UNIVERSITI TUN HUSSEIN ONN MALAYSIA

FINAL EXAMINATION
SEMESTER II
SESSION 2017/2018

COURSE NAME	:	ADVANCED REAL ESTATE VALUATION
COURSE CODE	:	BPE 12503
PROGRAMME	:	BPD
EXAMINATION DATE	:	JUNE / JULY 2018
DURATION	:	3 HOURS
INSTRUCTION	:	ANSWER **ALL** QUESTIONS

THIS QUESTION PAPER CONSISTS OF **EIGHT (8)** PAGES

Q1 Majlis Daerah Mersing (MDM) would like to investigate the market value for Mersing public library building for **Internal Management purposes** using the Depreciated Replacement Cost (DRC) approach. This single storey building was constructed in year 1990 and it has a life expectancy of 60 years. This library building is located at the heart of Mersing town, in a fair state of repair and served the community well. The site comprise of 40,000 square feet for land size and built-up area for 25,000 square feet. During the inspection, you noted that the rear building (approximately 5,000 square feet) was unoccupied due to roof leakage.

The estimated total cost of a replacement building new is RM2,465,000. Fees for the replacement building are estimated at 12% and the rebuilding period would be expected to be two years at a finance rate of 8% per annum to fund construction cost and land cost.

From your research at Jabatan Penilaian dan Perkhidmatan Harta (JPPH), the recent sales evidences located in the vicinity is shown in **Table Q1**.

Table Q1: Sales Evidence

Property	Sales Transaction	Date	Remarks
Lot 123, Jalan Laut 2, Mersing	RM2,400,000 (T)	12th January 2017	Type: Vacant land. Land: 80,000 sq.ft Zoning: For hotel purposes Location: 2 kms from Mersing town.
Lot 1, Jalan Bandar, Mersing	RM1,600,000 (T)	20th December 2017	Type: Vacant land Land: 20,000 sq.ft Zoning: Commercial use Location: 0.5km from subject property.
No. 5, Jalan Bandar, Mersing	RM300,000 (T)	1st April 2018	Type: Vacant land Land: 2,000 sq.ft Zoning: commercial use Location: 1 km from subject property.

(a) Calculate using the comparative method on the sales evidences given above, with appropriate adjustment and justification, to determine the land value for public library used.

(10 marks)

(b) Advice Majlis Daerah Mersing (MDM) on the open market value with appropriate justification and obsolescence, for Mersing public library building based on your answer in **Q1(a)**.

(15 marks)

Q2 Your client has the choice of two alternative property investments, whose cash flows are set out as follows:

Building A could be purchased today at a cost of RM5,500,000, with an additional outlay of RM865,000 at the end of year 1. The investment is expected to produce cash flows of RM160,000 in the first year, RM230,000 in years 2 – 5 and RM350,000 for the following 5 years. At the end of year 10 the investor expects to be able to sell the investment for RM8.7 million. Building A is located within Class A office premises, along Jalan Sultan Ismail, Kuala Lumpur CBD area. This location may experience heavy traffic and road work construction due to MRT 3 project development which is scheduled to start work on 1st January 2019 to 31st December 2025.

Building B would provide income of RM120,000 for each of the first 3 years, RM275,000 for the following 2 years and RM300,000 for each of the following 3 years, and RM320,000 for the remaining years. It is anticipated that the investment could be sold for RM6,500,000. The investment is available to be purchased today for RM4,500,000, with an additional outlay of RM625,000 required in year 1. Building B is located at the periphery of Jalan Medan Tuanku where most business includes 3-star hotels and restaurants.

Google map showing the location of these 2 buildings is attached as **Appendix 1**.

(a) Calculate the NPV and IRR of the two investments if the investor's target rate of return at 7.5%.

(20 marks)

(b) Advise your client on which building to purchase, based on your answer in **Q2(a)**.

(5 marks)

Q3 Irahaz Property & Co., a property developer wishes to acquire a potential development site of 10 acres located in Pura Kencana, Batu Pahat. The propose site is zoned for residential use and currently pending for planning approval from Majlis Perbandaran Batu Pahat (MPBP) for development of single storey terraced houses and double storey terraced houses. The project will take 2 years to complete. There is a steady demand for houses in this area.

