



MACHAKOS UNIVERSITY

University Examinations 2020/2021

SCHOOL OF BUSINESS AND ECONOMICS

DEPARTMENT OF ACCOUNTING BANKING AND FINANCE

FIRST YEAR END OF SEMESTER ONE EXAMINATION

CERTIFICATE IN BUSINESS MANAGEMENT

CERTIFICATE IN SUPPLIES MANAGEMENT

BUSINESS STATISTICS AND CALCULATIONS

DATE: 3/12/2021

TIME: 8:30 – 11:30 AM

Instructions

The paper contains two sections

Answer all questions

The questions should be answered in English

SECTION A

ANSWER ALL QUESTIONS

Question One

1. State the two divisions of statistics (2 marks)
2. A tailor sold a dress for ksh 1450 and made a profit of 25%. Calculate the cost price of the dress (2 marks)
3. The marked price of a TV set is Ksh 25000. A tax of 25% is added to the marked price. Determine the selling price if the TV set (2 marks)
4. The cost of a photocopying machine is is Ksh 240 000. The machine depreciated at a rate of 17% per annum. Determine the value of the machine after 5 years. (3 marks)

5. A job can be completed in 20 days by 15 men working 4 hours per day. Determine the number of days it will take 10 men working 5 hours per day to complete the same job. (2 marks)
6. Solve the equation using factorization method
 $4x^2 - x - 3 = 0$ (4 marks)
7. The original price of Article 'N' was sh 900. It was increased by 30% four months before but was decreased by 20% two months later. Find out the present price. (3 marks)
8. Explain the two types of discounts that can be offered to a business (2 marks)

SECTION 2

QUESTION TWO

- a) A manufacturer makes two products, product Q and product M. the cost of making 15 units of product Q and 10 units of product m is sh 600. The cost of making 5 units of product Q and 8 units of product M is sh 340. The manufacturer makes a profit of 20% and 25% on each unit of product Q and product M respectively.
- i) Express the above cost of making one unit of product Q and M in form of a simultaneous equation (2 marks)
 - ii) Calculate the cost of making one unit of product Q and product M. (4 marks)
 - iii) Calculate the selling price of one unit of product Q and one unit of product M (3 marks)
- b) Omino sells goods on commission basis for a Machakos based business. Commission is paid on sales as follows in addition to his monthly salary of sh 5000. On the first sh 50000 of sales, nothing. On the next sh 100000 of sales 4%, on the balance of sales 5%. He sold goods worth sh 350000 during the month of July 2007. Calculate Omino's total income for the month of July (6 marks)

QUESTION THREE

- a) Explain the relationship between statistics and other fields (8 marks)
- b) The marked price of a sofa set is ksh 40000. A cash discount of 5% is allowed on cash purchases. The sofa set is also sold on hire purchase terms by paying a deposit of sh 10000 and balance in 24 equal monthly installments. The hire purchase price is more than the cash price by 12.5%
 Determine;
- i) Hire purchase price
 - ii) Amount of monthly installments
 - iii) Difference between hire purchase price and the cash price (7 marks)

QUESTION FOUR

- a) Loise deposited sh 1200000 in a savings account for two years. The money earns interest at the rate of 5% per annum, compounded annually. Determine the amount of money she received when interest is compounded;
- i) Semi annually
 - ii) Quarterly (6 marks)
- b) Solve the following equation
- $$3x + 2y = 106$$
- $$2x + 4y = 92$$
- (4 marks)
- c) James and Omondi are partners in a business. Omondi is entitled to a salary of sh 20000 p.a. the profit sharing ration of James to Omondi is 3:2 respectively. If the profit for the year 2007 is sh 80000, calculate how much each will get (5 marks)

QUESTION FIVE

- a) The cash price of a machine is sh 9000. If it is bought on hire purchase terms, a deposit of 20% of the cash price is required. A flat rate is 15% is charged on the balance. Find the amount of monthly installment if the agreement is for 2 years. (4 marks)
- b) Peter purchased goods from ABC manufacturers on the following terms;
- Gross price sh 150000
Trade discount 20%
Cash discount 5% if paid in one month, 3% if paid in two months and no discount after two months. Calculate; the amounts which peter will pay if the amount is paid within;
- i) One month
 - ii) Two months
 - iii) Four months (6 months)
- c) Explain the importance of statistics to a business (5 marks)