

CODE NO: 07A32191

R07

II B.TECH - I SEMESTER EXAMINATIONS - MAY, 2011
AIRCRAFT ENGINEERING DRAWING
(AERONUTICAL ENGINEERING)

Time: 3hours

Max. Marks: 80

Answer any TWO questions from PART – A
PART – B is compulsory

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PART – A

1. Draw three views of a Hexagonal headed bolt of nominal diameter 25mm and length 100mm with a hexagonal nut and washer in place. [20]
2. Draw the top view and sectional front view of a double riveted single strap zig – zag butt joint for plates of 12mm thickness. [20]
3. Draw a 2-d sectional profile of NACA 2415 from the data given below. Take airfoil chord of 25cms for your workout. [20]

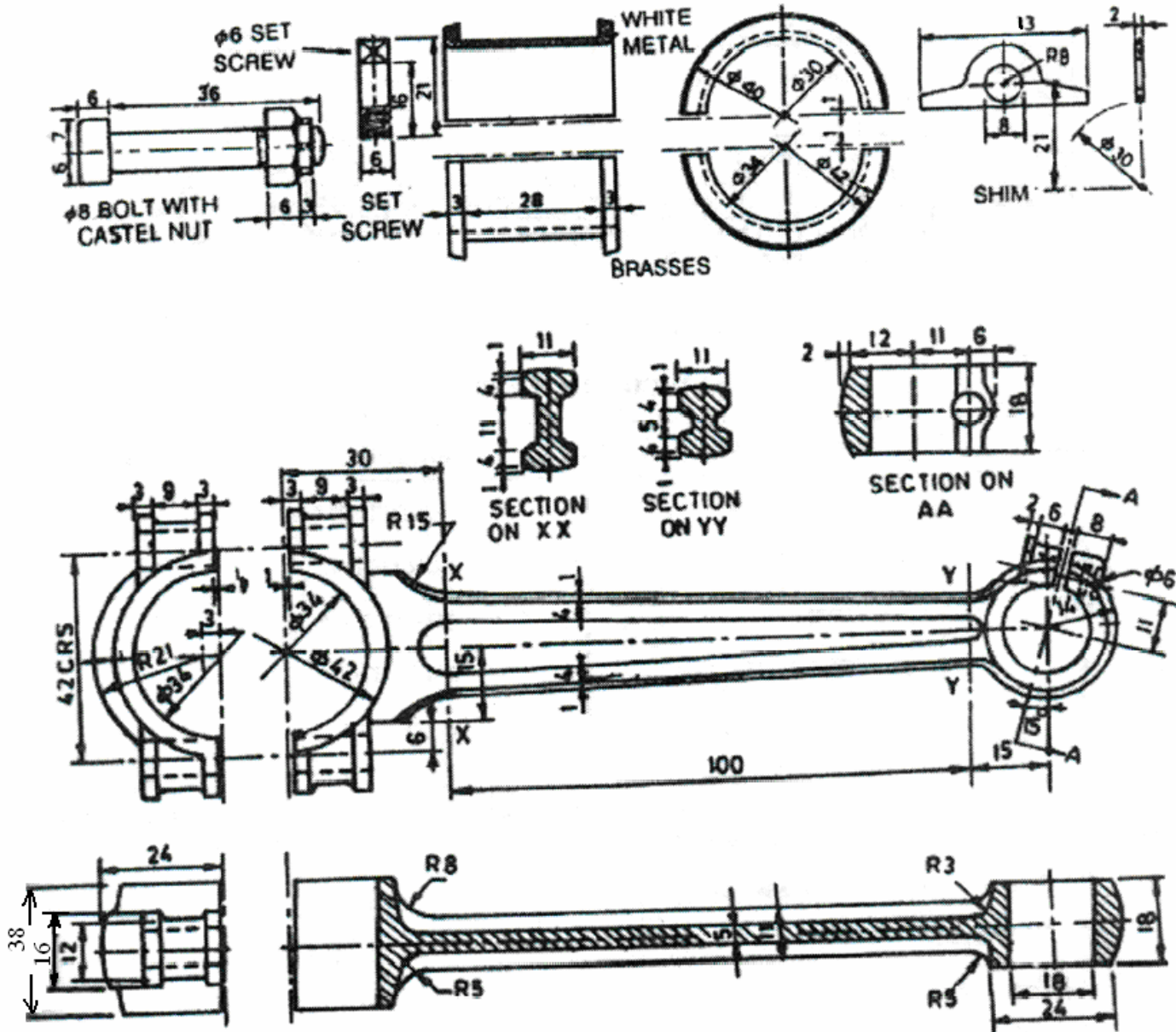
NACA 2415

(Stations and ordinates given in percent of air foil chord)

Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate
0	0	0
1.25	2.71	1.25	-2.06
2.5	3.71	2.5	-2.86
5.0	5.07	5.0	-3.84
7.5	6.06	7.5	-4.47
10	6.83	10	-4.90
15	7.97	15	-5.42
20	8.70	20	-5.66
25	9.17	25	-5.70
30	9.38	30	-5.62
40	9.25	40	-5.25
50	8.57	50	-4.67
60	7.50	60	-3.90
70	6.10	70	-3.05
80	4.41	80	-2.15
90	2.45	90	-1.17
95	1.34	95	-0.68
100	(0.16)	100	(-0.16)
100	100	0
L.E.radius: 2.48			
Slope of radius through L.E.: 0.10			

PART - B

4. Figure gives the part drawings of Aero Engine connecting rod. Assemble all the parts and draw the following assembled views.
 a) Front view
 b) Sectional Top view. [40]



Parts List

Part No.	Name	Matl	Qty.
1	Rod	FS	1
2	Cap	FS	1
3	Bearing brass	GM	2
4	Bearing bush	P Bronze	1
5	Bolt	MCS	2
6	Nut	MCS	2
