

**W1-2-60-1-6**

**JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY**

**UNIVERSITY EXAMINATIONS 2018/2019**

**YEAR IV SEMESTER I EXAMINATION FOR THE DEGREE OF BACHELOR OF COMMERCE**

**HBA 2403: FINANCIAL MODELLING AND FORECASTING**

**DATE: DECEMBER 2018 TIME: 2 HOURS**

INSTRUCTIONS: Answer question one and any other two questions.

QUESTION ONE (30 MARKS)

a. What is a financial model? Name any five financial models stating any five objectives of a financial model. (10 marks)

b. Outline three main uses of regression analysis. (6 marks)

c. In the following table are recorded data showing the test scores made by salesman on an intelligence tests and their weekly sales.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sales man | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Test score | 40 | 70 | 50 | 60 | 50 | 50 | 90 | 40 | 60 | 60 |
| Sales | 2.5 | 6.0 | 4.0 | 5.0 | 4.0 | 2.5 | 5.5 | 3.0 | 4.5 | 3.0 |

Required

Calculate the regression line of sales on test scores and estimate the probable weekly sales volume if a saleman make a score of 100. (14 marks)

QUESTION TWO (20 MARKS)

a. What condition must be made met for a good forecasting system to be instrumental, its contributing to setter management decision making. (5 marks)

b. Define rank correlation. (2 marks)

c. Calculate the rank correlation coefficient for the following data of ?? into two tests given in candidates for a clerical job.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Preliminary tests | 92 | 89 | 87 | 86 | 83 | 77 | 71 | 63 | 53 | 50 |
| Final tests | 86 | 83 | 91 | 77 | 68 | 85 | 52 | 82 | 37 | 57 |

 i. Interpret the results.

QUESTION THREE (20 MARKS)

a. What is a secular trend as used in time series. (2 marks)

b. Which are four methods which are commonly used for measuring the secular trend.

 (4 marks)

c. The following table relates to the prices of a commodity for three years.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Year quart | Price sh |  |  |  |
|  | 1st | 2nd | 3rd | 4th  |
| 2014 | 78 | 56 | 56 | 71 |
| 2015 | 84 | 61 | 61 | 82 |
| 2016 | 92 | 63 | 63 | 83 |

Required

Find the centered 4 quartetly moving average

d. Explain the following

 i. Delphi method in forecasting. (2 marks)

 ii. Qualitative forecasting method.

QUESTION FOUR

a. Explain four building stocks which must be in place to achieve good practice in financial management. (10 marks)

b. Below is the balance sheet of ABC Ltd for the year 31st Oct 2015.

|  |  |  |
| --- | --- | --- |
|  | Sh000 | Sh000 |
| Fixed assets |  | 1200 |
| Current assets Stock | 400 |  |
|  Debtors | 400 |  |
|  Cash | 200 |  |
|  | 1000 |  |
| Less current liabilities creditors | 550 | 450 |
|  | Net assets | 1650 |

You are also given that ? company made a total of sales of sh3000000 and its operating costs for the year were 2250000. All sales were made a credit.

Required

i. Calculate any three ratios that indicate management effectiveness in sales generations.

 (6 marks)

ii. Explain the importance of the following ratios to the management.

 a. Average credit allowed period. (2 marks)

 b. Working capital ratio. (2 marks)

QUESTION FIVE (20 MARKS)

a. Timer company has compiled the following information.

|  |  |
| --- | --- |
| Sales for the last period were | Sh600000 |
| Projected sales are | Sh800000 |
| Profit ratio is 5% of sales |  |
| Dividend payout ratio is 40% |  |
| Current balance in retained earnings is  | Sh200000 |
| Cash as a % of sales is 4% |  |
| Accounts receivables as a % of sles 10% |  |
| Inventory as % of sales 30% |  |
| Net fixed assets are budgeted  | Sh300000 |
| Accounts payable as % of sales 7% |  |
| Accrued liabilities % of sales is 15% |  |
| Common stock will remain as | Sh220000 |

Required

Prepare budgeted Balance sheet. (15 marks)

b. Explain what you understand by break even analysis. (5 marks)