



**BRAINWARE UNIVERSITY**

**Course – BCOM**

**Financial Modeling (BCM405)**

(Semester – 4)

**Time allotted: 3 Hours**

**Full Marks : 70**

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

**Group –A**

(Multiple Choice Type Question)

10 x 1 = 10

1. *Choose the correct alternative from the following*
  - (i) The objective of measuring Gross working capital is to evaluate the
 

a. Financing of working capital	b. Liquidity
c. Solvency	d. None of them.
  - (ii) The growth rate in dividend of a company is influenced by
 

a. Retention ratio	b. ROE
c. Both of the above	d. None of the above
  - (iii) Diluted EPS is the EPS
 

a. After all convertible securities were exercised	b. Before all convertible securities were exercised
c. Not dependent on conversion	d. None
  - (iv) What does cash inflows from a project usually includes
 

a. both tax shield of depreciation and raising of funds	b. tax shield of depreciation
c. after tax operating profits	d. raising of funds
  - (v) The beta value of indexed fund is
 

a. +1	b. -1
c. 0	d. None

- (vi) Which of the following statements is most correct?
- |   |   |
|---|---|
| a. Cash flows and accounting profit are not at all related since no common elements are used in the calculation of either individual measure.                   | b. Accounting profits are more important than free cash flow.   |
| c. High inflation can seriously distort firms' balance sheets, and since inflation also affects depreciation and inventory costs, profits can also be affected. | d. When an action is taken at one point in time, but its full effects cannot be accurately measured until later, this has the potential to affect the firm's financial statements. However, as long as the firm keeps the same standard accounting period this timing problem can be avoided. |
- (vii) The relation between liquidity and solvency are
- |                         |                        |
|-------------------------|------------------------|
| a. Inversely correlated | b. Directly correlated |
| c. No correlation       | d. None of the above   |
- (viii) Which of the following may be considered as criterion of good company to an investor
- |  |   |
|--|---|
| a. low price earning ratio with high EPS     | b. high price earning ratio with high EPS |
| c. high price earning ratio with high growth | d. all of the above                       |
- (ix) Price to sales ratio is more authentic than price earnings ratio, because
- |   |   |
|---|---|
| a. sales cannot be manipulated but earning can be manipulated | b. earning is more authentic than sales |
| c. calculation of earning is not an easy task                 | d. none                                 |
- (x) Sound solvency indicates
- |                              |                             |
|------------------------------|-----------------------------|
| a. high debt and less equity | b. low debt and high equity |
| c. equal debt and equity     | d. none                     |

**Group – B**

(Short Answer Type Questions)

3 x 5 = 15

Answer any *three* from the following

2. State the significance of measuring working capital as per gross and net concept separately? [5]
3. What is sensitivity analysis in financial modeling? [5]
4. State the significance of alpha value in context of CAPM? [5]
5. How does forecasting of working capital depend upon the span of operating cycle? [5]
6. State the significance of analyzing investment on fixed assets to judge the prospect of a firm? [5]

**Group – C**

(Long Answer Type Questions)

3 x 15 = 45

Answer any *three* from the following

7. (a) State the significance of determining cash flows from operating activity, financing activity and investment activity separately? [8]
- (b) Discuss the steps involved in forecasting of cash flows. [7]
8. (a) The gross profit ratios of a firm remain same in the last two years (approximately 22%) but net profit ratios were increased from 9% to 13%. Do you think that the company has improved in terms of its operating efficiency? Discuss with appropriate logics. [5]
- (b) State the significance measuring of ROCE and ROE separately? [5]
- (c) Decompose ROE and state the significance of every decomposed element. [5]
9. (a) State the process of building financial model? [5]
- (b) State the basic characteristics of financial model? [5]
- State the factors to be considered for forecasting working Capital? [5]
10. (a) How depreciation can be used as a tax shield? [6]
- (b) How depreciation can influence cash flow from operating activities of a firm? [6]
- (c) State the implication of cash EPS in company analysis. [3]

11. Fenix Corporation was set up fifteen years ago. After few years of initial turbulence the company found a few market segments in which it had some competitive advantage. The financials of the company for the last five years are given below:

Rs. in million

Income Statement Summary	20X1	20X2	20X3	20X4	20X5
□ Net sales	1200	1320	1400	1510	1630
□ Profit before interest and tax	180	195	201	220	242
□ Interest	40	44	47	50	56
□ Profit before tax	140	151	154	170	186
□ Tax	40	43	45	50	54
□ Profit after tax	100	108	109	120	132
□ Dividends	36	40	40	42	45
□ Retained earnings	64	68	69	78	87

  

Balance Sheet Summary	20X1	20X2	20X3	20X4	20X5
□ Equity capital (Rs.10 par)	120	120	120	120	120
□ Reserves and surplus	600	668	737	815	902
□ Loan funds	400	445	450	460	505
□ Capital employed	<u>1120</u>	<u>1233</u>	<u>1307</u>	<u>1395</u>	<u>1527</u>
□ Net fixed assets	<u>728</u>	<u>863</u>	<u>870</u>	<u>920</u>	<u>982</u>
□ Investments	100	102	90	104	118
□ Net current assets	<u>292</u>	<u>268</u>	<u>347</u>	<u>371</u>	<u>427</u>
□ Total assets	1120	1233	1307	1395	1527
□ Market price per share (year end)	52	50	55	62	68

The year 20X5 has just ended. The current market price per share is Rs.68.

The market price per share at the beginning of 20X1 was Rs.49.

- (a) What was the geometric mean return for the past 5 years? [3]
- (b) Calculate the following for the past 2 years : return on equity, book value per share, EPS, PE ratio (prospective), market value to book value ratio. [3]
- (c) Calculate the CAGR of sales and EPS for the period 20X1 - 20X5. [3]
- (d) Calculate the sustainable growth rate based on the average retention ratio and the average return on equity for the past 2 years. [3]
- (e) Decompose the ROE for the last two years in terms of five factors. [3]