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UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER I
SESSION 2014/2015**

COURSE NAME : PROJECT FINANCIAL
MANAGEMENT
COURSE CODE : BFP 40503
PROGRAMME : 4 BFF
EXAMINATION DATE : DECEMBER 2014 / JANUARY 2015
DURATION : 3 HOURS
INSTRUCTION : ANSWER ALL QUESTIONS

THIS QUESTION PAPER CONSISTS OF **SIX (6)** PAGES

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- Q1** (a) Explain on the Economies of Scale, and give an example on how they are related to the construction industry. (6 marks)
- (b) Sources of capital are generally consists of equity and debt. However, their usage was classified into fixed capital, working capital, and growth capital. Give two examples for each sources of capital, and fixed capital. (3 marks)
- (c) Analyse the Return on Investment (ROI) based on Table **Q1(c)** and choose the most profitable contract. (7 marks)
- (d) Construct a Balance Sheet based on Table **Q1(d)**. (9 marks)
- Q2** (a) There are several financial tools for decision making in construction project. However, their usage need to be justified and follows several selection processes. Explain the selection processes that generally required when dealing with a number of choices. (7 marks)
- (b) You planned to build a house.
- (i) Outline the key steps on the process of financial management. (10 marks)
- (ii) Generate a financial S-Curve on your planned construction activities based on Table **Q2(b)**. (8 marks)
- Q3** (a) In construction, machinery is utmost important resource. It can be bought, rented, or leased, and have several models and brands. However, there are several financial risk that associated with the desicion on procuring those machine. Discuss briefly on old perception and new perception regarding the financial risk associated with buying a new one. (5 marks)
- (b) In Risk Management, the last step is to continually monitor the risks. Explain briefly on the tasks associated with the regular risk review. (5 marks)

- (c) Construction project involves a lot of financial risks which need to be managed. Based on the following financial risk contributors, construct a relevant financial HIRARC table complete with their identification, assessment, and control. Each contributor requires only one example.

- (i) Capital expenditure on construction
- (ii) Material
- (iii) Machine
- (iv) Manpower

(15 marks)

- Q4** (a) Explain briefly about Life Cycle Costing.

(4 marks)

- (b) Basically Life Cycle Cost will represent the cost to the investor for a particular construction project. Thus, state:

- (i) The core requirements for LCC
- (ii) The core costs to be considered

(5 marks)

- (c) You are the Process Engineer at a precast plant in Batu Pahat. Recently, the plant is facing many problems because of their service life. Your job is to replace the old plant with a new one. However from the quotations that you had received, there are three shortlisted companies with different models of plant that comply with your requirements. Table **Q4(c)** shows the summary of all plants.

Disregarding depreciation and other accounting details, calculate and determine the followings:

- (i) Reliability for one year
- (ii) Total number of failures
- (iii) Total failure costs
- (iv) Total number of overhaul
- (v) Total overhaul costs
- (vi) Total operating/maintenance costs
- (vii) Total long term costs
- (viii) Savings
- (ix) Select the best plant

(11 marks)

- (d) Based on answer **Q4(c)(ix)**, calculate how much is required to be invested in the bank today for a replacement of plant which is anticipated to fail in year fifteen (15). Calculation should be based only on the acquisition cost of your selected plant with two different situations on Table **Q4(d)**. Then, briefly evaluate your findings based on the economic conditions.

(5 marks)

- END OF QUESTIONS -

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Table Q1(c)

Items	Contract A	Contract B	Contract C
Investment	RM 100,000	RM 110,000	RM 80,000
Profit	RM 40,000	RM 35,000	RM 45,000
Contract duration	12 months	18 months	16 months

Table Q1(d)

No.	Items	RM
1	Material stocks	200,000
2	Account receivables	500,000
3	Company car	100,000
4	Loan taken for company office and store	500,000
5	Account payables	300,000
6	Cash	400,000
7	Loan taken for company car	40,000
8	Company office and store	800,000
9	Office equipment	50,000

Table Q2(b)

No.	Major construction activity	Estimated activity cost (RM)	Estimated duration (days)
1	Earthwork	2,000	2
2	Foundation	20,000	30
3	Ground floor	40,000	30
4	First floor	30,000	30
5	Roof	10,000	20
6	External and internal	20,000	30
7	Site clearing	1,000	2
8	Testing and commissioning	500	2
Total		123,500	146

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Table Q4 (c)

Items	Plant A	Plant B	Plant C
Plant life (years)	15	15	15
Total hours / life	129,600	129,600	129,600
Cost of plant (RM)	140,000	180,000	210,000
Failure rate (failures/hour)	0.0005	0.0001	0.0002
Failure cost (RM/failure)	4,500	5,000	5,000
Equipment overhaul required every (year)	3	5	6
Each overhaul cost (RM)	8,000	12,000	20,000
Operating @ routine maintenance cost (RM/hour)	1.00	0.95	0.90
Disposal cost at retirement (RM)	10,000	10,000	10,000

Table Q4 (d)

Items	Stable economy	Economic downturn
Anticipated to fail (year)	15	15
Discount rate (%)	15	7