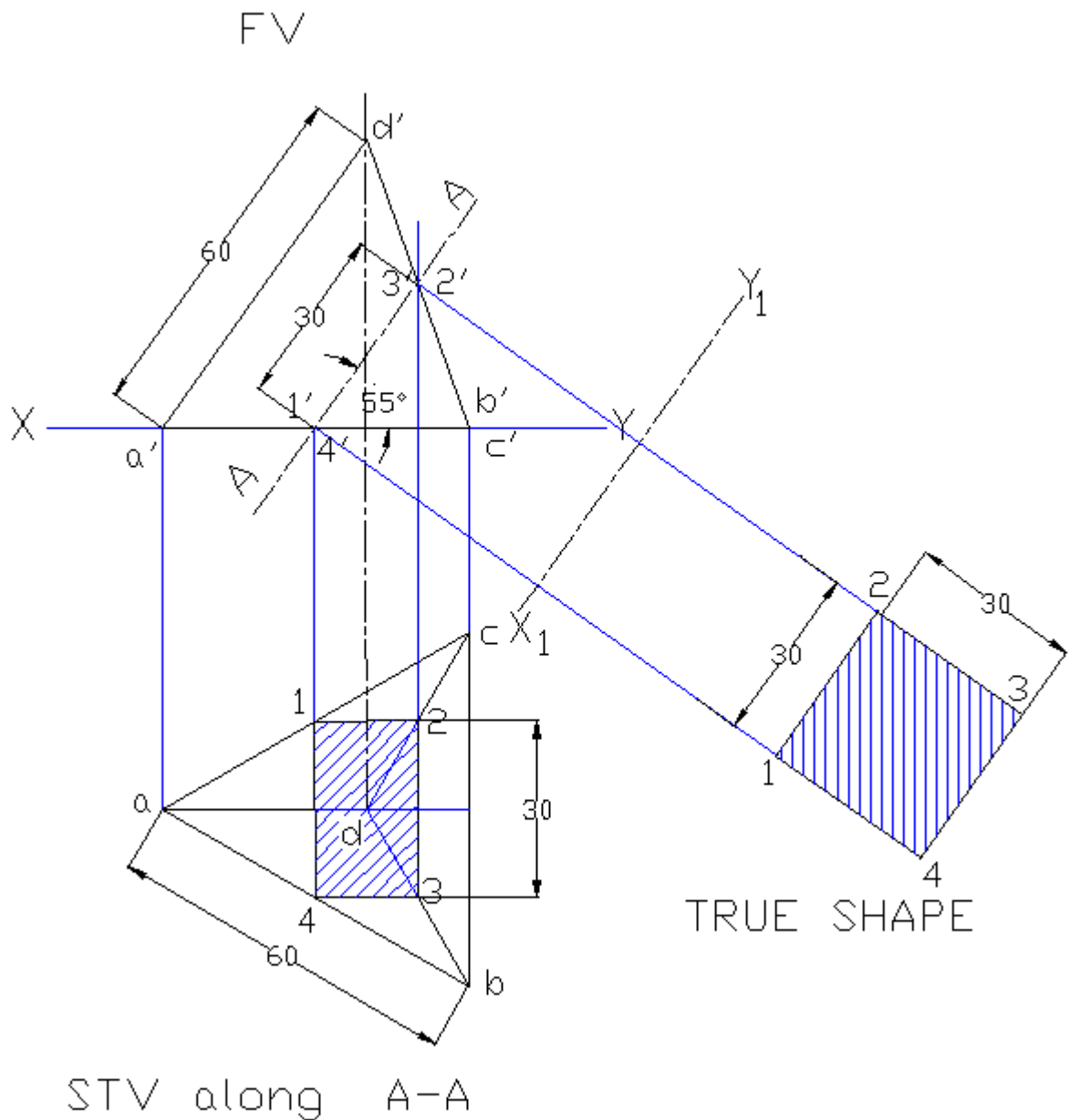
Q 5 a)   Problem on Development of <u>Cone</u>

