

PAPER – 2 : MANAGEMENT ACCOUNTING AND FINANCIAL ANALYSIS

Question No. 1 is compulsory.

Attempt any **five** questions from the remaining **six** questions.

Working notes should form part of the answer.

Question 1

- (a) A Company passes through three stages: growth, transition and maturity stage. The growth stage is expected to last for 2 years, while the transition stage lasts for 3 years. During the transition stage the growth rate of dividends changes from 18% to 9%. What would be the rate of dividend at the end of the first year of the transition stage?

- (b) M/s X Ltd. has paid a dividend of ₹ 2.5 per share on a face value of ₹ 10 in the financial year ending on 31st March, 2009. The details are as follows:

Current market price of share	₹ 60
Growth rate of earnings and dividends	10%
Beta of share	0.75
Average market return	15%
Risk free rate of return	9%

Calculate the intrinsic value of the share.

- (c) If the market price of the bond is ₹ 95; years to maturity = 6 yrs; coupon rate = 13% p.a (paid annually) and issue price is ₹ 100. What is the yield to maturity?
- (d) A convertible bond with a face value of ₹ 1,000 is issued at ₹ 1,350 with a coupon rate of 10.5%. The conversion rate is 14 shares per bond. The current market price of bond and share is ₹ 1,475 and ₹ 80 respectively. What is the premium over conversion value?

(4 × 5 = 20 Marks)

Answer

$$\begin{aligned} \text{(a)} &= 18\% - \frac{10\%}{1 + 0.18} \\ &= 18\% - 0.79\% = 17.21\% \end{aligned}$$

$$\text{(b) Intrinsic Value } P_0 = \frac{D_1}{k - g}$$

Using CAPM

$$k = R_f + b (R_m - R_f)$$

R_f = Risk Free Rate

FINAL (OLD) EXAMINATION : NOVEMBER, 2010

b = Beta of Security

R_m = Market Return

$$= 9\% + 0.75 (15\% - 9\%) = 13.5\%$$

$$P = \frac{2.5 \times 1.1}{0.135 - 0.10} = \frac{2.75}{0.035} = \text{Rs. } 78.57$$

(c)
$$YTM = \frac{C + \frac{(F - P)}{n}}{\frac{F + P}{2}}$$
 C= Coupon Rate; F= Face Value (Issue Price) ; P= Market Price of Bond

$$YTM = \frac{13 + \frac{(100 - 95)}{6}}{\frac{100 + 95}{2}}$$
$$= 0.1418 \text{ or } 14.18\%$$

(d) Conversion rate is 14 shares per bond. Market price of share Rs. 80

Conversion Value 14 x Rs. 80 = Rs. 1120

Market price of bond = Rs. 1475

$$\text{Premium over Conversion Value (Rs. 1475 - Rs. 1120)} = \frac{355}{1120} \times 100 = 31.7\%$$

Question 2

(a) P Ltd. is considering take-over of R Ltd. by the exchange of four new shares in P Ltd. for every five shares in R Ltd. The relevant financial details of the two companies prior to merger announcement are as follows:

	P Ltd	R Ltd
Profit before Tax (` Crore)	15	13.50
No. of Shares (Crore)	25	15
P/E Ratio	12	9

Corporate Tax Rate 30%

You are required to determine:

- (i) Market value of both the company.
- (ii) Value of original shareholders.
- (iii) Price per share after merger.

PAPER – 2 : MANAGEMENT ACCOUNTING AND FINANCIAL ANALYSIS

(iv) Effect on share price of both the company if the Directors of P Ltd. expect their own pre-merger P/E ratio to be applied to the combined earnings. (10 Marks)

(b) Red Ltd. is considering a project with the following Cash flows:

<u>Years</u>	<u>Cost of Plant</u>	<u>Recurring Cost</u>	<u>Savings</u>
0	10,000		
1		4,000	12,000
2		5,000	14,000

The cost of capital is 9%. Measure the sensitivity of the project to changes in the levels of plant value, running cost and savings (considering each factor at a time) such that the NPV becomes zero. The P.V. factor at 9% are as under:

<u>Year</u>	<u>Factor</u>
0	1
1	0.917
2	0.842

Which factor is the most sensitive to affect the acceptability of the project? (6 Marks)

Answer

(a)

