Arunima Singh Thakur, 180905218, Sec C, Branch CSE, Roll no. 31,

Arunima

1a)

Journal

Date	Particular	Debit	Credit
May 1, 2002	Cash A/c - Dr To Capital (Being commencement of business)	40,000	40,000
May 3, 2002	Bank A/c - Dr To Cash A/c (Being paid into bank)	2,000	2,000
May 5, 2002	Purchase A/c - Dr To Cash A/c (Being purchase of goods for cash)	15,000	15,000
May 8, 2002	Cash A/c - Dr To Sales A/c (Being sale of goods for cash)	6,000	6,000

Nature of the accounts are:-

→ Cash A/c : Real A/c

→ Capital A/c : Personal A/c

→ Bank A/c : Personal A/c
→ Purchase A/c : Real A/c
→ Sales A/c : Real A/c

3b)

D = Initial deposit that is in the account for the cash flow series

$$D + F(P/F, i, N) = C(P/A, i, N) + A(P/A, i, N)(P/F, i, N)$$

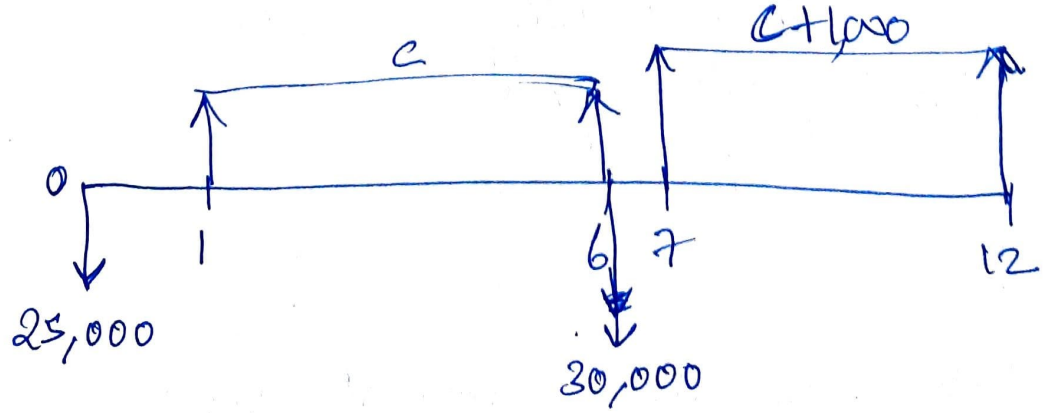
$$\Rightarrow [\$25{,}000 + \$30{,}000(P/F, 0.10, 6)] = [C(P/A, .10, 12) + \$1{,}000(P/A, .10, 6)(P/F, .10, 6)]$$

$$\Rightarrow [\$25{,}000 + \$30{,}000(0.5645)] = [C(6.8137) + \$1{,}000(4.3553)(0.5648)]$$

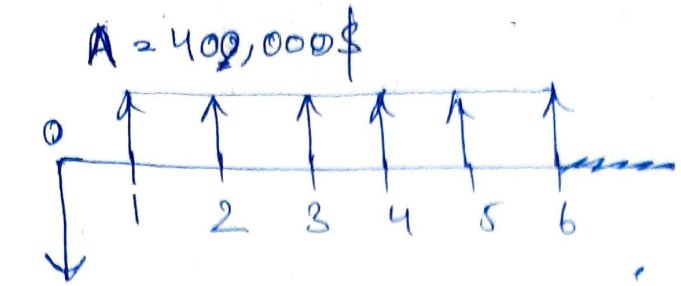
$$\Rightarrow \$41{,}935 = 6.8137C + \$2458.57$$

$$\Rightarrow \$39{,}476.43 = 6.8137C$$

$$\Rightarrow \boxed{C = \$5{,}793.68 \text{ — Ans}}$$



1d)



P = $1,000,000 $i = 15\%$

$$NPV = -1,000,000 + 400,000(P/A, 15\%, 6)$$
$$= -1,000,000 + 400,000(3.784)$$
$$= \$513,600$$

NPV is $513,600 — Ans

2a) Accounting Equation

	Assets	=	Liabilities	+	Capital
(i)	60,000 (cash)	=	0	+	60,000
ii)	59,500 (cash) + 500 (rental)	=	0	+	60,000
iii)	29,500 (cash) + 500 (rental) + 50,000 (goods)	=	20,000 (credit)	+	60,000
iv)	59,500 (cash) + 500 (rental) + 30,000 (goods)	=	20,000 (credit)	+	70,000
v)	59,000 (cash) + 500 (rental) + 30,000 (goods)	=	20,000 (credit) + 100 (outstanding salary)	+	69,400
vi)	54,000 (cash) + 500 (rental) + 30,000 (goods)	=	20,000 (credit) + 100 (outstanding salary)	+	64,400

2b) Trading Account of M/s Lidwin & Co as on 31 March 2021

Dr Cr

Particular	Amt	Amt	Particular	Amt	Amt
To Opening stock		50,000	By Closing stock		70,000
To net purchase		6,00,000	By net sales		11,00,000
To direct expenses		60,000			
To gross profit (to be transferred to P&L)		4,60,000			
Total		11,70,000			11,70,000

Profit & loss statement of M/s Lidwin & Co as on March 31, 2021

Dr Cr

Particular	Amt	Amt	Particular	Amt	Amt
To Administration expenses		45,000	By gross profit		4,60,000
To selling and distribution expenses		65,000			
To loss due to fire		20,000			
To net profit (to be transferred to Capital A/C)		3,30,000			
Total		4,60,000			4,60,000