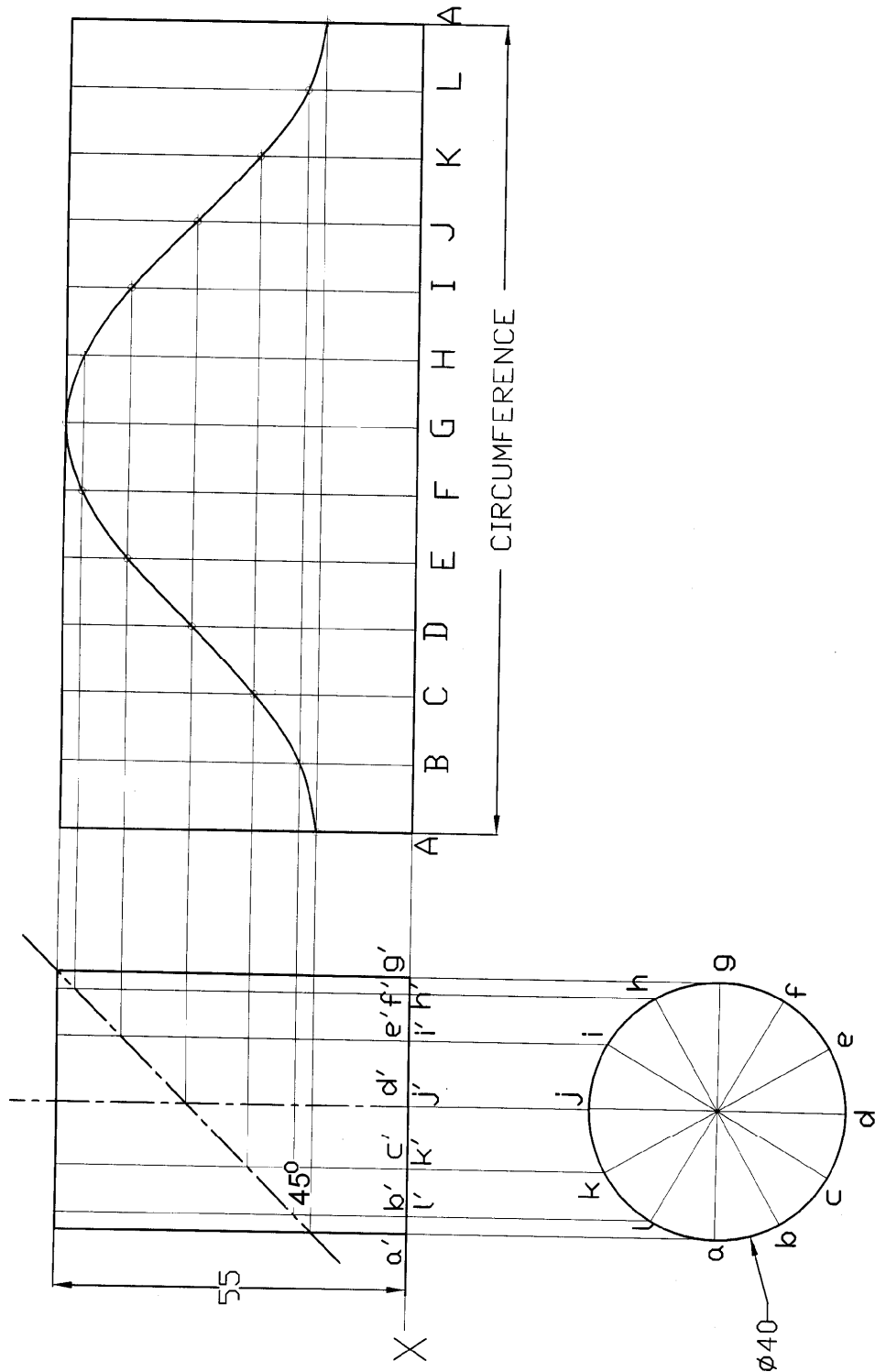**For   FV : 2 marks   TV: 2 marks   Development : 4 marks**

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Q 5 b)   Problem on Development of <u>Cylinder</u>

For   FV : 2 marks   TV: 2 marks   Development : 4 marks

Q 5 c)   Problem on Development of sq. Pyramid

Note: It looks from FV that pyramid base edges are equally inclined to VP. So, along with given solution, an alternative solution by considering equally inclined condition may be given due credit.
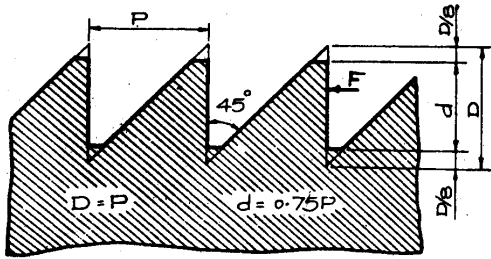
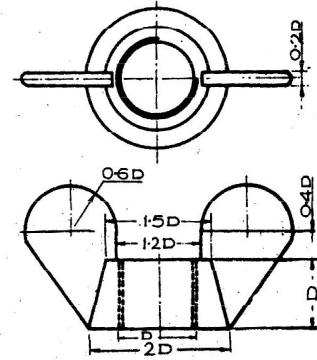For   FV : 2 marks   TV: 2 marks   Development : 4 marks

