



WINTER – 19 EXAMINATION


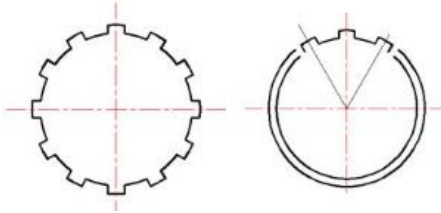
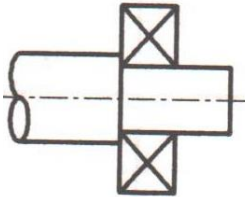
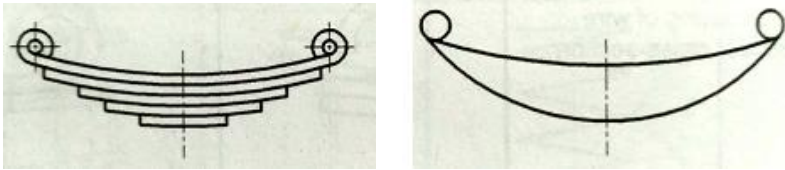
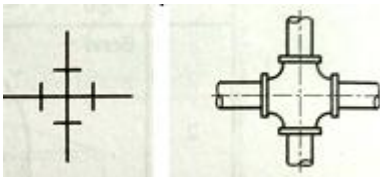
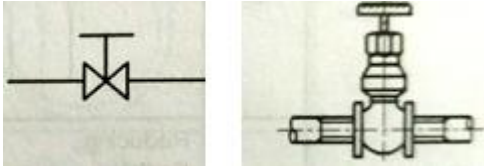
Subject Name: Mechanical working Drawing

Model Answer

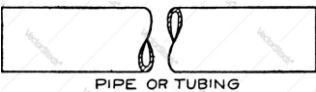
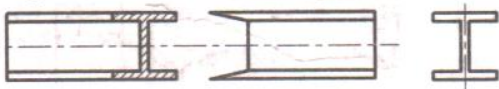
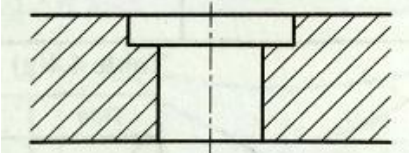
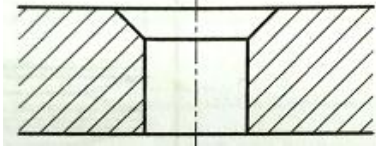
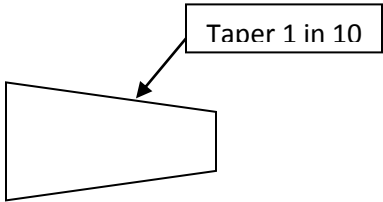

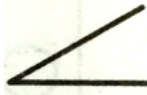
Subject Code: 22341

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.