The following are information for the propose project development:

	Selling Price
• Types of development:	
- 10 units Double storey Terracced houses@	RM250,000 /unit
- 50 units Single storey Terracced houses@	RM150,000 /unit

- Pre Development Cost
  - Site preparation per hectare@ RM100,000.00
  - Survey cost@ RM300 per unit
  - Cost of individual title@ RM250 per unit
  - Cost of building plan approval@ RM220 per unit
  - Cost of additional premium@ RM50,000 per hectare (conversion from agriculture to building)

- Construction Cost:
  - Double storey Terracced houses@ RM88,000 /unit
  - Single storey Terracced houses@ RM56,000/unit

- Infrastructure cost @ RM20,000 per/unit
- Contribution to government agency@ RM2,000 per unit
- Professional fees@ 5%
- Management fee RM10,000 per month
- Cost of Estate Agency for selling of houses@ 1%
- Cost of finance @ 12% per year
- Developer profit's and risk@ 20%.

(a) Based on the information given, advise Irahaz Property & Co on maximum price they can offer for this development land with appropriate justification.

(20 marks)

(b) Explain the factors considered by Irahaz Property & Co in the process of bidding market for this development land, based on **Q3(a)** finding.

(5 marks)

Q4 The profits method of valuation is used where a premises' value is based on the profit produced by the business operating in the premises. Its principle is derived from the ability of the property to provide income to the operator from his occupation which will compensate him sufficiently for operating the business concern.

(a) State the circumstances in which the above principle of the profits method of valuation is adopted in the valuation of properties.

(5 marks)

(b) A modern ten-pin bowling centre was built two years ago in a popular shopping centre located on the edge of a large town. The catchment population extends to 20 km radius and access by highway and trunk road is excellent. The centre has 48 lanes, a licensed cafe and restaurant, a sundry shop, shoe hire facility, and a room with pool tables, amusement and gaming machines. The interior is of typical high quality finishes and facilities with mechanised computerised scoring.

The following are details obtained from the accounts and information which have been provided to you.

Operating Hours	
Opens daily	11:00 to 22:00
Average usage	60% capacity
Income	
Admissions	RM 60,000
Bowling income	RM 15 per game
Snack Bar	RM110,000
Cafe and Restaurant	RM230,000
Shoe Hire	RM 90,000
Sundry Shop	RM 60,000
Machines	RM 70,000
Costs	
Wages	RM300,000
Operating Costs	RM250,000
Snack Bar	RM 60,000
Cafe and Restaurant	RM 90,000

This is a successful business venture which would be attractive to existing and potential operators. The following are market evidence obtained from an analysis of returns required by established businesses by property types; Residential – 5%, Commercial – 8%, and Industrial – 10%.

Calculate the open market value of the ten-pin bowling centre, based on the above given information,

(20 marks)

