ISRA UNIVERSITY

Islamabad Campus

Department of Electrical Engineering
Program: B.E. (Electrical)
Semester - Fall 2015

HS-321 Engineering Economics & Management

Assignment – 4   **Due Date: 01/06/2016**
Marks: 10   **Handout Date: 25/05/2016**

Question # 1:

	2010
Net Sales	13,851,000
Cost of goods sold	11,671,000
Selling, general & admin expense	1,925,000
Depreciation expense	55,000
Earnings before interest & tax	200,000
Net interest expense	90,000
Earnings before tax	110,000
Income tax expense	44,000
Earnings after tax	66,000
Dividends	44,000

	2010		2010
Net fixed assets	818,000	Owners equity	2,536,000
Cash	6,0000	Long term debt	750,000
Accounts receivable	2,616,000	Short term debt	880,000
Inventories	2,694,000	Accounts payable	1,950,000
Prepaid expenses	42000	Accrued expenses	114,000
Total assets	6,230,000	Total liabilities & owners equity	6,230,000

Calculate the following
   a) Gross Profit Margin, Operating Profit Margin, Net Profit Margin and Retained Earnings
   b) Financial Structure, Capital Structure and Asset Structure
   c) Inventory Holding Period, Collection Period, Payment Period and Operating cycle

Good Luck

<u>Solution</u>

Gross Profit Margin = Gross profit / Sales revenue x 100%

= Sales – COS / Sales revenue x 100%

= 13851000-11671000 / 13851000 x 100%

= 15.739%

Operating Profit Margin = EBIT / Sales revenue x 100%

= 200000 / 13851000 x 100%

= 1.444%

Net Profit Margin = EAT / Sales revenue x 100%

= 66000 / 13851000 x 100%

= 0.476%

Retained Earnings = EAT – Dividends

= 66000-44000

= 22000

Financial Structure = Invested capital / Owners Equity

= (2536000 + 750000) / 2536000

= 1.296

Capital Structure = Owners Equity / Long term liabilities

= 2536000 / 750000

= 3.381

Asset Structure = Fixed assets / Current assets

= 818000 / (6230000-818000)

= 0.151

Inventory Holding Period =

Inventories / COS x 365

= 2694000 / 11671000 x 365

= 85 days

Collection Period =

Accounts receivable / Sales revenue x 365

= 2616000 / 13851000 x 365

= 69 days

Payment Period =

Accounts payable / COS x 365

= 1950000 / 11671000 x 365

= 61 days

Operating Cycle =

Inventory Holding Period + Collection Period - Payment Period

= 85 + 69 – 61

= 93 days