



UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER I
SESSION 2013/2014**

COURSE NAME : CONSTRUCTION ECONOMICS
COURSE CODE : BPD 42802
PROGRAMME : 4 BPC
EXAMINATION DATE : DECEMBER 2013/JANUARY 2014
DURATION : 2 HOURS
INSTRUCTION : ANSWER ALL QUESTIONS

THIS QUESTION PAPER CONSISTS OF FOUR (4) PAGES

Q1 A site located in Batu Pahat is required for constructing a proposed development of offices. The information of the development project as follows:

- Gross floor area $10,000m^2$
- Circulation area 22% of gross floor area
- Estimated rent $RM60/m^2$
- Capitalisation rates of rents 7%
- All outgoings to be recovered by service charge.
- Period 18 months
- Professional fees 15%
- Short term finance 12%
- Developer's profit 12% of gross development value
- Land costs (including fees) $RM100,000$

(a) Calculate cost of the building based on the information provided.

(20 marks)

(b) Describe the cost of the building influences the gross development value.

(5 marks)

- Q2** A school is going to be built in Parit Raja. Two alternative proposals have been suggested as shown in Table Q2.

Table Q2: Alternative Proposal

Scheme A	(RM)
Cost of building	200,000
Site cost	40,000
Annual running cost	6,000
Replacement cost at every 20 years	24,000
Replacement cost at every 30 years	32,000

Scheme B	(RM)
Cost of building	-30,000
Site cost	3,000,000
Annual running cost	5,000
Replacement cost at every 20 years	30,000
Replacement cost at every 30 years	6,000

- (a) Calculate Scheme A and Scheme B proposals with the assumption of an equal life of 60 years and discount rate is 5%. (20 marks)
- (b) Explain which scheme should be accepted. (5 marks)

Q3 Table **Q3** consists of information on pertaining two potential projects.

Table Q3: Pertaining Two Potential Projects

Project	Commercial A	Commercial B
Investments	RM 500,000	RM500,000
Cash Flow-Year 1	50,000	75,000
Cash Flow-Year 2	150,000	100,000
Cash Flow-Year 3	350,000	150,000
Cash Flow-Year 4	600,000	150,000
Cash Flow-Year 5	500,000	90,000

- (a) Calculate Return on Investments (ROI) for each project. (6 marks)
- (b) Calculate Net Present Value (NPV) for each project with the interest rate (i) is 8%. (16 marks)
- (c) Describe the most appropriate project to chosen based on the answer from question Q3(a) to Q3(b). (3 marks)

Q4 A four-year housing project has a net cash flow of RM200,000; RM250,000; RM300,000 and RM500,000 in the next four years. The cost of the project is RM750,000 with the required rate of return is 0.2.

- (a) Analyse a Discounted Cash Flow (DCF) to determine the Net Present Value (NPV). (10 marks)
- (b) Analyse the NPV if the inflation rate is expected to be 4% in each of the next four years? (10 marks)
- (c) Calculate the Profitability Index (PI) for question Q4(a) and Q4(b). (5 marks)

-END OF QUESTION-