Dated:

Question # 01

$D = 275$ daily $= 275 \times 365 = 100375$ /year

Ordering Cost $= S = \$10$

holding Cost $= H = \$0.30$ per year

Lead time $= 5$ days

$\sigma_L = 1$ day

$\sigma_d = 30$ bars

$EOQ = ?$

$R = ?$

$T.C = ?$

Solution:

$$EOQ = \sqrt{\frac{2DS}{H}}$$

$$= \sqrt{\frac{2(100375)(10)}{0.30}}$$

$$= \sqrt{6691666.67}$$

$$EOQ = 2586.8$$

$$T.C = \frac{Q}{2}(H) + \frac{D}{Q}(S)$$

$$= \frac{2586.8}{2}(0.30) + \frac{100375}{2586.8}(10)$$

$$= 388.02 + 388.03 = \$776.05$$

Dated:

$$\sigma_{dLT} = \sqrt{\bar{L}\sigma_d^2 + \bar{d}^2\sigma^2}$$

$$= \sqrt{(275)^2(1)^2 + (30)^2(5)}$$

$$\sigma_{dLT} = \sqrt{75625 + 4500}$$

$$\sigma_{dLT} = 283.06$$

$$S.S = z\sigma_{dLT}$$

$$= 2.33 \times 283.06$$

$$S.S = 659.5$$

$$\text{Reorder Point} = (\bar{d} \times L) + S.S$$

$$= (275 \times 5) + 659.5$$

$$= 1375 + 659.5$$

$$R = 2034.5$$

$$T.C = 776.05 + (659.5)(0.30)$$

$$= 776.05 + 197.85$$

$$T.C = \$973.9$$

Dated:

Question # 2

Week	1	2	3	4	5	6
BI = 40						
MPS	10	30	0	60	30	50
CCO	50	20	10	40	20	0
ATP	0	00	0	20	10	50

Week	1	2	3	4	5	6
CCO	50	20	10	40	20	0
S.R	100 (Assumes we had 100 S.R)	0	0	50		
Projected on hand inventory = 40 unit	90	70 60	60	70	50	50
Planned order Release	100 (2 weeks before)	50				

Q = 50 units

LT = 2 Weeks

SS = 30 units

Dated:

Question # 3

Critical Factors	Relative Weights	Karachi	Islamabad	Pesh
Labor Cost	0.15	70	90	50
Proximity to market	0.25	100	90	80
Supplier base	0.2	80	100	70
Quality of life	0.3	90	60	60
Taxes	0.1	60	80	90

		(F.V)	(F.V)
Karachi	Final value	Islamabad	Peshaw.
L.C	10.5	13.5	7.5
Proximity to market	25	22.5	20
Supplier base	16	20	14
Quality of life	27	18	18
Taxes	6	8	9
	84.5	82	68.5

We will choose Karachi as it final value is more than other cities.

Dated:

Question 4

True & False

1) False
2) False
3) False
4) True
5) True