	P Ltd.	R Ltd.
Profit before Tax (Rs. in crore)	15	13.50
Tax 30% (Rs. in crore)	4.50	4.05
Profit after Tax (Rs. in crore)	10.50	9.45
Earning per Share (Rs.)	$\frac{10.50}{25} = \text{Rs. } 0.42$	$\frac{9.45}{15} = \text{Rs. } 0.63$
Price of Share before Merger (EPS x P/E Ratio)	$0.42 \times \text{Rs. } 12 = \text{Rs. } 5.04$	$0.63 \times \text{Rs. } 9 = \text{Rs. } 5.67$

(i) \ Market Value of company

P Ltd. = Rs. 5.04 x 25 Crore = Rs. 126 crore

R Ltd. = Rs. 5.67 x 15 Crore = Rs. 85.05 crore

Combined = Rs. 126 + Rs. 85.05 = Rs. 211.05 Crores

FINAL (OLD) EXAMINATION : NOVEMBER, 2010

After Merger

	P Ltd.	R Ltd.
No. of Shares	25 crores	$15 \times \frac{4}{5} = 12$ crores
Combined	37 crores	
% of Combined Equity Owned	$\frac{25}{37} \times 100 = 67.57\%$	$\frac{12}{37} \times 100 = 32.43\%$

(ii) \ Value of Original Shareholders

P Ltd.	R Ltd.
Rs. 211.05 crore x 67.57%	Rs. 211.05 crore x 32.43%
= Rs. 142.61	= Rs. 68.44

(iii) \ Price per Share after Merger

$$\text{EPS} = \frac{\text{Rs. 19.95 crore}}{37 \text{ crore}} = \text{Rs. 0.539 per share}$$

$$\text{P/E Ratio} = 12$$

$$\text{Market Value Per Share} = \text{Rs. 0.539} \times 12 = \text{Rs. 6.47}$$

$$\text{Total Market Value} = \text{Rs. 6.47} \times 37 \text{ crore} = \text{Rs. 239.40 crore}$$

$$\text{Price of Share} = \frac{\text{Market Value}}{\text{Number of Shares}} = \frac{239.40 \text{ crore}}{37 \text{ crore}} = \text{Rs. 6.47}$$

(iv) Effect on Share Price

P Ltd.

$$\text{Gain/loss (-) per share} = \text{Rs. 6.47} - \text{Rs. 5.04} = \text{Rs. 1.43}$$

$$\text{i.e. } \frac{6.47 - 5.04}{5.04} \times 100 = 0.284 \text{ or } 28.4\%$$

\ Share price would rise by 28.4%

R Ltd.

$$6.47 \times \frac{4}{5} = \text{Rs. 5.18}$$

$$\text{Gain/loss (-) per share} = \text{Rs. 5.18} - \text{Rs. 5.67} = (-\text{Rs. 0.49})$$

$$\text{i.e. } \frac{5.18 - 5.67}{5.67} \times 100 (-) 0.0864 \text{ or } (-) 8.64\%$$

\ Share Price would decrease by 8.64%.

PAPER – 2 : MANAGEMENT ACCOUNTING AND FINANCIAL ANALYSIS

(b) P.V. of Cash Flows

Year 1	Running Cost	Rs. 4000 x 0.917	= (Rs. 3,668)
	Savings	Rs. 12000 x 0.917	= Rs. 11,004
Year 2	Running Cost	Rs. 5000 x 0.842	= (Rs. 4,210)
	Savings	Rs. 14000 x 0.842	= <u>Rs. 11,788</u>
			Rs. 14,914
Year 0	Less: P.V. of Cash Outflow	Rs. 10000 x 1	Rs. <u>10,000</u>
	NPV		<u>Rs. 4,914</u>

Sensitivity Analysis

(i) Increase of Plant Value by Rs. 4,914

$$\backslash \frac{4,914}{10,000} \times 100 = 49.14\%$$

(ii) Increase of Running Cost by Rs. 4,914

$$\frac{4,914}{3668 + 4210} = \frac{4914}{7878} \times 100 = 62.38\%$$

(iii) Fall in Saving by Rs. 4,914

$$\frac{4,914}{11004 + 11788} = \frac{4914}{22792} \times 100 = 21.56\%$$

Hence, savings factor is the most sensitive to affect the acceptability of the project.