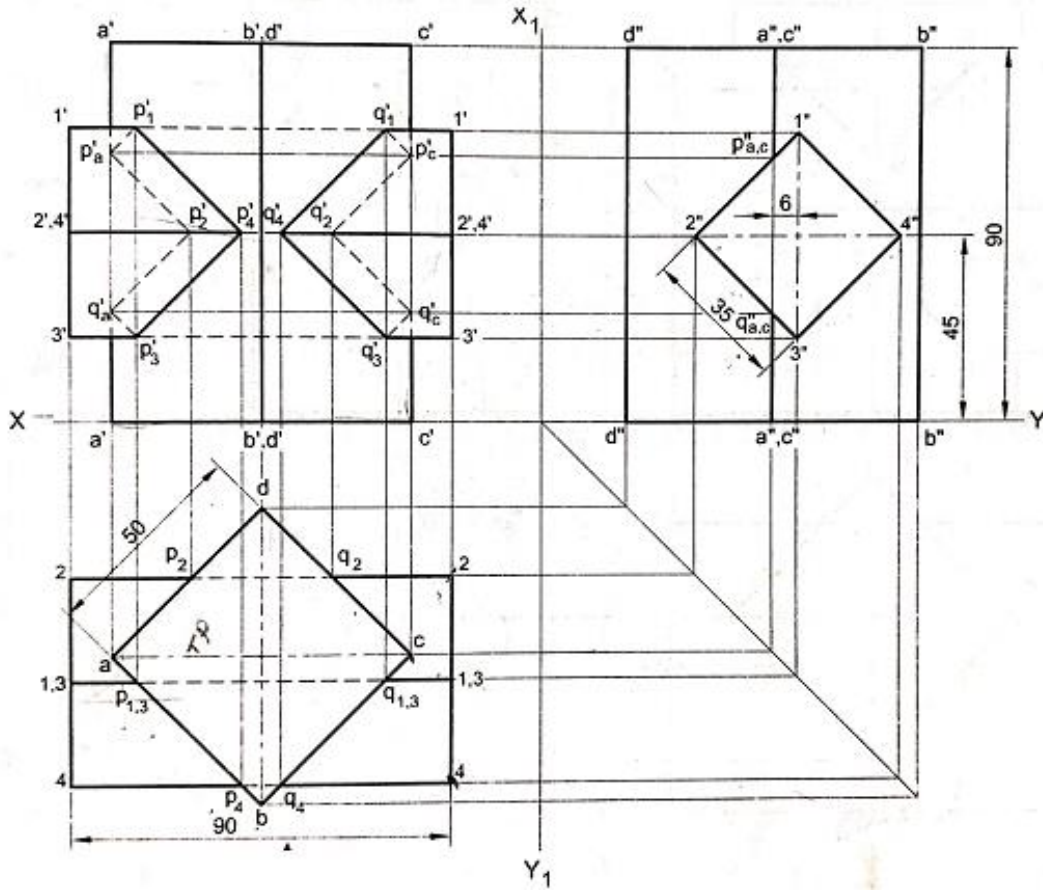
Q. No.	Sub Q. N.	Answer	Marking Scheme
Q.1 (A)	a)	(i)  (ii) 	01 Mark each
	b)	(i)  (ii) 	01 Mark each
	c)	(i)  (ii) 	01 Mark each



d)	<p>(i) </p> <p>(ii) </p>	01 Mark each
e)	<p>(i) </p> <p>(ii) </p>	01Mark each
f)	<p></p> <p>Shaft of $\phi 40$ mm & length 110 mm</p>	02 Marks
g)	<p></p> <p></p>	01 Mark each



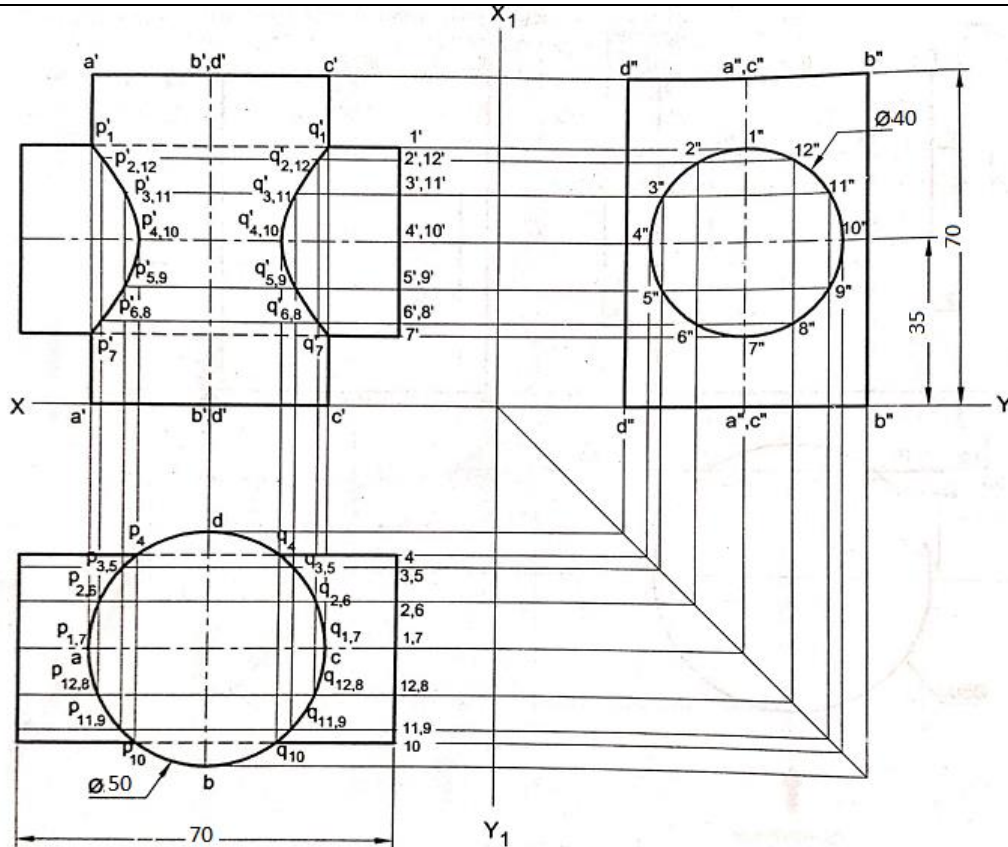
Q.2 a)



