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Q.P. code: 63972

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Q.1. (A)

- 1)
- 2) 1:3
- 3) List Price
- 4) Invoice Price
- 5) 1350
- 6) Less than
- 7) Immediate Annuity
- 8) an integer or a fraction.
- 9) SIP
- 10) 11

Q.1 (B)

- 1) False
- 2) False
- 3) True
- 4) True
- 5) False
- 6) True
- 7) True.
- 8) False
- 9) False
- 10) True.

Q.2. (A). The profit is to be distributed in the proportion to the capital invested  
 in the ratio 40,000 : 25,000 : 55,000  
 in the ratio 8 : 5 : 11

$$\text{Now, } 8 + 5 + 11 = 24$$

$$\therefore \text{Kunal's share in the profit} = \frac{8}{24} \times 29,616$$

$$= 9,872$$

$$\begin{aligned} \text{Kiran's share in the profit} &= \frac{5}{24} \times 29616 \\ &= 6170 \end{aligned}$$

$$\begin{aligned} \text{Kabir's share in the profit} &= \frac{11}{24} \times 29616 \\ &= 13574 \end{aligned}$$

Q2. (B)

$$\text{Commission amount} = 22,275$$

$$\text{rate of commission} = 12\%$$

$$\text{price of one T.V} = 6,875$$

$$\text{Let no. of T.Vs. sold} = x.$$

$$\text{Total Commission} = 12\% \text{ on Total Price of } x \text{ T.V}$$

$$22,275 = \frac{12}{100} \times 6875x$$

$$x = \frac{22,275 \times 100}{12 \times 6875}$$

$$x = 27$$

27 T.Vs are sold by an agent.

Q2. (P) Given that T.D = 30% C.D = 2%  
Profit = 37.2% L.P = 4000

$$\text{I.P} = \frac{100 - \text{T.D}\%}{100} \times \text{L.P}$$

$$= \frac{100 - 30}{100} \times 4000$$

$$= 2800$$

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$$N.S.P = \frac{(100 - C.D\%)}{100} \times I.P = \frac{100 - 2}{100} \times 2800$$

$$= 2744$$

Now,

$$N.S.P = \frac{(100 + Profit\%)}{100} \times C.P$$

$$2744 = \frac{100 + 37.2}{100} \times C.P$$

$$C.P = Rs. 2000$$

The cost price is Rs. 2000/-

Q2. Q.

Let the monthly incomes of Albert & Bertha be  $10x$  and  $9x$  respectively.

$$Savings = Income - Expenditure.$$

$$\therefore Expenditure = Income - Savings.$$

$$\therefore \text{monthly expenditure of Albert} = 10x - 20000$$

$$\text{Bertha} = 9x - 10000$$

$$\therefore \frac{10x - 20000}{9x - 10000} = \frac{6}{7}$$

$$7(10x - 20000) = 6(9x - 10000)$$

$$70x - 140000 = 54x - 60000$$

$$70x - 54x = -60000 + 140000$$

$$16x = 80000$$

$$x = 5000$$

$$\therefore 10x = 10 \times 5000 = 50000$$

$$9x = 9 \times 5000 = 45000$$

$\therefore$  The monthly incomes of Albert = Rs. 50,000

Bertha = Rs. 45,000

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Q.3(A) C.I - S.I = 76.8 - (1) for 2 years.  
 S.I = 3840 for 4 years.

$$\frac{P \times N \times R}{100} = 3840$$

$$\frac{P \times 4 \times R}{100} = 3840$$

$$\boxed{PR = 96000} \quad - (2)$$

eg<sup>1</sup> (1)  $\Rightarrow P \left(1 + \frac{R}{100}\right)^N - P - \frac{P \times N \times R}{100} = 76.8$

$$P \left(1 + \frac{R}{100}\right)^2 - P - \frac{PR \times 2}{100} = 76.8$$

$$P \left[1 + \frac{2R}{100} + \frac{R^2}{10000}\right] - P - \frac{PR \times 2}{100} = 76.8$$

$$\cancel{P} + \frac{2PR}{100} + \frac{PR^2}{10000} - \cancel{P} - \frac{2PR}{100} = 76.8$$

$$\cancel{\frac{PR}{100}} \left[ \cancel{2} \times \cancel{R} + \right.$$

$$\left. \frac{PR^2}{10000} = 76.8 \right.$$

$$\frac{96000 \times R}{10000} = 76.8$$

$$\boxed{R = 8\%}$$

eg<sup>2</sup> (2)  $\Rightarrow P \times 8 = 96000$

$$\boxed{P = 12000}$$

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Q3 (B)

$$C = 10,000, \quad A = 20,500$$
$$n = 2 \text{ years} \quad R = ?$$

$$A = \frac{C}{i} [(1+i)^n - 1]$$

$$20500 = \frac{10000}{i} [(1+i)^2 - 1]$$

$$\frac{20500i}{10000} = [1 + 2i + i^2 - 1]$$

$$2.05i = [2 + i]$$

$$2 + i = 2.05$$

$$i = 0.05$$

$$\frac{R}{100} = 0.05$$

$$\boxed{R = 5\%}$$

Q.3. (P)  $P = Rs. 1,00,000$ ,  $n = 4$  months  
 $r = 12\% p.a = \frac{12}{12} = 1\% p.m$   
 here  $i = \frac{1}{100} = 0.01$

$$P = \frac{C}{i} [1 - (1+i)^{-n}]$$

$$1,00,000 = \frac{C}{0.01} [1 - (1+0.01)^{-4}]$$

$$1000 = C [1 - 0.9610]$$

$$1000 = C \times 0.039$$

$$C = 25,641.03$$

(a) The EMI is Rs. 25,641.03.