Alternative Solution

P.V. of Cash Flows

Year 1	Running Cost	Rs. 4000 x 0.917	= (Rs. 3,668)
	Savings	Rs. 12000 x 0.917	= Rs. 11,004
Year 2	Running Cost	Rs. 5000 x 0.842	= (Rs. 4,210)
	Savings	Rs. 14000 x 0.842	= <u>Rs. 11,788</u>
			Rs. 14,914
Year 0	Less: P.V. of Cash Outflow	Rs. 10000 x 1	Rs. <u>10,000</u>
	NPV		<u>Rs. 4,914</u>

Sensitivity Analysis

(i) If the initial project cost is varied adversely by say 10%*.

$$\text{NPV (Revised)} (\text{Rs. 4,914} - \text{Rs. 1,000}) = \text{Rs. 3,914}$$

FINAL (OLD) EXAMINATION : NOVEMBER, 2010

$$\text{Change in NPV} = \frac{(\text{Rs. } 4,914 - \text{Rs. } 3,914)}{\text{Rs. } 4,914} = 20.35\%$$

- (ii) If Annual Running Cost is varied by say 10%*.

$$\begin{aligned} \text{NPV (Revised)} &= (\text{Rs. } 4,914 - \text{Rs. } 400 \times 0.917 - \text{Rs. } 500 \times 0.843) \\ &= \text{Rs. } 4,914 - \text{Rs. } 367 - \text{Rs. } 421 = \text{Rs. } 4,126 \end{aligned}$$

$$\text{Change in NPV} = \frac{(\text{Rs. } 4,914 - \text{Rs. } 4,126)}{\text{Rs. } 4,914} = 16.04\%$$

- (iii) If Saving is varied by say 10%*.

$$\begin{aligned} \text{NPV (Revised)} &= (\text{Rs. } 4,914 - \text{Rs. } 1,200 \times 0.917 - \text{Rs. } 1,400 \times 0.843) \\ &= \text{Rs. } 4,914 - \text{Rs. } 1,100 - \text{Rs. } 1,179 = \text{Rs. } 2,635 \end{aligned}$$

$$\text{Change in NPV} = \frac{(\text{Rs. } 4,914 - \text{Rs. } 2,635)}{\text{Rs. } 4,914} = 46.37\%$$

Hence, savings factor is the most sensitive to affect the acceptability of the project.

* Any percentage of variation other than 10% can also be assumed.

Question 3

- (a) Aeroflot airlines is planning to procure a light commercial aircraft for flying class clients at an investment of ` 50 lakhs. The expected cash flow after tax for next three years is as follows:

(` in lakh)

Year 1		Year 2		Year 3	
<u>CFAT</u>	<u>Probability</u>	<u>CFAT</u>	<u>Probability</u>	<u>CFAT</u>	<u>Probability</u>
15	.1	15	.1	18	.2
18	.2	20	.3	22	.5
22	.4	30	.4	35	.2
35	.3	45	.2	50	.1

The company wishes to consider all possible risk factors relating to an airline.

The company wants to know-

- (i) the expected NPV of this proposal assuming independent probability distribution with 6 per cent risk free rate of interest, and
 (ii) the possible deviation on expected values

(12 Marks)

PAPER – 2 : MANAGEMENT ACCOUNTING AND FINANCIAL ANALYSIS

- (b) An importer requests his bank to extend the forward contract for US\$ 20,000 which is due for maturity on 30th October, 2010, for a further period of 3 months. He agrees to pay the required margin money for such extension of the contract.

Contracted Rate – US\$ 1= ` 42.32

The US Dollar quoted on 30-10-2010:-

Spot – 41.5000/41.5200

3 months' Premium -0.87% /0.93%

Margin money for buying and selling rate is 0.075% and 0.20% respectively.

Compute:

- (i) The cost to the importer in respect of the extension of the forward contract, and
(ii) The rate of new forward contract. (4 Marks)

Answer

- (a) (i) Determination of expected CFAT

Rs. in lakh								
Year-1			Year-2			Year - 3		
CFAT	P ₁	Cash flow	CFAT	P ₂	Cash flow	CFAT	P ₃	Cash flow
15	0.1	1.5	15	0.1	1.5	18	0.2	3.6
18	0.2	3.6	20	0.3	6	22	0.5	11
22	0.4	8.8	30	0.4	12	35	0.2	7
35	0.3	<u>10.5</u>	45	0.2	<u>9</u>	50	0.1	<u>5</u>
		<u>CF₁ 24.4</u>			<u>CF₂ 28.5</u>			<u>CF₃ 26.6</u>

