



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

**UNIVERSITY EXAMINATION FOR BACHELOR OF SCIENCE IN
CONSTRUCTION MANAGEMENT**

YEAR THREE SEMESTER ONE ACADEMIC YEAR 2018/19

CONSTRUCTION ECONOMICS (TCM 3315)

MAIN CAMPUS-FULL TIME

UNIT CODE : TCM 3315

UNIT NAME : CONSTRUCTION ECONOMICS

DATE :

DURATION : 2HRS

Instructions

1. Answer question One and any other two in this paper
2. Candidates are advised not to write on the question paper
3. Candidates must hand in their answer booklets to the invigilator while in the examination room

QUESTION ONE

Construction is one of the key pillars of economic growth. The government of Kenya in its latest economic blueprint came up with 'The Big Four Agenda' with Infrastructural development being one of the key pillars. Most institutions of higher learning have tailored courses to meet the demand in line with the emerging trends. Construction economics is one of such courses.

Required

- (a) Briefly explain the relevance of construction economics in line with the achievement of this goal (infrastructural development) (**3 Marks**)
- (b) State and explain the four characteristics of construction economics (**12 Marks**)
- (c) Briefly explain the role of construction in the economy (**12 Marks**)
- (d) Explain the following concepts in economics
 - (i) Scarcity (**1 Marks**)
 - (ii) Choice (**1 Marks**)
 - (iii) Opportunity costs (**1 Marks**)

QUESTION TWO

- (a) Managers are agents of companies whose responsibilities, among others include decisions of appraisal and commitment of huge sums of money long term projects that are expected to yield positive returns.

Required:

- (i) What do you understand by the term 'Capital Budgeting'? (**2 Marks**)
- (ii) What are the features of a good appraisal technique (**3 Marks**)?
- (b) 'Conman' two mutually exclusive projects A and B and needs to invest in any of them. If the project cost is estimated to be Kshs 20 million and the cost of capital is 10%. The projects promise the following after tax cashflows:

		Cash flows (Kshs'000')				
		Year	1	2	3	4
Project	A		6	7	7.5	7.5
Project	B		6.5	6.5	6.5	8.5395

Required

- i. NPV of each project (**4 Marks**)
- ii. IRR of each project (**6 Marks**)
- iii. PBP of each project (**3 Marks**)
- iv. Advise of which project to undertake (**2 Marks**)

Discount Rate Table

Year	1	2	3	4
PVIF (10%, n yrs)	0.909	0.826	0.751	0.683
PVIF (12%, n yrs)	0.892	0.797	0.712	0.636
PVIF (15%, n yrs)	0.870	0.756	0.658	0.572

QUESTION THREE

Success of any company depends on its managers' ability to strategically invest in critical areas in order to drive its turnover. Marketing is one such area. However, one of the key components of marketing of products is the various stages of the product life the company is selling in the market.

- Briefly name and explain the four Marketing Mix variable (**8 Marks**)
- How would the product life cycle (PLC) help the managers improve on their turnover (**10 Marks**)
- What are some of the challenges managers would experience when using the **PLC** (**2 Marks**)

QUESTION FOUR

- Enumerate and briefly and explain four sources of finance available to investors (**4 Marks**)
- Kenya has in the recent past experienced collapse of buildings in the construction sector. This has led to lose of lives and property .Explain some of the causes and indicate how such risks can be mitigated (**6 Marks**)
- Mjengo Plc conducted a study to determine the demand for housing units at JOOUST and discovered the demand function of the product to be represented by $P = 50/\sqrt{X}$ and the cost function of producing X items is also estimated by an economist as $C = 0.5X + 500$

Where p= price, x= qty of items demanded; C= cost of the items

Required

- Find the price per unit which will yield a maximum profit (**2 ½ Marks**)
- Find the output level the project will produce to maximize the profit (**2 ½ Marks**)
- Find the project's maximum profit (**2 ½ Marks**)
- Show that the Second Order Condition (SOC) has been fulfilled (**2 ½ Marks**)

QUESTION FIVE

- (a) Microeconomists always have to battle with the challenges of ‘what, how and for whom to produce’ goods and services. However, in macroeconomics, the challenges are inflation, unemployment, economic growth and cyclic events.
- (i) Define construction Economics (1 Marks)
- (ii) Briefly explain how Kenyan government would use fiscal and monetary policies to solve these macroeconomic problems (8 Marks)
- (b) Briefly explain features of a good project appraisal technique (2 Marks)
- (c) As a business manager, what are some of the applications (importance) of the Law of Variable Proportions to modern businesses (4 Marks)
- (d) Briefly describe the following pricing strategies giving examples in each case
- (i) Loss leader pricing (2 ½ Marks)
- (ii) Limit price (2 ½ Marks)

END