06
Marks

FV-3
TV-1.5
SV-1.5

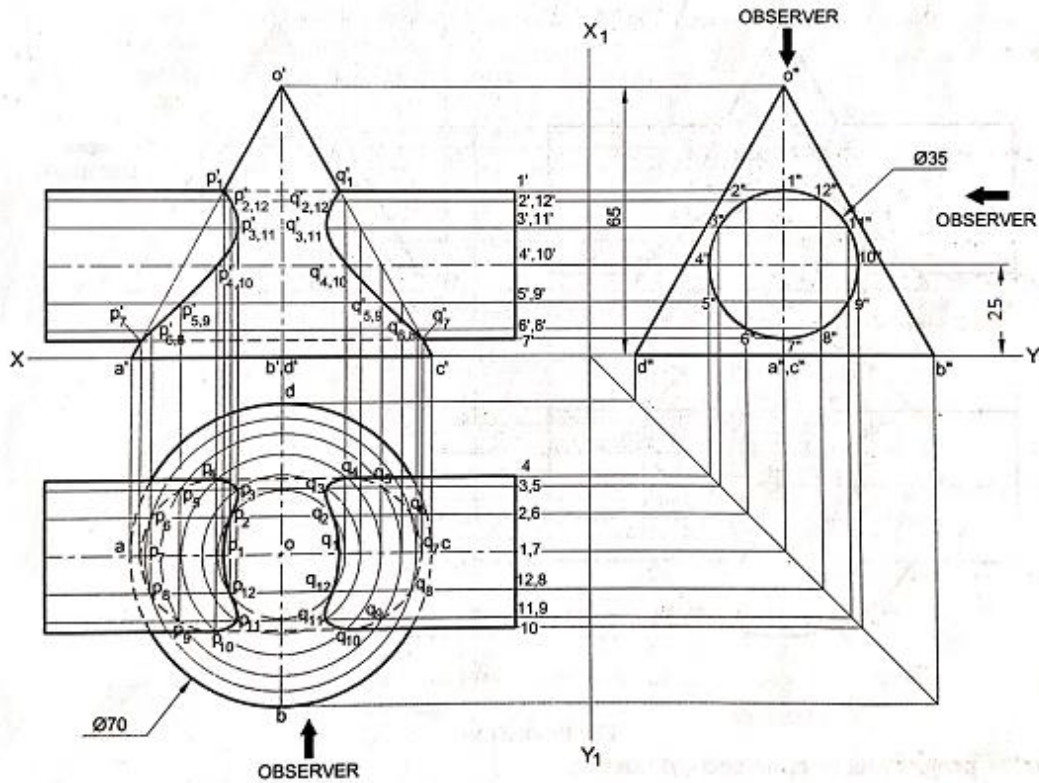
b)



06
Marks

FV-3
TV-1.5
SV-1.5

c)



06
Marks
FV-3
TV-1.5
SV-1.5

Q.3

a)

(i)

For shaft:
 $\Phi 16^{+0.023}_{-0.012}$

For Hole:
 $\Phi 16^{+0.018}_{-0.000}$

Max. allowance = Upper limit of hole - Lower limit of shaft
 $= 16.018 - 15.988$
 $= 0.03 (+ve)$