CFAT (Rs. in lakh)	PV factor @ 6%	Total PV (Rs. in lakh)
24.4	0.943	23.009
28.5	0.890	25.365
26.6	0.840	<u>22.344</u>
		70.718
	Less Cash flow	<u>50.000</u>
	= NPV	<u>20.718</u>

FINAL (OLD) EXAMINATION : NOVEMBER, 2010

(ii) Determination of Standard deviation for each year

Year 1

$(CF_1 - \overline{CF_1})^2$	$(CF_1 - \overline{CF_1})^2$	P_1	
$(15-24.4)^2$	88.36	0.1	8.836
$(18-24.4)^2$	40.96	0.2	8.192
$(22-24.4)^2$	5.76	0.4	2.304
$(35-24.4)^2$	112.36	0.3	<u>33.708</u>
			<u>53.04</u>

$$\sigma = \sqrt{53.04} = 7.282$$

Year 2

$(CF_2 - \overline{CF_2})^2$	$(CF_2 - \overline{CF_2})^2$	P_2	
$(15-28.5)^2$	182.25	0.1	18.225
$(20-28.5)^2$	72.25	0.3	21.675
$(30-28.5)^2$	2.25	0.4	0.9
$(45-28.5)^2$	272.25	0.2	<u>54.45</u>
			<u>95.25</u>

$$\sigma = \sqrt{95.25} = 9.76$$

Year -3

$(CF_3 - \overline{CF_3})^2$	$(CF_3 - \overline{CF_3})^2$	P_3	
$(18-26.6)^2$	73.96	0.2	14.792
$(22-26.6)^2$	21.16	0.5	10.58
$(35-26.6)^2$	70.56	0.2	14.112
$(50-26.6)^2$	547.56	0.1	<u>54.756</u>
			<u>94.24</u>

$$\sigma = \sqrt{94.24} = 9.70$$

Standard deviation of the expected Values

$$\sqrt{\sum_{t=1}^n \frac{\sigma_t}{(1+i)^{2t}}}$$

PAPER – 2 : MANAGEMENT ACCOUNTING AND FINANCIAL ANALYSIS

$$\sigma = \sqrt{\frac{7.282}{(1.06)^2} + \frac{9.76}{(1.06)^4} + \frac{9.7}{(1.06)^6}}$$

$$\sigma = \sqrt{6.48 + 7.73 + 6.84} = \sqrt{21.05} = 4.58$$

- (b) (i) The contract is to be cancelled on 30-10-2010 at the spot buying rate of US\$ 1
= Rs. 41.5000
Less: Margin Money 0.075% = Rs. 0.0311
= Rs. 41.4689 or Rs. 41.47
US\$ 20,000 @ Rs. 41.47 = Rs. 8,29,400
US\$ 20,000 @ Rs. 42.32 = Rs. 8,46,400
The difference in favour of the Bank/Cost to the importer Rs. 17,000
- (ii) The Rate of New Forward Contract
Spot Selling Rate US\$ 1 = Rs. 41.5200
Add: Premium @ 0.93% = Rs. 0.3861
= Rs. 41.9061
Add: Margin Money 0.20% = Rs. 0.0838
= Rs. 41.9899 or Rs. 41.99

Question 4

An investor has decided to invest to invest 1,00,000 in the shares of two companies, namely, ABC and XYZ. the projections of returns from the shares of the two companies along with their probabilities are as follows:

Probability	ABC(%)	XYZ(%)
.20	12	16
.25	14	10
.25	-7	28
.30	28	-2

You are required to

- Comment on return and risk of investment in individual shares.
- Compare the risk and return of these two shares with a Portfolio of these shares in equal proportions.
- Find out the proportion of each of the above shares to formulate a minimum risk portfolio.

(16 Marks)

FINAL (OLD) EXAMINATION : NOVEMBER, 2010

Answer

(i)

Probability	ABC (%)	XYZ (%)	1X2 (%)	1X3 (%)
(1)	(2)	(3)	(4)	(5)
0.20	12	16	2.40	3.2
0.25	14	10	3.50	2.5
0.25	-7	28	-1.75	7.0
0.30	28	-2	<u>8.40</u>	<u>-0.6</u>
Average return			<u>12.55</u>	<u>12.1</u>

