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JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

MID SEMESTER EXAMINATION-2015

M.Tech IInd Semester

COURSE CODE: 10M11CE214 MAX. MARKS: 30

COURSE NAME: Construction Financial Management

COURSE CREDITS: 03 MAX. TIME: 2 HRS

Note: *All questions are compulsory. Question paper has 4 sides printed.*
Assume any missing data.
Attempt the questions of a section together.

Section A **(Marks: 6x1 = 6)**

1. Discuss the terms *assets* and *liabilities*. Give 2 examples each of assets and liabilities in context of construction industry.
2. What do you mean by working capital? Why is working capital management important?
3. Discuss the term *operating expenses* in income statement sheet.
4. Highlight the various drawbacks of excess debts.
5. Justify the statement, "The balance sheet is one of the most important and fundamental financial statements of a firm."
6. State and prove the relationship between *Leverage* and *debt to equity ratio*.

Section B **(Marks: 3x3 = 9)**

1. The following data are related to the operations of XYZ Construction Co. for 2012.

	Total contract sum	Total estimated costs	Cumulative costs incurred	Current year's costs	Cumulative contract billings
Completed contracts	11,00,000	9,00,000	9,00,000	3,60,000	11,00,000
Contracts in progress	54,00,000	45,00,000	31,50,000	18,50,000	35,00,000

   a. Determine the value of "costs and estimated earnings in excess of billings on works in progress" under the current asset account.

   b. Compute the gross profit of the company by applying the percentage-of-completion method.

2. The management of TUV Construction Company wishes to maintain a current ratio of 2 by reducing its short-term borrowing so as to achieve this result. The company's cash balance is currently \$40,000. Accounts payable are equal to \$55,000 and the company is now having a short-term borrowing of \$35,000. The current asset accounts consist of only cash, inventory and accounts receivable; and the current liability accounts consist of only accounts payable and short-term bank loan payable. How much of its short-term bank loan should the company repay?

3.

   a. A construction company will replace an excavation after 8 years. A new one costs \$7,20,000. How much is the end-of-year annual uniform payment the company has to put into a bank in order to save enough money in 8 years' time for purchasing the equipment if the bank is offering an interest rate of 4.5% per annum?

   b. If the excavator of part (3.a) suddenly breaks down now so the company needs to purchase a new one immediately and not 8 years later, and therefore has to borrow from a bank \$7,20,000 at an interest rate of 4.5% per annum. What will be the annual installment for repaying the loan in 8 years?

Section C **(Marks: 3x5 = 15)**

1. Following is a case study of ABC Construction Company. Shown in Table 1 and Table 2 are incomplete income statement (Table 1) and a balance sheet (Table 2) of ABC construction company. Complete the income statement (Table 1) and the balance sheet (Table 2). Further do the vertical and horizontal analysis on the income statement.
2. Calculate the financial ratios relevant to the ABC construction company.
   a. the three Profitability Ratios
   b. the three Liquidity Ratios
   c. the three Working Capital Ratios
   d. the two Capital Structure Ratios
   e. the seven Activity Ratios
3. The general manager of the ABC construction company recently resigned. You have been hired as the new general manager. You are required to review the financial statements to find out the goods and the bads of the company and hence find ways to make improvements;
   a. On the basis of vertical and horizontal analysis
   b. On the basis of five financial ratios

Table 1: Income Statement

	31/12/2012	31/12/2011
Revenue		3,47,01,250
Cost of Revenue		
Materials		1,59,25,567
Labour	33,17,123	33,07,879
Subcontracts	64,17,407	47,21,312
Other direct costs	4,87,059	4,26,885
Total Cost of Revenue	3,09,54,095	
Gross profit	99,21,256	
Operating Expenses		
Variable overhead		
Advertising	8,98,398	8,26,927
Truck, vehicle and equipment	11,64,800	
Insurance, workers' compensation	4,29,958	3,19,058
Travel and Entertainment	4,50,893	1,84,606
Bad debts	1,65,935	98,706
Miscellaneous	42,958	46,197
Total variable overhead		23,39,994
Fixed overhead		
Depreciation	5,55,220	5,60,500
Rent	1,65,000	1,40,000
Salaries	37,60,500	35,55,200
Legal and audit	1,01,997	83,542
Maintenance and repair	1,76,598	96,960
Office Supplies	1,58,221	1,32,982
Utilities	2,10,950	1,35,800
Miscellaneous	54,872	50,699
Total Fixed overhead		
Total Operating Expenses		
Operating Profit		
Other Income/Expense		
Interest income	46,000	37,550
Interest expense	-2,97,490	
Net Profit before Tax		28,14,730
Tax Expense (25% tax rate)		
Net Profit after Tax		

Table 2: Balance Sheet		
	31/12/2012	31/12/2011
Assets		
Current Assets		
Cash		18,77,676
Accounts receivable	61,24,992	58,37,658
Retention money	17,43,663	16,59,415
Material inventory	9,42,765	7,61,763
Costs and estimated earnings in excess of billings on work in progress	5,81,221	4,86,472
Prepaid expenses and others	10,00,026	10,62,968
Total Current Assets	1,26,97,745	
Fixed Assets		
Property and equipment		
Construction plant	8,06,200	8,00,000
Vehicles/Trucks	4,14,500	3,10,000
Furniture and fixtures	69,560	60,100
Total depreciable assets	39,45,260	37,50,100
Less accumulated depreciation		16,63,400
Net Fixed Assets		
Total Assets	1,45,91,105	
Liabilities		
Current Liabilities		
Accounts payable	39,30,309	34,81,330
Accrued expenses	14,41,215	10,76,450
Notes payable	5,88,149	3,58,817
Retention money payable	8,35,495	5,51,763
Billings in excess of costs and estimated earnings on work in progress	5,60,847	4,95,167
Other current liabilities	3,23,232	2,13,478
Total Current Liabilities	76,79,247	
Long-term Liabilities		19,01,445
Total Liabilities	91,59,760	80,78,540
Equity (i.e. Net Worth)		
Capital Stock	20,00,000	20,00,000
Additional paid-in capital	8,00,000	8,00,000
Retained earnings	26,31,345	28,94,202
Total Equity	54,31,345	
Equity + Total Liabilities		