3507

BOARD DIPLOMA EXAMINATION, (C-09)
OCTOBER/NOVEMBER-2018
DME – FOURTH SEMESTER EXAMINATION

PRODUCTION DRAWING

Time : 3 Hours]   [Total Marks: 60

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PART-A

5X4=20

Instructions **:**   1. Answer **All** questions.
            2. Each question carries **five** marks.
   3. Assume missing data, if any

1. Draw the conventional symbols for the following:

   (a) Spot weld (b) Slot weld (c) spur gear (d) diamond knurling (e) splined shaft

2. The dimensions of a shaft and hole are given below:

   +0.039   +0.062
   +0.000   +0.041

   Find out (a) Tolerance of the shaft   (b) Tolerance of the hole

   (c) Maximum allowance   (d) Minimum allowance

   (e) Type of fit

3. The surface roughness is specified as shown below:
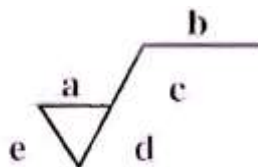
   What do a, b, c, d, and e represent?

4. Explain the following designations:

   a) O ring, 10/2.5, Viton,
   b) 11 mn2
   c) Fe 410 Cu K
   d) Hex. Bolt M20 x 75
   e) Solid taper pin 10 x 65?

40Marks

Instructions : 1. Answer **ANY ONE** questions.
2. Each question carries **forty** marks

5. Study the parts list and assembly drawing of non-return valve shown in fig. 1 below:

Part list of non-return valve

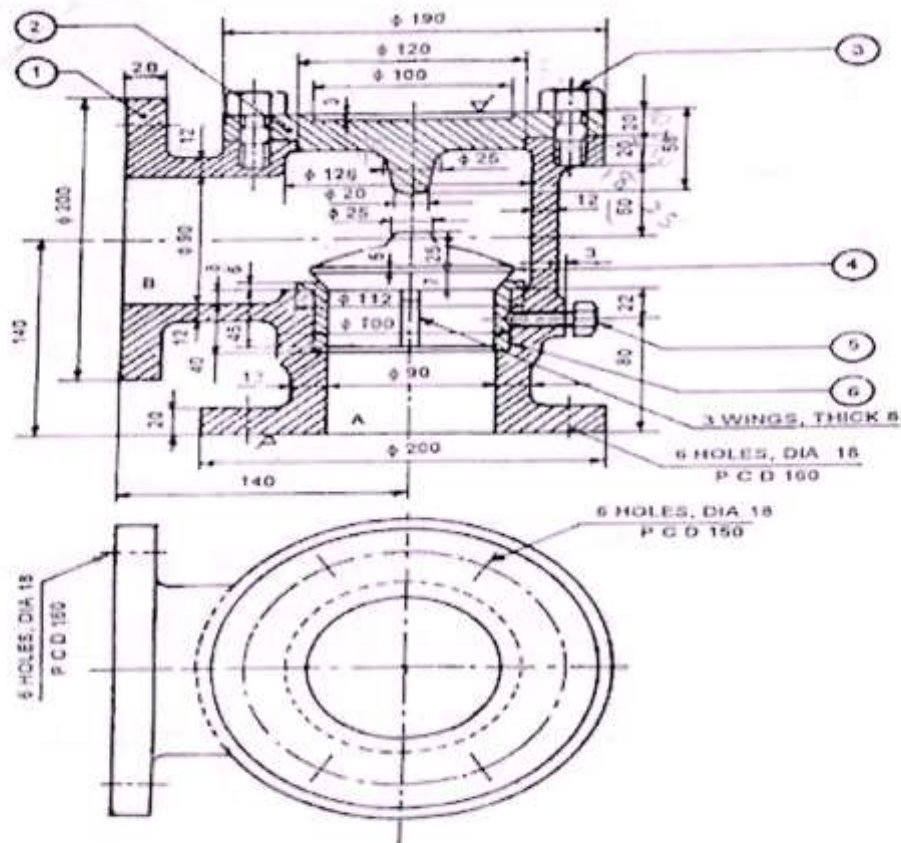| Part no.	Nam	Raw material	Quantity
1	Body	Brass-casting	1
2	Cover	Brass-casting	1
3	Stud with nut	Std. component	6
4	Valve	G.M-Casting	1
5	Set-screw	Std. component	1
6	Valve seat	Bronze-casting	1