Hence the expected return from ABC = 12.55% and XYZ is 12.1%

Probability	(ABC - $\overline{ABC}$)	(ABC - $\overline{ABC}$) ²	1X3	(XYZ - $\overline{XYZ}$)	(XYZ - $\overline{XYZ}$) ²	(1)X(6)
(1)	(2)	(3)	(4)	(5)	(6)	
0.20	-0.55	0.3025	0.06	3.9	15.21	3.04
0.25	1.45	2.1025	0.53	-2.1	4.41	1.10
0.25	-19.55	382.2025	95.55	15.9	252.81	63.20
0.30	-15.45	238.7025	<u>71.61</u>	-14.1	198.81	<u>59.64</u>
			<u>167.75</u>			<u>126.98</u>

$$S^2_{ABC} = 167.75(\%)^2 ; S_{ABC} = 12.95\%$$

$$S^2_{XYZ} = 126.98(\%)^2 ; S_{XYZ} = 11.27\%$$

(ii) In order to find risk of portfolio of two shares, the covariance between the two is necessary here.

Probability	(ABC - $\overline{ABC}$)	(XYZ - $\overline{XYZ}$)	2X3	1X4
(1)	(2)	(3)	(4)	(5)
0.20	-0.55	3.9	-2.145	-0.429
0.25	1.45	-2.1	-3.045	-0.761
0.25	-19.55	15.9	-310.845	-77.71
0.30	15.45	-14.1	-217.845	<u>-65.35</u>
				<u>-144.25</u>

$$S^2_P = (0.5^2 \times 167.75) + (0.5^2 \times 126.98) + 2 \times (-144.25) \times 0.5 \times 0.5$$

$$S^2_P = 41.9375 + 31.745 - 72.125$$

$$S^2_P = 1.5575 \text{ or } 1.56(\%)^2$$

$$S_P = \sqrt{1.56} = 1.25\%$$

PAPER – 2 : MANAGEMENT ACCOUNTING AND FINANCIAL ANALYSIS

$$E(R_p) = (0.5 \times 12.55) + (0.5 \times 12.1) = 12.325\%$$

Hence, the return is 12.325% with the risk of 1.25% for the portfolio. Thus the portfolio results in the reduction of risk by the combination of two shares.

(iii) For constructing the minimum risk portfolio the condition to be satisfied is

$$X_{ABC} = \frac{\sigma_X^2 - r_{AX}\sigma_A\sigma_X}{\sigma_A^2 + \sigma_X^2 - 2r_{AX}\sigma_A\sigma_X} \text{ or}$$

$$= \frac{\sigma_X^2 - \text{Cov}_{AX}}{\sigma_A^2 + \sigma_X^2 - 2\text{Cov}_{AX}}$$

σ_X = Std. Deviation of XYZ

σ_A = Std. Deviation of ABC

r_{AX} = Coefficient of Correlation between XYZ and ABC

Cov_{AX} = Covariance between XYZ and ABC.

Therefore,

$$\% \text{ ABC} = \frac{126.98 - (-144.25)}{126.98 + 167.75 - (2 \times -144.25)}$$

$$\frac{271.23}{583.23} = 0.46 \text{ or } 46\%$$

$$\% \text{ ABC} = 46\%, \text{ XYZ} = 54\%$$

$$(1 - 0.46) = 0.54$$

Question 5

- (a) A mutual fund company introduces two schemes i.e. Dividend plan (Plan-D) and Bonus plan (Plan-B). The face value of the unit is ₹ 10. On 1-4-2005 Mr. K invested ₹ 2,00,000 each in Plan-D and Plan-B when the NAV was ₹ 38.20 and ₹ 35.60 respectively. Both the plans matured on 31-3-2010.

Particulars of dividend and bonus declared over the period are as follows:

Date	Dividend	Bonus	Net Asset Value(₹)	
	<u>%</u>	<u>Ratio</u>	<u>Plan D</u>	<u>Plan B</u>
30-09-2005	10		39.10	35.60
30-06-2006		1:5	41.15	36.25
31-3-2007	15		44.20	33.10
15-9-2008	13		45.05	37.25
30-10-2008		1:8	42.70	38.30

FINAL (OLD) EXAMINATION : NOVEMBER, 2010

27-3-2009	16		44.80	39.10
11-4-2009		1:10	40.25	38.90
31-3-2010			40.40	39.70

What is the effective yield per annum in respect of the above two plans? (10 Marks)

- (b) The earnings per share of a company is ` 10 and the rate of capitalisation applicable to it is 10 per cent. The company has three options of paying dividend i.e. (i) 50%, (ii) 75% and (iii) 100%. Calculate the market price of the share as per Walter's model if it can earn a return of (a) 15, (b) 10 and (c) 5 per cent on its retained earnings. (6 Marks)