Min. allowance = Lower limit of hole - Upper limit of shaft
 $= 16.000 - 16.023$
 $= -0.023 (-ve)$

Hence type of fit is Transition fit

04
Marks

02

02

(ii)

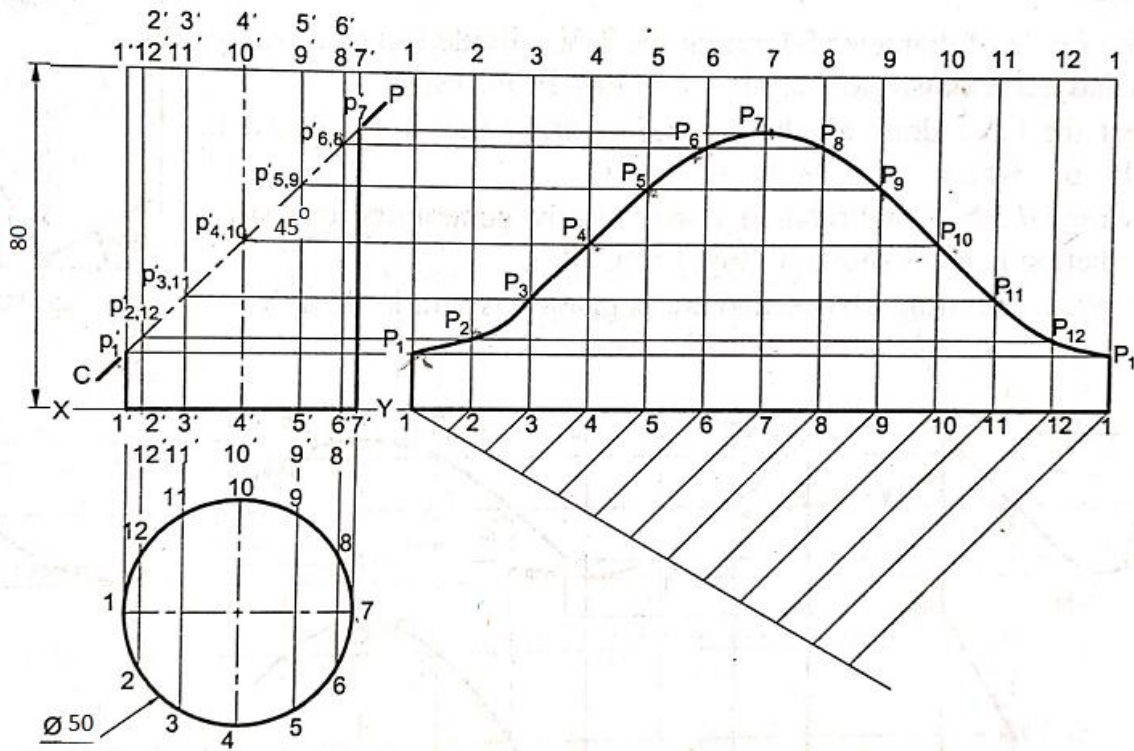
X = The tolerance edge is parallel within 0.02 to the datum line A