-END OF QUESTIONS-

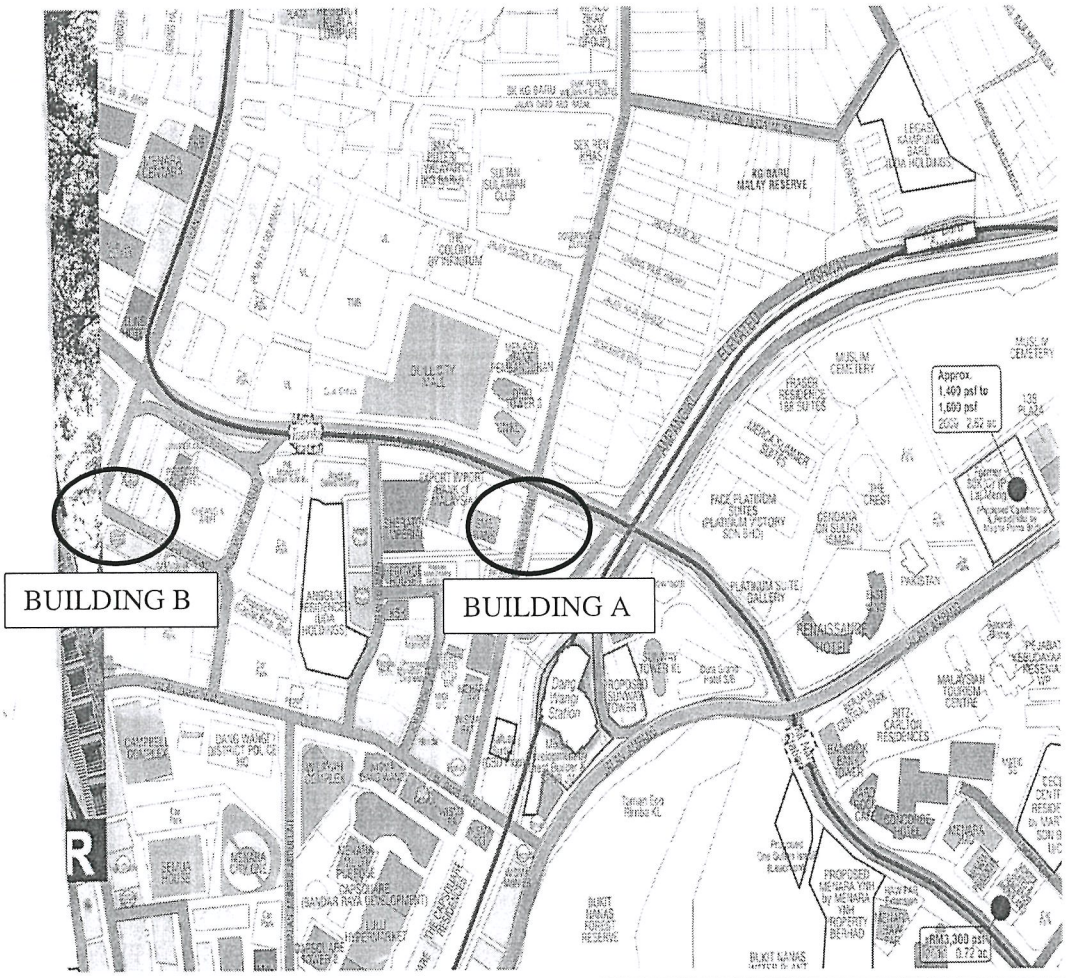
APPENDIX 1

FINAL EXAMINATION

SEMESTER/SESSION	: SEM II / 2017/2018	PROGRAMME CODE	: BPD
COURSE NAME	: ADVANCED REAL ESTATE VALUATION	COURSE CODE	: BPE 12503

Q2: Google map of Kuala Lumpur CBD area – Jalan Sultan Ismail

az.



APPENDIX 2

VALUATION MATHEMATIC FORMULA SHEET

Present Value of £1 p.a. in Perpetuity (Years' Purchase in Perpetuity)

$$\frac{1}{i}$$

Present Value of £1 p.a. in Perpetuity (in advance)

$$\frac{1}{i} \bullet (1+i)$$

Years Purchase (YP) of £1 p.a. in Perpetuity (in advance)

$$\frac{1-(1+i)^{-n}}{i}$$

Annual Sinking Fund (ASF)

$$\frac{i}{(1+i)^n - 1}$$

i = accumulation rate, SF

YP Dual Rate (tax (t) adjusted)

$$\frac{1}{i + \left[ASF \bullet \left(\frac{1}{1-t} \right) \right]}$$

Notation for above Formulae

i = remuneration rate
t = tax rate

Internal Rate of Return (approximation)

$$IRR = r_L + \left[(r_H - r_L) \times \left(\frac{NPV_L}{NPV_L - NPV_H} \right) \right]$$

IRR	=	internal rate of return
r_l	=	lower trial rate
r_h	=	higher trial rate
NPV_l	=	net present value at the lower trial rate
NPV_h	=	net present value at the higher trial rate

Implied Annual Growth Rate (IAGR) Formula

$$(1+g)^m = \frac{\left(1/k\right) - \left[\dfrac{1-(1+e)^{-m}}{e}\right]}{\left(1/k\right) \times (1+e)^{-m}}$$

k	=	all-risks yield
e	=	equated yield
m	=	number of periods between each rent review
g	=	implied annual growth rate (IAGR)