Fig. No: 1 Non Return Valve
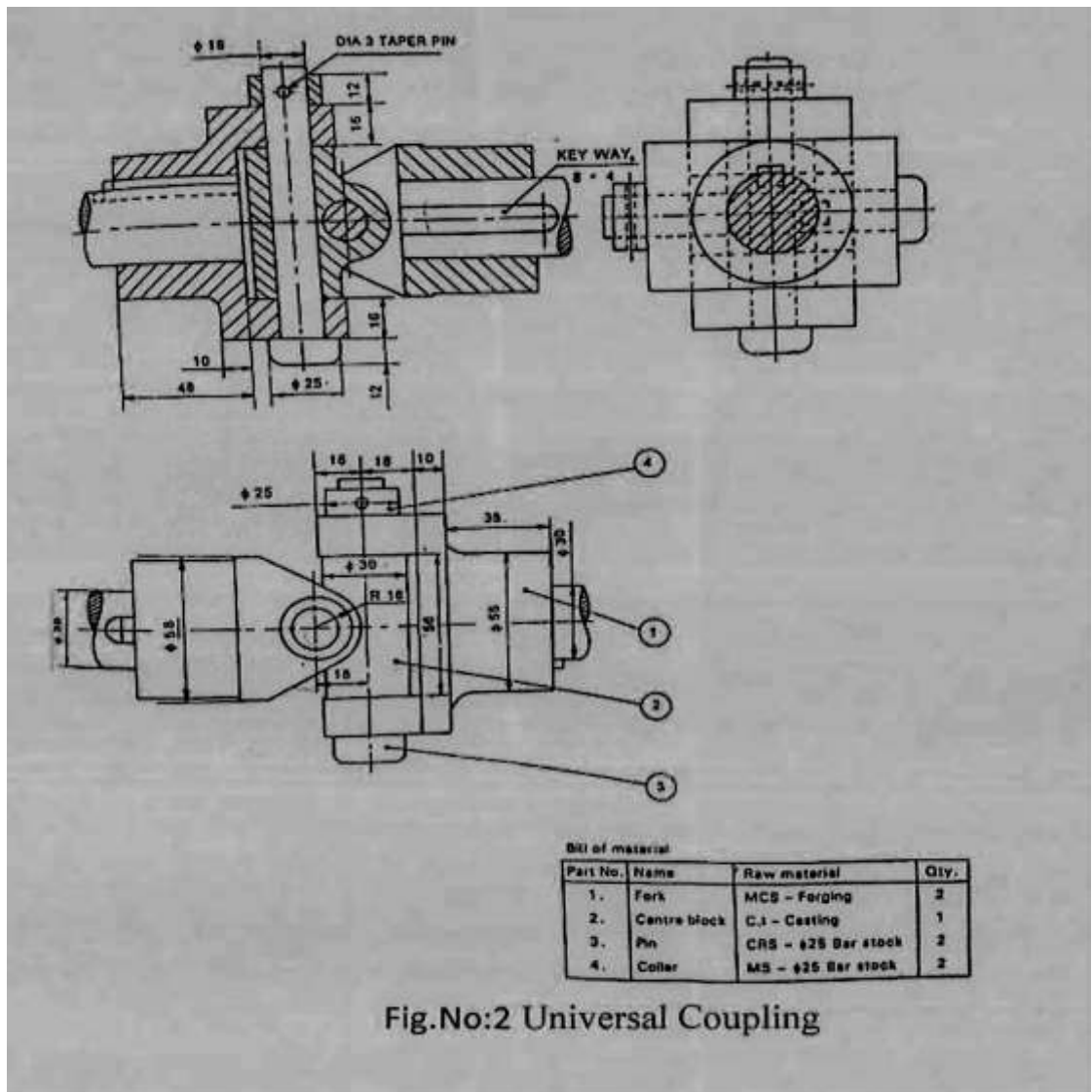
a) Draw the component drawing
b) Apply suitable fits and tolerance
c) Apply suitable geometrical tolerances to each component
d) Select normal surface roughness valve to the components.
e) Prepare process sheet for valve.

6. Study the parts list and assembly drawing of universal coupling shown in figure. 2 below:

Part list of universal coupling

Part no.	Name	Raw material	Quantity
1	Fork	MCS-forging	2
2	Center block	Cl Casting	1
3	Pin	CRS – φ 25 bar stock	2
4	Cotter	MS-φ bar stock	2

Fig.No:2 Universal Coupling

a) Draw the component drawings.
b) Apply suitable fits and tolerance
c) Apply suitable geometrical tolerances to each component.
d) Select normal surface roughness value to the component
e) Prepare process sheet for center block.