Answer

(a) Plan – D

$$\text{Unit acquired} = \frac{2,00,000}{38.20} = 5235.60$$

Date	Units held	Dividend %	Dividend Amount	Reinvestment Rate	New Units	Total Units
01.04.2005						5235.60
30.09.2005	5235.60	10	5235.60	39.10	133.90	5369.50
31.03.2007	5369.50	15	8054.25	44.20	182.22	5551.72
15.09.2008	5551.72	13	7217.24	45.05	160.20	5711.92
27.03.2009	5711.92	16	9139.07	44.80	204	5915.92
31.03.2010	Maturity Value		Rs. 40.40 X 5915.20			Rs. 2,39,003.17
	Less: Cost of Acquisition					<u>Rs. 2,00,000.00</u>
	Total Gain					<u>Rs. 39,003.17</u>

$$\text{Effective Yield} = \frac{\text{Rs. 39,003.17}}{\text{Rs. 2,00,000}} \times \frac{1}{5} \times 100 = 3.90\%$$

Alternatively, it can be computed by using the IRR method as follows:

$$\text{NPV at 4\%} = -2,00,000 + 1,96,443 = -3,557$$

$$\text{NPV at 2\%} = -2,00,000 + 2,16,473 = 16,473$$

$$\text{IRR} = \text{LR} + \frac{\text{NPV at LR}}{\text{NPV at LR} - \text{NPV at HR}} (\text{HR} - \text{LR}) = 2\% + \frac{16473}{16473 - (-3557)} (4\% - 2\%) = 3.645\%$$

PAPER – 2 : MANAGEMENT ACCOUNTING AND FINANCIAL ANALYSIS

Plan – B

			No. of Units	NAV (Rs.)
1.4.05	Investment	Rs.2,00,000/35.60=	5617.98	35.60
30.6.06	Bonus	5617.98/5 =	<u>1123.60</u>	36.25
			6741.58	
30.10.08	"	6741.58/8 =	<u>842.70</u>	38.30
			7584.28	
11.4.09	"	7584.28/10 =	<u>758.43</u>	38.90
			8342.71	
31.3.10	Maturity Value	8342.71 x Rs. 39.70=		3,31,205.59
	Less: Investment			<u>2,00,000.00</u>
	Gain			<u>1,31,205.59</u>

\ Effective Yield $\frac{1,31,205.59}{2,00,000} \times \frac{1}{5} \times 100 = 13.12\%$

Alternatively, it can be computed by using the IRR method as follows:

NPV at 13% = -2,00,000 + 1,79,765 = -20,235

NPV at 8% = -2,00,000 + 2,25,413 = 25,413

$$IRR = LR + \frac{NPV \text{ at LR}}{NPV \text{ at LR} - NPV \text{ at HR}} (HR - LR) = 8\% + \frac{25413}{25413 - (-20235)} (13\% - 8\%) = 10.78\%$$

(b)
$$P = \frac{D + \frac{r}{k_e}(E - D)}{k_e}$$

Where

P= Price of Share

R= Rate of Earning

Ke = Rate of Capitalisation or Cost of Equity

FINAL (OLD) EXAMINATION : NOVEMBER, 2010

	(i) DP ratio 50%	(ii) DP ratio 75%	(iii) DP ratio 100%
(a) Price of Share if r = 15%	$\frac{5 + \frac{15}{100} \times (10 - 5)}{.10}$ $\frac{12.5}{.10}$ Rs. 125	$\frac{7.5 + \frac{15}{100} \times (10 - 7.5)}{.10}$ $\frac{11.25}{.10}$ Rs. 112.5	$\frac{10 + \frac{15}{100} \times (10 - 10)}{.10}$ $\frac{10}{.10}$ Rs. 100
(b) Price of Share if r = 10%	$\frac{5 + \frac{10}{100} \times (10 - 5)}{.10}$ $\frac{10}{.10} = \text{Rs. } 100$	$\frac{7.5 + \frac{10}{100} \times (10 - 7.5)}{.10}$ $\frac{10}{.1} = 100$	$\frac{10 + \frac{10}{100} \times (10 - 10)}{.10}$ $\frac{10}{.1} = \text{Rs. } 100$
(c) Price of Share if r = 5%	$\frac{5 + \frac{5}{100} \times (10 - 5)}{.10}$ $\frac{7.5}{.10} = \text{Rs. } 75$	$\frac{7.5 + \frac{5}{100} \times (10 - 7.5)}{.10}$ $\frac{8.75}{.10} = 87.5$	$\frac{10 + \frac{5}{100} \times (10 - 10)}{.10}$ $\frac{10}{.1} = \text{Rs. } 100$