Y = The tolerance edge is perpendicular within 0.03 to the datum line A

02
Marks
each

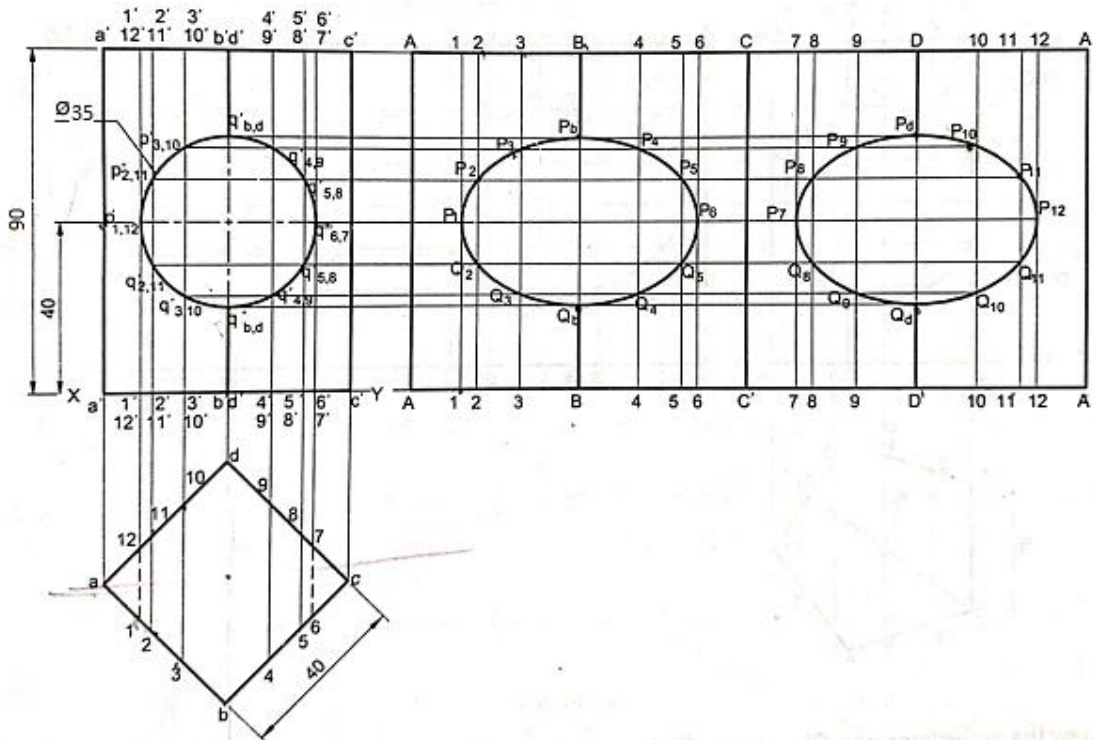


b)
(i)



(ii)

Note: Hole diameter is given as 85mm which is not feasible. Assumed as 35mm.



