Numericals from Qb

(Q1) Given:

Current Assets = 2,00,00,000
Current Liabilities = 1,40,00,000
Current ratio = 1.33
(minimum)

Liabilities after borrowing "x" amt = x + 1,40,00,000

We know,

$$\text{Current Ratio} = \frac{C.A}{C.L}$$

$$1.33 = \frac{2,00,00,000}{[x + 1,40,00,000]}$$

$$1.33x = 20000000 - [14000000 \times 1.33]$$

$$x = \frac{1380000}{1.33}$$

$$\therefore \boxed{x = ₹1037593.985}$$

∴ ₹1037593.985 can be borrowed.

(Q8) P.V = 1000

$r = 12\%$

$t = 8$ yrs

n = 4 times a yr.

Compound Interest formula,

$$F.V = P \times \left[1 + \frac{r}{n}\right]^{nt}$$

$$= 1000 \left[1 + \frac{0.12}{4}\right]^{4 \times 8}$$

$$= 1000 \left[1.03\right]^{32}$$

$$\boxed{F.V = 2575.08}$$

(Q15) Given:

CI	CCI	Yr.
10000	10000	1
12000	22000	2
15000	37000	3
10000	47000	4
7000	54000	5

Applying Simple Payback period,

$$P.B = 3 + \left[\frac{40000 - 37000}{10000}\right]$$

$$= 3.3 \text{ yrs}$$

(22) PVCO = 1000

	CI	PV@ 8%	PVCI
1	-1200		-1111.11
2	-600		-514.40
3	-250		-198.45
4	2000		1470.05
5	4000		2722.33
			2368.42

NPV = 2368.42 - 1000

= 1368.42

IRR ⇒ NPV = 0

Assume r = 20%

CI	PV@ 20%	
-1200		-1000
-600		-416.66
-250		-144.67
2000		964.50
4000		1607.51
		1010.68

NPV = 10

X

Assume, $\gamma = 22\%$

	PVC @ 22%	
-1200		-983.6
-600		-403.11
-250		-137.67
2000		902.79
4000		1479.99
		858.4

$$NPV = 858.4 - 1000$$
$$= -141.6$$

$$IRR = 8 + \left\{ \left[\frac{2368.42 - 1000}{2368.42 - 858.4} \right] [22 - 8] \right\}$$

$$= 8 + [0.906 \times 14]$$
$$= 8 + 12.684$$

$$\boxed{IRR = 20.68\ \%}$$

(23)

R_i	P_i
−20	0.05
−10	0.10
10	0.20
15	0.25
20	0.20
25	0.15
30	0.05

$E(R) = (-1) + (-1) + (2) + (3.75) + 4 + 3.75 + 1.5$

$= 13\%$

P_i	$R_i - E(R)^2$	$P_i(R_i - E(R)^2$
0.05	$(-33)^2$	54.45
0.10	$(-23)^2$	52.9
0.2	(-3)	1.8
0.25	$(2)^2$	1
0.2	$(7)^2$	9.8
0.15	$(12)^2$	21.6
0.05	$(17)^2$	14.45

Total = 156

$\therefore$ Var = 156

SD = $\sqrt{156}$ = 12.48%