Question 6

- (a) Sensex futures are traded at a multiple of 50. Consider the following quotations of Sensex futures in the 10 trading days during February, 2009:

<u>Day</u>	<u>High</u>	<u>Low</u>	<u>Closing</u>
4-2-09	3306.4	3290.00	3296.50
5-2-09	3298.00	3262.50	3294.40
6-2-09	3256.20	3227.00	3230.40
7-2-09	3233.00	3201.50	3212.30
10-2-09	3281.50	3256.00	3267.50
11-2-09	3283.50	3260.00	3263.80
12-2-09	3315.00	3286.30	3292.00
14-2-09	3315.00	3257.10	3309.30

PAPER – 2 : MANAGEMENT ACCOUNTING AND FINANCIAL ANALYSIS

17-2-09	3278.00	3249.50	3257.80
18-2-09	3118.00	3091.40	3102.60

Abshishek bought one sensex futures contract on February, 04 . The average daily absolute change in the value of contract is ` 10,000 and standard deviation of these changes is ` 2,000. the maintenance margin is 75% of initial margin.

You are required to determine the daily balances in the margin account and payment on margin calls, if any. (8 Marks)

- (b) The share of Galaxy Ltd. of a face ` 10 is being quoted at ` 24. The company has a plan to make a right issue of one equity share for every four shares currently held at a premium of 40% per share.

You are required to:

- Determine the minimum price that can be expected of share after the issue.
- Calculate the theoretical value of the rights alone.
- Show the effect of the right issue on the wealth of a shareholder who has 1500 shares, if
 - he sells the entire rights, and
 - he ignores the rights.

(8 Marks)

Answer

(a) Initial Margin = $\mu + 3s$

Where μ = Daily Absolute Change
 s = Standard Deviation

Accordingly

Initial Margin = Rs. 10,000 + Rs. 6,000 = Rs. 16,000

Maintenance margin = Rs. 16,000 x 0.75 = Rs. 12,000

Day	Changes in future Values (Rs.)	Margin A/c (Rs.)	Call Money (Rs.)
4/2/09	-	16000	-
5/2/09	50 x (3294.4-3296.5)= -105	15895	-
6/2/09	50 x (3230.4-3294.4)= -3200	12695	-
7/2/09	50 x (3212.30-3230.4)= -905	16000	4210
10/2/09	50x(3267.5-3212.3)= 2760	18760	-
11/2/09	50x(3263.8-3267.5)= -185	18575	-
12/2/09	50x(3292-3263.8) =1410	19985	-
14/2/09	50x(3309.30-3292)=865	20850	-

FINAL (OLD) EXAMINATION : NOVEMBER, 2010

17/2/09	50x(3257.80-3309.3)=-2575	18275	-
18/2/09	50x(3102.6-3257.8)=-7760	16000	5485

(b) (i) Expected minimum price

$$P = \frac{M \times N + Sr}{N + r}$$

Where P= Theoretical Post right price per share

M = Market price of share

N = No. of existing shares

S = Subscription price

r = No. of rights

$$\frac{24 \times 4 + 14 \times 1}{5} = \text{Rs. } 22$$

(ii) Post right price – Subscription price

$$\text{Rs. } 22 - \text{Rs. } 14 = \text{Rs. } 8$$

$$\text{or } (M - P) \times N$$

$$(\text{Rs. } 24 - \text{Rs. } 22) \times 4 = \text{Rs. } 8$$

(iii) (a) Value of 1500 shares before right issue

	1500 x Rs. 24 =	<u>Rs. 36,000</u>
After Rights issue	1500 x Rs. 22 =	Rs. 33,000
Add Sale proceeds of right	375 x Rs. 8 =	<u>Rs. 3,000</u>
		<u>Rs. 36,000</u>

Net effect on wealth is Nil.

(b) Value of 1500 Shares

Before rights	Rs. 36,000
After rights	Rs. <u>33,000</u>
Loss to Shareholder	Rs. <u>(3000)</u>

Question 7

Attempt any **FOUR** of the following:

- What is insider trading practice?
- What are the features of Futures Contract?
- Explain briefly the salient features of Foreign Currency Convertible Bonds.
- What is reverse merger?