If the students assume any diameter value , give them the appropriate marks

06
Marks

FV-02

TV-01

DEV.-03

06
Marks

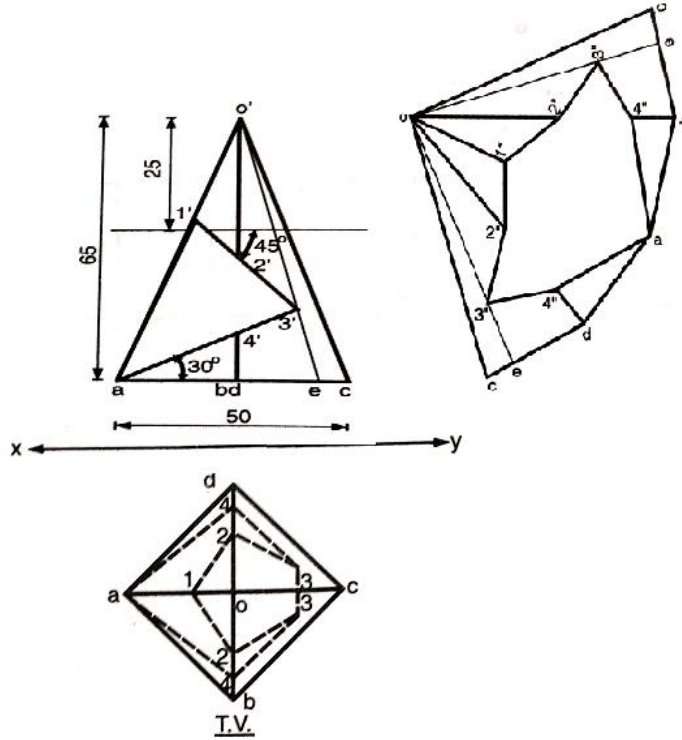
FV-02

TV-01

DEV.-03

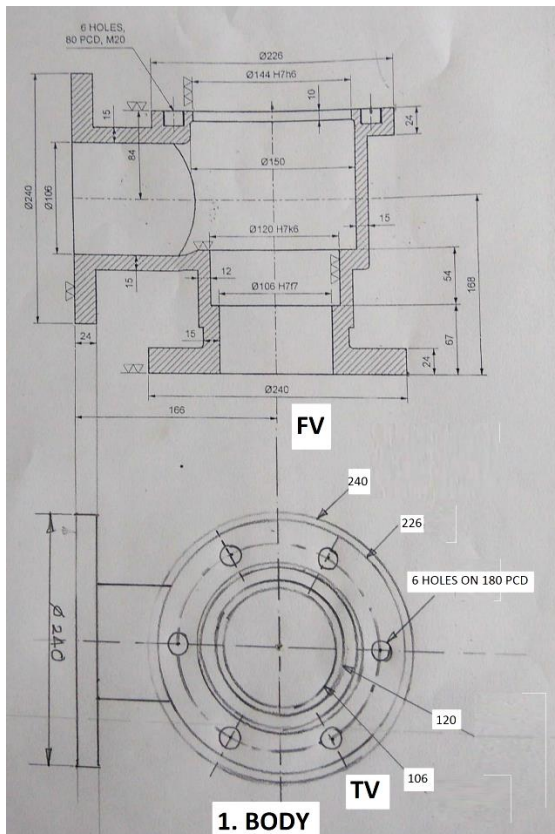


(iii)

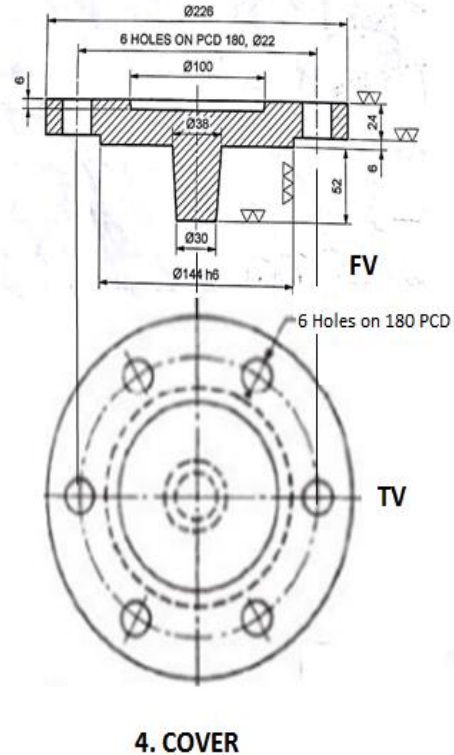


06
Marks
FV-02
TV-01
DEV.-03

Q.4

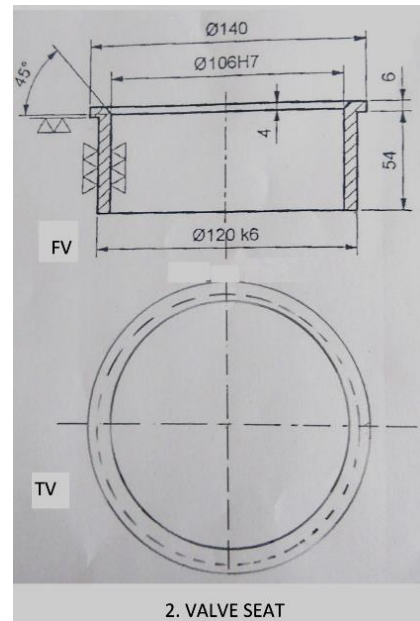
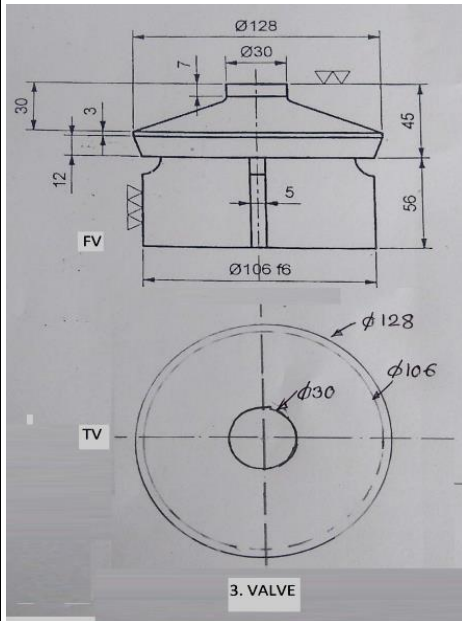


