



MURANG'A UNIVERSITY COLLEGE

(A constituent College of Jomo Kenyatta University of Agriculture & Technology)

MAINCAMPUS

ORDINARYUNIVERSITY EXAMINATIONS

2015/2016 ACADEMIC YEAR

FOURTHYEARFIRSTSEMESTER EXAMINATIONS

FOR THE DEGREE

OF

BACHELOR OF COMMERCE

COURSE CODE: HBF2403

COURSE TITLE:FINANCIAL MODELING AND FORECASTS

DATE : 15TH DECEMBER, 2015

TIME: 2 HOURS

INSTRUCTIONS TO CANDIDATES

Question ONE (1) is compulsory
Answer TWO (2) questions

MRUC observes ZERO tolerance to examination irregularities



QUESTION ONE

- (a) XYZ welfare group is a new investment team specializing on the returns from the Financial Assets Investments. Being their first time to venture in this area, the group very cautious in the investment choice. The leaders have approached you for professional advice on the building blocks of a good financial forecast. Advice. (8marks)
- (b) The following data have been recorded for sales over the last four years

	Sales in thousands of units			
Year 1	70	32	55	60
Year 2	65	29	50	58
Year 3	76	43	58	62
Year 4	83	54	65	71

Using the Additive Time Series model,

Required

- (i) The Trend Line using the least squares method (5 marks)
- (ii) The Trend values (3 marks)
- (iii) The De-seasonalized values (5 marks)
- (iv) A Trend graph indicating the actual sales values, Trend values and De-seasonalised values (5 marks)
- (v) The sales values for the year 5 (4 marks)

(TOTAL: 30 marks)

QUESTION TWO

- (a) Indicate reasons of applying quantitative techniques in forecasting (5 marks)
- (b) Discuss the importance of qualitative Time Series models (6 marks)
- (c) State the various elements of exponential Smoothing (5 marks)
- (d) Explain how the regression technique is applied to time series techniques (4 marks)

(TOTAL: 20 marks)

QUESTION THREE

- (a) Discuss the basic characteristics of Time Series Models. (8marks)
- (b) The following information relates to company XYZ Ltd for the years ended 31st March.

Particulars	31.03.2014	31.03.2015
	Sh."000"	Sh. "000"

HBF 2403 FINANCIAL MODELING AND FORECASTS

Sales	6,000	8,000
Equity share capital	5,000	5,000
Fixed Assets	6,000	7,200
Reserves and Surplus	1,000	1,200
Investments	1,000	1,000
Long Term Loans	3,000	3,000
Current Assets	3,000	3,000
Current Liabilities	1,000	1,100

Additional Information

- (i) No additions to be made to the reserves and surplus for the year ended 31.03.2016.
- (ii) Additional Sh.1, 000,000 ordinary shares at Sh.10 per share will be invested by the year 31.03.2016.
- (iii) Sales of the year ending 31.03.2015 are expected to increase by Sh.500,000 by the year end 31.03.2016

Required

A pro forma Balance Sheet for the year ended 31.03.2016

(12marks)

(TOTAL:20 marks)

QUESTION 4

(a) Differentiate between;

- (i) Cash Budgets and Cash Forecasts (2 marks)
- (ii) Short Term and Long term cash flow projections (2 marks)
- (iii) Univariate and multivariate models (2 marks)

(b) Vikings Ltd has provided the following proposal budget for six months period ending 30 June 2015 ;

Month	Sales Sh. "000"	Material purchases Sh. "000"	wages Sh. "000"	Production Overheads Sh. "000"	Administrative Overheads Sh. "000"
January	36,000	12,500	5,000	3,000	2,750
February	48,500	15,500	6,050	3,150	3,350
March	43,000	12,750	5,300	3,000	3,750
April	44,300	15,300	12,500	3,250	4,450
May	51,250	18,500	11,000	4,000	5,500
June	54,350	19,400	11,500	4,100	5,750

Additional information

1. Depreciation is charged at a rate of 0.5% of the Sales
2. Expected cash balance in hand on January 2015 is Sh. 36,250,000
3. 50% of total sales are on cash basis.
4. Fixed assets are to be acquired in the months of February and April 2015 at Sh.4, 000,000 and Sh. 12,500,000 respectively.
5. A Bank loan amounting to Sh. 15,000,000 is expected to be approved and received by the company on May 2015.
6. It is anticipated that a dividend of Sh. 17,500,000 will be paid in June 2015.
7. Debtors are allowed one month credit period.
8. Creditors for the materials purchases give one month credit period.
9. Overheads are paid one month in arrears.
10. Sales commission at the rate of 3% on sales is paid to the salespersons on monthly basis.

Required:

A cash budget for the six months period ending 30 June 2015. (14 marks)

(TOTAL: 20 marks)