PAPER – 2 : MANAGEMENT ACCOUNTING AND FINANCIAL ANALYSIS

(e) What are the guidelines of Public Investment Board for project appraisal?

(4 × 4 = 16 Marks)

Answer

- (a) The insider is any person who accesses the price sensitive information of a company before it is published to the general public. Insider includes corporate officers, directors, owners of firm etc. who have substantial interest in the company. Even, persons who have access to non-public information due to their relationship with the company. An outsider may be held an insider by virtue of his engaging himself in this practice on the basis of inside information.

Insider trading practice is the act of buying or selling or dealing in securities by as a person having unpublished inside information with the intention of making abnormal profit's and avoiding losses. This inside information includes dividend declaration, issue or buy back of securities, amalgamation, mergers or take over, major expansion plans etc.

Insider trading practices are lawfully prohibited. The regulatory bodies in general are imposing different fines and penalties for those who indulge in such practices. Based on the recommendation of Sachar Committee and Patel Committee, SEBI has framed various regulations and implemented the same to prevent the insider trading practices. Recently SEBI has made several changes to strengthen the existing insider Trading Regulation, 1992 and new Regulation as SEBI (Prohibition of Insider Trading) Regulations, 2002 has been introduced.

- (b) Future contracts can be characterized by:-

- (a) These are traded on organized exchanges.
- (b) Standardised contract terms like the underlying assets, the time of maturity and the manner of maturity etc.
- (c) Associated with clearing house to ensure smooth functioning of the market.
- (d) Margin requirements and daily settlement to act as further safeguard i.e., marked to market.
- (e) Existence of regulatory authority.
- (f) Every day the transactions are marked to market till they are re-wound or matured.

Future contracts being traded on organisatized exchanges, impart liquidity to a transaction. The clearing house being the counter party to both sides or a transaction, provides a mechanism that guarantees the honouring of the contract and ensuring very low level of default.

- (c) FCCBs are important source of raising funds from abroad. Their salient features are –

- 1. FCCB is a bond denominated in a foreign currency issued by an Indian company which can be converted into shares of the Indian Company denominated in Indian Rupees.
- 2. Prior permission of the Department of Economic Affairs, Government of India, Ministry of Finance is required for their issue

FINAL (OLD) EXAMINATION : NOVEMBER, 2010

3. There will be a domestic and a foreign custodian bank involved in the issue
 4. FCCB shall be issued subject to all applicable Laws relating to issue of capital by a company.
 5. Tax on FCCB shall be as per provisions of Indian Taxation Laws and Tax will be deducted at source.
 6. Conversion of bond to FCCB will not give rise to any capital gains tax in India.
- (d) A merger is considered to be the fusion of two Companies. The two Companies which have merged into another Company in the same industry, normally the market share of the company would increase. In addition to normal merger (where smaller companies merge into larger Company), vertical merger (where two companies of different industry merge together), there is one more kind of merger, known as Reverse Merger.
- In this, two Companies are normally of the same industry but here bigger company merges into smaller company that's why it is called reverse merger. In order to avail benefit of carry forward of losses which are available as per tax laws, the profit making Company is merged with companies having accumulated losses. Following three things are very important for reverse merger.
1. The assets of transfer company are greater than the transferee company.
 2. Equity Capital to be issued by the transferee company pursuant to the merger exceeds to original capital.
 3. There is a change in control in the transferee company through the introduction of a minority group or new group of shareholders.
- (e) In public sector, the projects beyond the specified limit come under the purview of Central Government and the same is decided by the Public Investment Board (PIB). The PIB is an organ of the Central Government with persons from the Deptt. Of Economic Affairs, Deptt. of Industrial Development, Planning Commission and from Administrative Ministry.
- PIB has formulated guidelines for project appraisal which includes, inter alia –
1. The project should be in conformity with plan priorities.
 2. There should be a feasibility of undertaking project in public or joint sector.
 3. Wherein the IRR is expected to be adequate.
 4. The analysis of social cost benefit is undertaken.
 5. Wherein the project is expected to contribute to Foreign Exchange earnings.
 6. There is a provision of funds in budgetary allocation.
 7. Logical sequence of project schedule has been arranged.
 8. Adequacy of safety and anti pollution measures have been ensured.
- There may be some other guidelines also in view of the PPP models also.