Answer Key 01- Statics of Particles

Problem No.	Answer	Problem No.	Answer
01	Rx = -20.9 kgf ; Ry = -56.2 kgf	06	T_{CA} = 217.0 kgf or 2128.7 N T_{CB} = 176.9 kgf or 1735.5 N
02	184.3 N	07	T_{CA} = 5598.2 N; T_{CB} = 519.2 N
03	Rx = 608.0 N; Ry = -240.1 N	08	T_{ACB} = 1212.6 N; T_{CD} = 166.31 N
04	2198.5 N, 2060.6 N	09	Rx = 240 N; Ry = -252.7 N; Rz = 160 N
05	194.9 N, 153.6 N	10	955.63 N

Answer Key 02- Rigid Bodies: Equivalent system of particles

Problem No.	Answer	Problem No.	Answer
01	1142.86 N	07	(a) 12.39 N.m (b) 12.39 N.m (c) 12.39 N.m
02	1306.67i^ - 1633.35 j^ - 980.01 k^ 2.36 m 1306.67i^ - 653.6 k^ 1.49 m	08	(a) 80 N (towards left), 4 N.m(anti-clock wise) (b) -100 N, 100 N
03	** Derivation **	09	(a) 250 N, 75 N.m (b) 625 N (upward to AC at point A) & 625 N (downward to AC at point B
04	(a) 96.57 degree (b) 99.3 degree	10	(a) 600 N downward, 1000 N.m anticlock (b) 600 N downward, 900 N.m clock wise (c) 900 N downward, 900 N.m anticlock (d) 400 N upward, 900 N.m anticlock (e) 600 N downward, 200 N.m clockwise (f) 600 N downward, 800 N.m anticlockwise (g) 1000 N downward, 1000 N.m anticlockwise (h) 600 N downward, 900 N.m anticlockwise

			(b) and (h) are equivalent
05	-31.52 i^ + 13.32 j^ - 2.39k^	11	629.09 N (horizontal); 3351.09 N.m (vertical) 2.89 m
06	(a) 1.25 m (b) 1.14 m		

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