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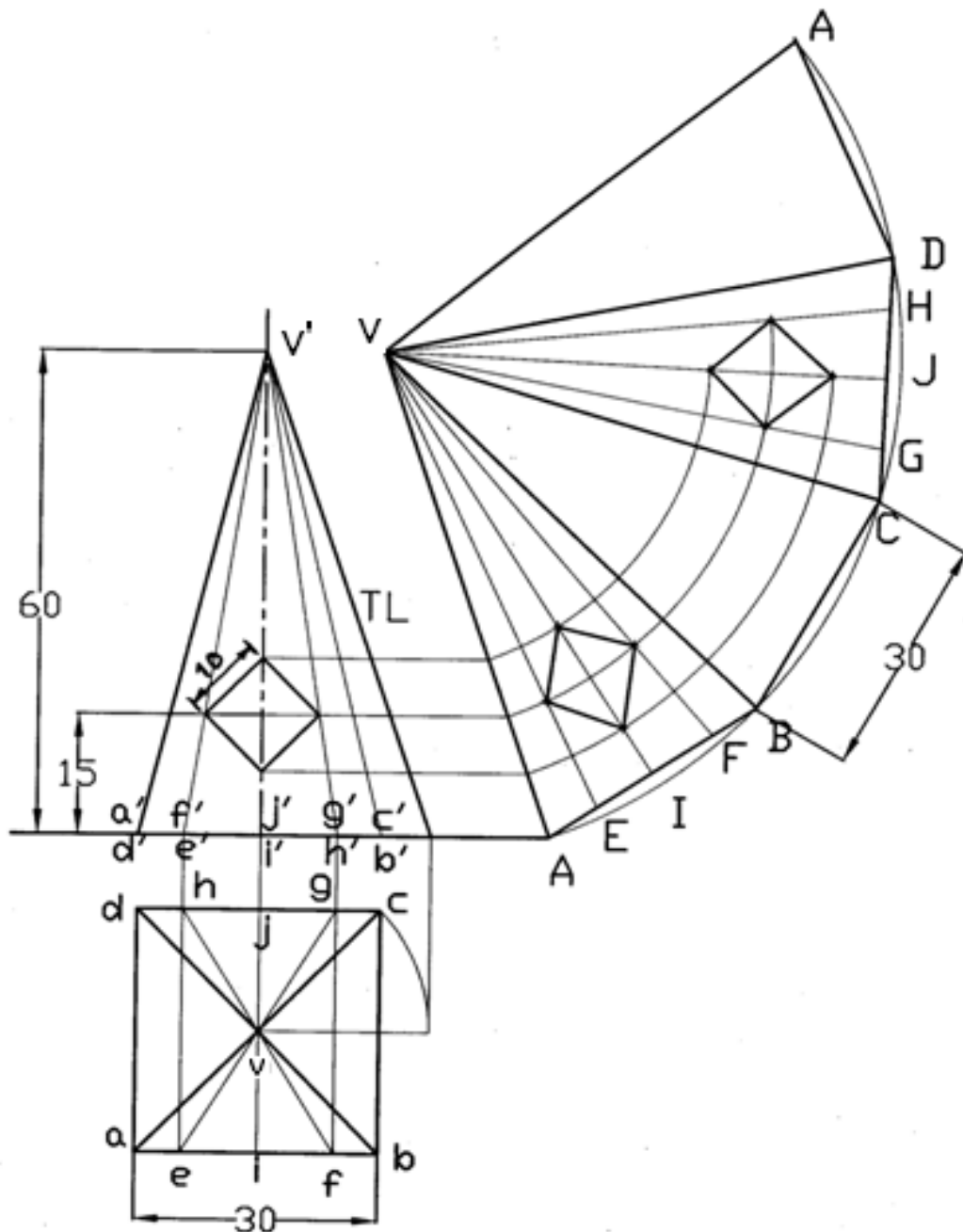
Q6   Free Hand Sketches   (Any Four   4 x 4 marks)
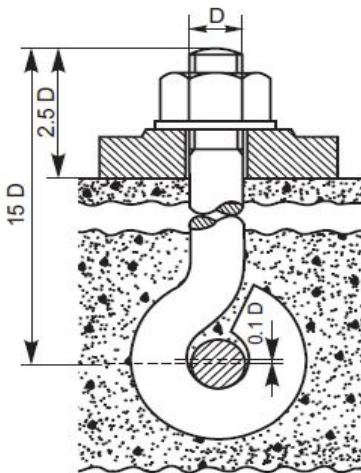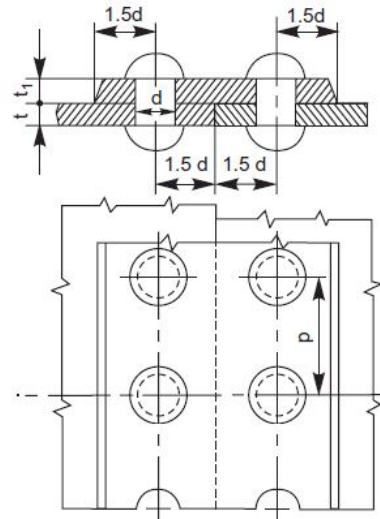
i)   Buttress thread   **ii) Wing nut**
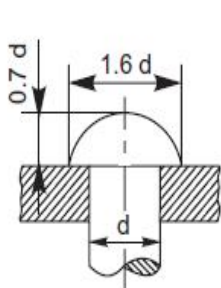

iii)Eye foundation bolt   **iv) Single riveted butt joint**
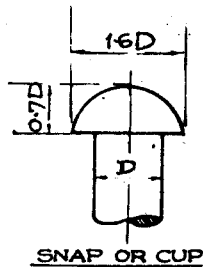

v) Snap or Cup rivet head   **vi)   Hexagonal bolt**

(Read <u>Cup</u> instead of <u>cut</u>)

SNAP OR CUP