Important Instructions to examiners:

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 (Not applicable for subject English and Communication Skills).
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.

<table>
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<tr>
<th>Q. No.</th>
<th>Sub Q. N.</th>
<th>Answer</th>
<th>Marking Scheme</th>
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<tr>
<td>1</td>
<td>a</td>
<td>Sect. F. V. 06 Marks &amp; T.V 04 Marks</td>
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b) Sect. F. V. 04 Marks  T.V 04 Marks  Side view – 02 Marks

Initial positions of FV, TV – 02 Marks  Final positions – 04 Marks EL – 01 mark PL – 1 mark
b) Initial position 02 Marks F. V. 02 Marks side view 02 Marks & T.V 02 Marks

ii) Initial position 02 Marks F. V. 02 Marks side view 02 Marks & T.V 02 Marks
3 a) Initial Position 04 Marks & Final Position 04 Marks

08 Marks

b) Initial Position 04 Marks & Final Position 04 Marks
c) Initial Position 04 Marks & Final Position 04 Marks

F.V = 03 Marks  Sect. T. V = 03 Marks  True shape of section = 02 Marks
b) F.V = 03 Marks  Sect. T. V = 03 Marks  True shape of section = 02 Marks

c) F.V = 03 Marks  Sect. T. V = 03 Marks  True shape of section = 02 Marks
a) Initial position 4m, development 4m.

b) Initial position 4m, development 4m.
c) Initial position 4m, development 4m.

a) 

\[
T = 0.3707 \times P \\
d = 0.5 \times P + 0.25 \text{ mm}
\]
b)  

![Diagram of a mechanical component with dimensions: T, D, W, 30° angles, and views from front, side, and top.]

04 Marks

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c)  

![Diagram of a flanged coupling with dimensions and labels: D, 30°, 45°, and sunk key.]

04 Marks

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d)  

![Diagram of a cylindrical object with cross-section and labels: T, N, and Φ.]

04 Marks
e) Square headed bolt

f) Diagram of a mechanical part with dimensions labeled.