i) Body S.F.V. 05 Marks / T.V. 03 Marks



ii) COVER S.F.V. 05 Marks / T.V. 03 Marks

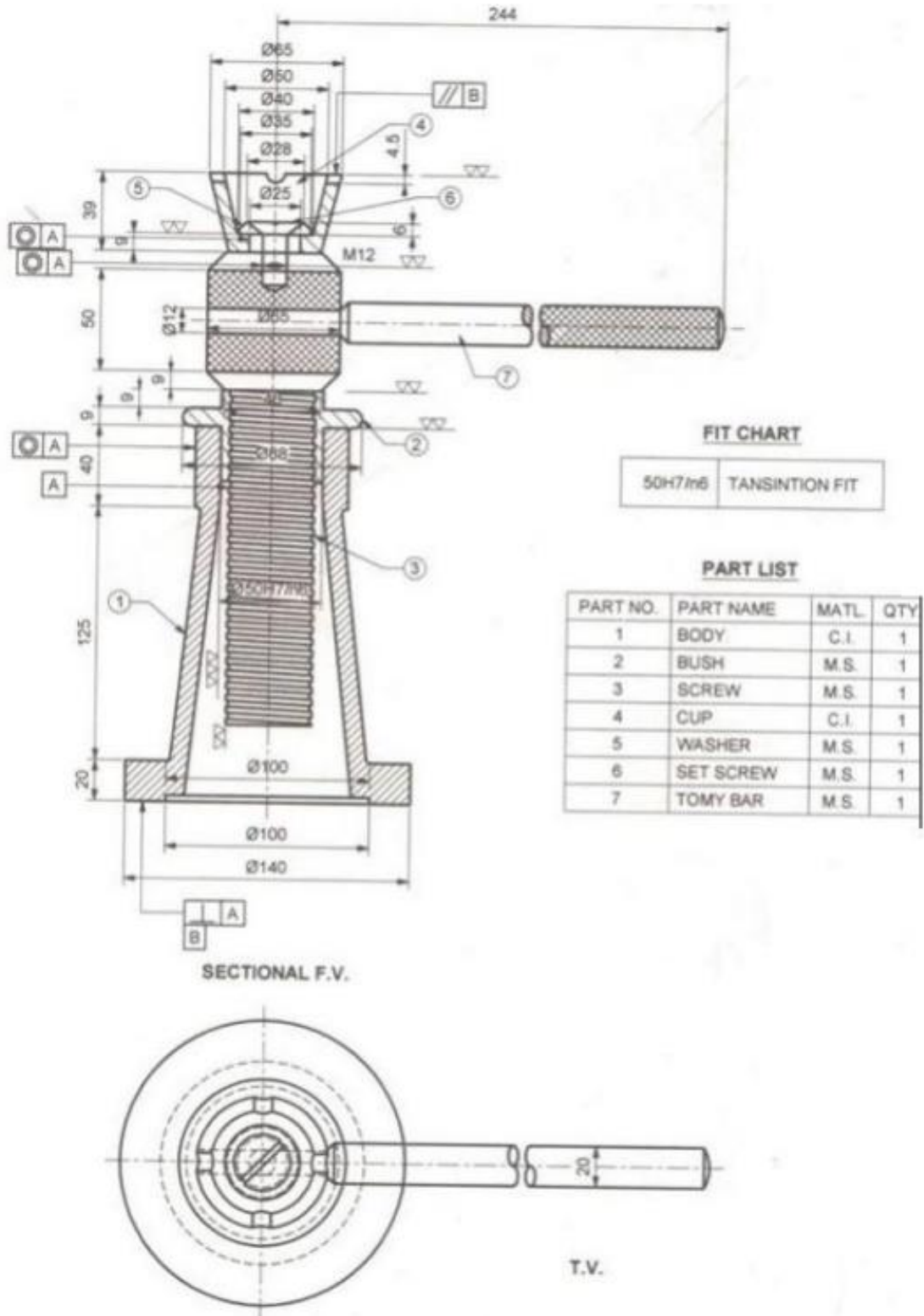
any two
details
08
marks
each



Valve F.V./ T.V. 02 Marks each and valve seat F.V./ T.V. 02 Marks each