Gross profit = 4,60,000 Ans

Net profit = 3,30,000 Ans

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1b) $0 = -50,000 + \frac{5000}{(1+IRR)} + \frac{10,000}{(1+IRR)^2} + \frac{15,000}{(1+IRR)^3} + \frac{25,000}{(1+IRR)^4} + \frac{30,000}{(1+IRR)^5}$

- Let IRR = 15%

$\Rightarrow NPV = -50,000 + \frac{5000}{1.15} + \frac{10,000}{1.15^2} + \frac{15,000}{1.15^2} + \frac{25,000}{1.15^4} + \frac{20,000}{1.15^5}$

NPV = $981.13 → Let IRR = 18%

→ NPV = -3443.40

- Let IRR = 15.63%

$\Rightarrow NPV = -50,000 + \frac{5000}{1.1563} + \frac{10,000}{1.1563^2} + \frac{15,000}{1.1563^3} + \frac{25,000}{1.1563^4} + \frac{30,000}{1.1563^5}$

NPV = 4$ ≈ 0

∴ IRR = 15.63%

∵ IRR > Cost of capital

so project is acceptable — Ans

1c) We know that (S − V)/S = F + P or

S × P/V Ratio = Contribution

So

a) P/V Ratio = Contribution / sales × 100

$= (40-24)/40 \times 100 = 16/40 \times 100$ or 40% Ans

b) Break even sales

S X P/V Ratio = Fixed Cost

(At break even sales, contribution is equal to fixed cost)

Putting values :- $S \times 40/100 = 16,000$

$S = \frac{16,000 \times 100}{40} = 40,000$ or 1000 units = 3 Ans

(c) The sales to earn a profit of Rs. 2000

S X P/V Ratio = F+P

Putting values : $S \times \frac{40}{100} = 16,000 + 2,000$

$S = \frac{18,000 \times 100}{40}$

S = Rs 45,000 or 1125 units — Ans

(d) Profit at sales of 60,000

S X P/V Ratio = F+P

Putting values : Rs $60,000 \times 40/100 = 16,000 + P$

$24,000 = 16,000 + P$

$24000 - 16,000 = P$

8000 = P — Ans

2c)

Year	Cash Flow
0	-200,000
1	+80,000
2	+50,000
3	+200,000

a) NPV at $i = 0\% \Rightarrow -200,000 + \left[\frac{50,000}{(1+0)^2} + \frac{50,000}{(1+0)^2} + \frac{200,000}{(1+0)^3}\right]$

$= -200,000 + 50,000 + 50,000 + 200,000$

$= 100,000$ — Ans

b) NPV at $i = 5\% \Rightarrow -200,000 + \left[\frac{50,000}{(1+0.05)^1} + \frac{50,000}{(1+0.05)^2} + \frac{200,000}{(1+0.05)^3}\right]$

$= -200,000 + 47619.04 + 45351.47 + 172,767.51$

$= 65,738.02$ — Ans

c) NPV at $i \Rightarrow -200,000 + \left[\frac{50,000}{(1+i)^1} + \frac{50,000}{(1+i)^2} + \frac{50,000}{(1+i)^3}\right]$

At $i = 10\%$, NPV $\Rightarrow$ 37039.81

At $i = 15\%$, NPV $\Rightarrow$ 12788.69

At $i = 20\%$, NPV $\Rightarrow$ -7870.37

At $i = 18\%$, NPV $\Rightarrow$ 8.27

$\therefore$ IRR $= 18\% + \frac{8.27}{8.27 - (-7870.37)} \times (20\% - 18\%)$

$= 18\% + 0.0010 \times 2\%$

$= 18\% + 0.0020$

$= 18.0020\%$

$= \boxed{18\%}$ — Ans

5a)

Cash outflows	Time	PV @ 12%	Total Present Value
200000	0	1	200000
50000	1	0.893	44650
			244650

Cash inflows	Time	PV @ 12%	Total Present Value
30,000	1	0.893	26790
50000	2	0.797	39850
70000	3	0.712	49840
120000	4	0.636	76320
80000	5	0.567	45360
			238160

Terminal value	Time	PV @ 12%	Total Present Value
30000	5	0.567	17010

∴ NPV = 238160 + 17010 − 244650

= 255170 − 244650

NPV = 10520 — Ans

2b) (CONTINUED)

Operating Profit = Net Profit − Non-Operating Income + Non-operating Expenses

= 3,30,000 + − 0 + 20,000 = Rs 3,50,000

(Loss by fire is a non-operating expense, thus added to the net profit to arrive at operating profit)

4a) Trading account of ABC & Co as on 31st December, 2020.

Dr Cr

Particular	Amt	Amt	Particular	Amt	Amt
To opening stock		60,000	By sales	480,00	~~4,80,000~~
To wages		32,000	Less sales returns	1900	~~1,900~~
To purchases	1,60,000				4,78,100
Less purchase returns	2000		By Closing stock		90,000
	~~1,58,000~~	158,000			
To carriage inwards		8,400			
To gross profit (to be transferred to P&L)		3,14,700			
					5,68,100
Total		5,68,100			

Profit & Loss Account of ABC & Co as on 31st December, 2020

Dr Cr

Particular	Amt	Amt	Particular	Amt	Amt
To carriage outward		5,000	By trading A/c gross profit		3,14,700
To salaries		24,000			
To sales expense		12,000	By interest received		2,000
To advertisement		5,000			
To insurance expense		4,400			
To bad debts		4,800			

To net profit		2,64,500		
Total		3,16,700		3,16,700