CVL 775		CONSTRUCTION ECONOMICS AND FINANCE	MAJOR EXAMINATION	
Time allowed 1.5 hours	1:00 - 2:30 PM		Maximum Marks	40
Venue	LH 310		Date	05.05.2016

ANSWER ALL QUESTIONS. ASSUME MISSING DATA SUITABLY IF REQUIRED.

Q1 *7 marks*

A construction company has identified four mutually exclusive investment proposa\ls. The details of the four proposals are given in the following table. Use 8% as the minimum attractive rate of return post tax. Use straight line method of depreciation and tax rate 40%. Find the best alternative based on the incremental analysis. Given (P/A, 8%,5)=3.9927

Scheme	Initial cost (Rs.)	Annual Return (Rs.)	Life (Year)	Salvage value (Rs.)
A	150,000	45,000	5	0
B	200,000	60,000	5	0
C	250.000	75,000	5	0
D	300,000	80,000	5	0

Q2 **7 marks**

Consider the following two alternatives

	Alternative 1	Alternative 2
First cost	1000,000	800,000
Annual expense	250,000	150,000
Annual income	575,000	575,000
Salvage value	200,000	0
Economic life	8 years	4 years

Suppose that the salvage value of alternative 2 is known with certainty. By how much would the estimate of salvage value for alternative 1 have to vary so that the initial decision based on the data above would be reversed? The minimum acceptable rate of return is 15 percent.

Also develop a family of curves showing variation in present worth as a function of annual expenses for different values of economic life for alternative 1.

(P/A, 15%,8)=4.4873, (P/F,15%,8)= 0.3269, (P/F,15%,4)=0.5718

Q 3 4 X 2 = 8 marks

(A) For the set of data given in the following table calculate the revenue using the following methods of revenue recognition: (1) Cash method of revenue recognition (2) Straight Accrual Method of Revenue recognition (3) Completed contract method of revenue recognition and (4) Percentage of completion method of revenue recognition

Table: Data set

Sl. No.	Description	Amount in $
1	Contract amount	1000,000
2	Original estimated cost	900,000
3	Billed to date	700,000
4	Payments received to date	630,000
5	Costs incurred to date	450,000
6	Forecasted costs to complete	400,000
7	Costs paid to date	400,000

(B)

The following table shows inter firm comparison of construction companies. Calculate the current ratio and the net working capital for each of the companies and comment on them.

Table: Inter firm comparison

Particulars	ECC	Gammon	HCC	NCC
Working capital as % of sales	28.94%	6.30%	27.33%	28.26%
Unadjusted advance	560	174	169	29
Unadjusted advance as % of backlog	6.28%	6.09%	5.05%	2.54%
Gross Current Assets	2704	442	539	256
Gross Current Assets as a % of sales	70.18%	56.81%	79.62%	56.51%
Total Liabilities and Provisions	1589	392	354	128
Total Liabilities and Provisions as a % of sales	41.24%	50.39%	52.29%	28.26%
Current Ratio				
Net Working capital				

Q 4 4X2 = 8 marks

From the following transactions details of a construction company M/s *New Construction Limited*, Fill in the blanks in the profit and loss account and Balance Sheet. Assume all transactions to be the cash transactions. Also assume depreciation of machinery to be zero in this financial year.

Table: Transaction details of M/s *New Construction Company*

ransac on	Reference	Description
	T_1	Purchased materials for Rs. 6566/-
	T_2	Paid salaries Rs. 668/-
	T_3	Paid for telephone charges Rs.1691/-
	T_4	Interest on loan paid Rs. 177/-
	T_5	Tax paid Rs.77/-
	T_6	Sold goods for Rs. 9614/-
	T_7	Borrowed loan from Citibank Rs. 3176/-
	T_8	Purchased machinery for Rs. 3176/-

Profit And Loss Account

Particulars	**Amount in Rs.**
1.0 Sales	
2.0 Expenditure	
2.1 Materials	
2.2 Staff Expenses	
2.3Administrative Expenses	
2.4 Interest	
3.0 Profit Before Taxes	
4.0 Tax Paid	
5.0 Profit after Tax	

Balance Sheet

Particulars	**Amount in Rs.**
Sources of Funds	
Reserves and Surplus	
Loan	
Total	
Usage of Funds	
Fixed Assets	
Cash and Bank Balances	
Total	

Q 5. 5 marks

In order to increase the production of a precast concrete manufacturing plant, a new and fully equipped factory is required at an estimated cost of Rs. 45 Lakhs. This is expected to increase the turnover of the company to Rs 200 Lakhs per annum broken down as 40% materials, 35% wages and other production costs, 15% administration, the remaining 10% representing profit. On an average the concrete unit takes two weeks to produce, after which they are put into store until fully cured and ready for sale. The average period between completion of manufacture and sale is two months, and two month's credit is allowed for customers. Three months' supply of raw materials will be kept in stock at all times, for which suppliers allow one and a half months' credit.

From the above data,

(a) determine the working capital required to start the new business

(b) determine the working capital to finance the normal transactions.

Q 6 0.5 x 10=5 marks

(i) **Net working capital means**
   a. Current assets – Current liabilities
   b. Fixed assets – Fixed liabilities
   c. Current assets – Non tangible assets

(ii) **An aggressive approach to current asset financing leads to**
   a. Greater profitability
   b. Lower profitability
   c. No impact on profitability

(iii) **The longer the operating cycle**
   a. The larger the size of current assets
   b. The smaller the size of current assets
   c. The size of current assets remain unchanged

(iv) **Mortgage involves**
   a. Moveables as collateral
   b. Immovables as collateral
   c. No collateral

(v) **Commercial paper is issued by**
   a. Any company
   b. Only blue-chip companies
   c. Only Government companies

(vi) Retained earning is liability. **True or False**

(vii) Goodwill is tangible asset. **True or False**

(viii) Factoring and Forfaiting are sources of long term finance. **True or False**

(ix) T-account is also called Ledger. **True or False**

(x) Outstanding is part of current liability. **True or False**