(b)

Month.	Outstanding Principal at the beginning of the month	EMI	Break up of EMI	
			Interest on outstanding Principal	Principal Repayment
1st	1,00,000	25,641.03	1,000	24,641.03
2nd	75,358.97	25,641.03	753.59	24,887.44
3rd	50,471.53	25,641.03	504.72	25,136.31
4th	25,335.22	25,641.03	253.35	25,081.87

Q.3 (Q)

(i)  $i = \frac{16}{100} = 0.16$  &  $m = 2$ .

$$i_e = (1 + \frac{i}{m})^m - 1$$

$$= (1 + \frac{0.16}{2})^2 - 1$$

$$i_e = 0.1664$$

∴ The effective rate of interest is 16.64% p.a

$$(ii) \quad i = \frac{16}{100} = 0.16, \quad m = 4.$$

$$i_e = \left(1 + \frac{i}{m}\right)^m - 1$$

$$= \left(1 + \frac{0.16}{4}\right)^4 - 1$$

$$i_e = 0.1699.$$

Thus the effective rate of interest is 16.99% P.A.

Q.4 (A)

$$\text{Purchase Price} = \text{NAV on 8th Feb 2007} (\because \text{NO entry load})$$

$$= \text{Rs. } 1133.5761$$

$$\text{NO. of units purchased} = \frac{\text{Amt Invested}}{\text{Purchase Price}} = \frac{42000}{1133.5761}$$

$$= 37.051$$

$$\text{Redemption Price} = \text{NAV on 22nd June 07} (\text{NO. exit load})$$

$$= \text{Rs. } 1165.0014$$

$$\text{Amt Received after redemption}$$

$$= (\text{Redemption Price per unit}) \times \text{NO. of units Sold}$$

$$= 1165.0014 \times 37.051$$

$$= \text{Rs. } 43,164.47$$

$$\text{Total Gain} = (\text{Amt Received After Redemption}) - (\text{Amt Invested})$$

$$= 43,164.47 - 42000$$

$$= \text{Rs. } 1,164.47$$

$$\text{Rate of Return} = \frac{\text{Change in N.A.V}}{\text{N.A.V at the beginning of the period}} \times 100$$

$$= \frac{1165.0014 - 1133.5761}{1133.5761} \times 100$$

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Rate of Return = 2.77%

∴ Total gain is Rs. 1,164 and rate of return is 2.77%.

Q.4 (B) No. of shares = 50,000

Face value = 10

Total dividend = 55,000.

Face value of 50,000 shares =  $50,000 \times 10$   
= 5,00,000

Rate of dividend =  $\frac{\text{Total dividend}}{\text{F.V of 50,000 shares}} \times 100$

$$= \frac{55,000}{5,00,000} \times 100$$

$$= 11\%$$

The rate of dividend paid by the company was 11%.

Q.4 (P) Market price = 120, brokerage rate = 0.10%  
of 1 share Net Amt Recd = 47,952

Let No. of shares =  $x$ .

∴ Market price of  $x$  shares =  $x \times 120$   
=  $120x$ .

Amt received on sale of 1 share

$$= \text{M.P. of 1 share} - \text{Brokerage for share}$$

$$= 120 - \frac{0.10 \times 120}{100}$$

$$= 120 - 0.12$$

$$= 119.88$$

∴ Amt received on sale of  $x$  shares

$$= \text{Rs. } 119.88x.$$

But,

∴ Amt received on sale of  $x$  shares = 47,952

$$= \text{M.P. of } x \text{ shares} - \text{Brokerage on } x \text{ shares}$$



$$119.88x = 120x - 0.12x$$

$$\therefore 47952 = 119.88x$$

$$x = \frac{47952}{119.88}$$

$$x = 400$$

$\therefore$  No. of shares sold are 400.

Q.4.(Q)

$$\text{Value of the Units} = (\text{NAV on } 25/01/08) \times (\text{No. of units})$$

$$4889.99 = 14.5213 \times \text{No. of units}$$

$$\Rightarrow \text{No. of units} = 4889.99 / 14.5213 = 336.746$$

$$\text{Purchase Price per unit} = \frac{\text{Amt Invested}}{\text{No. of Units}}$$

$$= \frac{5000}{336.746}$$

$$= \text{Rs. } 14.8480$$

$$\text{Purchase Price per Unit} = (\text{NAV per unit}) + (\text{Entry load per unit})$$

$$14.8480 = 14.5213 + \text{Entry load per Unit}$$

$$\Rightarrow \text{Entry load per unit} = \text{Rs. } 0.3267$$

On NAV Rs. 14.5213, the entry load is Rs. 0.3267

On NAV Rs. 100, the entry load is  $\frac{100}{14.5213} \times 0.3267$

$$= 2.25$$

$\therefore$  The entry load was 2.25%.