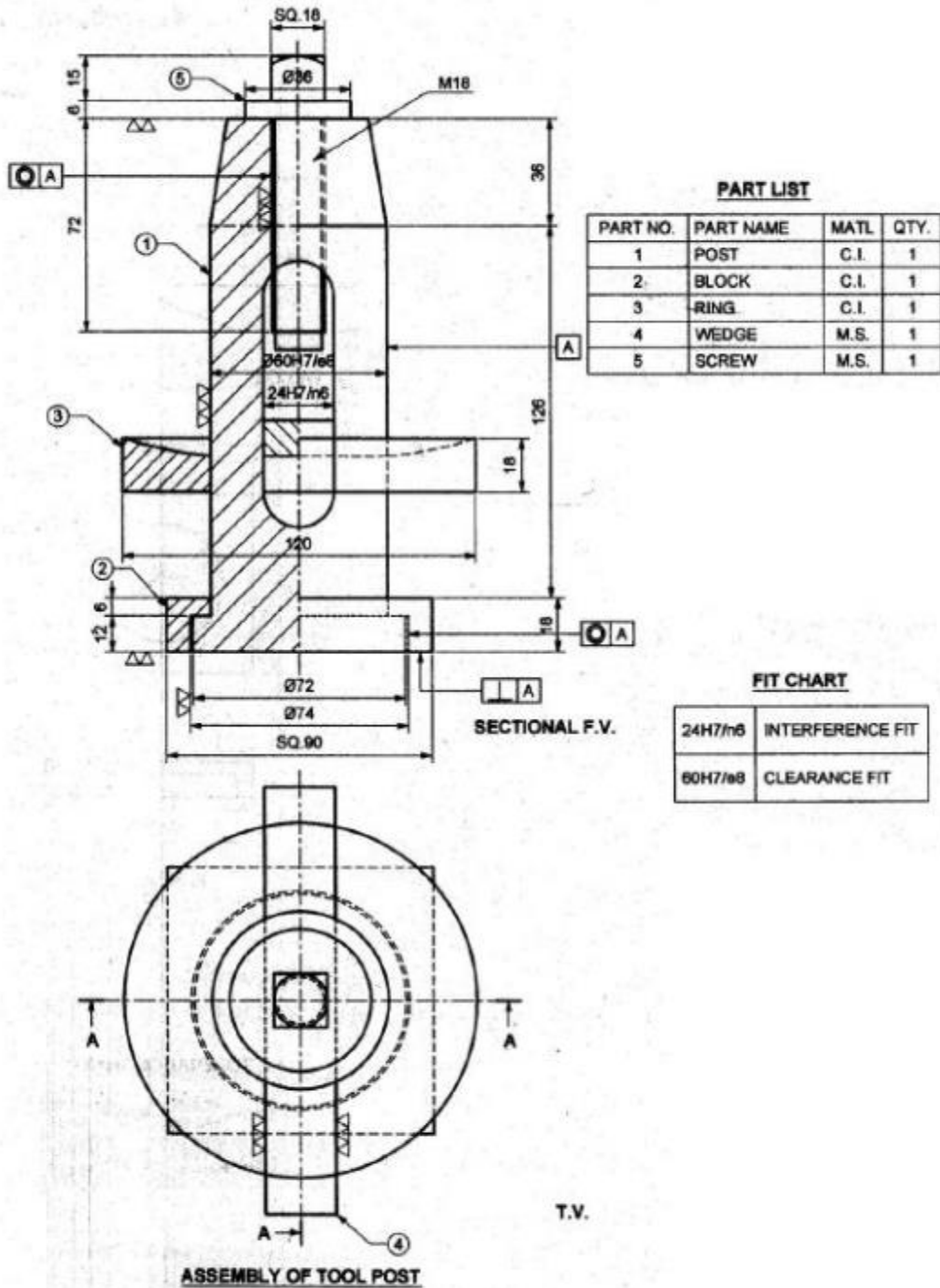
Q.5 a)



S.F.V. 10
Marks,
T.V. 04
marks,
Bill of
material
02 mark



b)



S.F.V. 10
Marks,
T.V. 04
marks,

Bill of
material
02 mark