

SIR ARTHUR LEWIS COMMUNITY COLLEGE  
DIVISION OF AGRICULTURE  
CERTIFICATE IN GENERAL AGRICULTURE

200/10 END OF SUMMER SEMESTER EXAMINATION



COURSE: MAT 101—Elementary Mathematics

Time : 2 hours 30 minutes

Date: 4 DECEMBER, 2009

Instructions: Do all questions in section 1

SECTION 1

1. Evaluate the following. Show all working

- (a)  $3454 \div 215$  give answer correct to 2 d. p 3mks  
(b)  $1.2 \times 0.02 / 0.04$  3 mks  
(d)  $3/4 + 2/5$  of  $10 - 3/25$  3 mks  
(e) 0.35 % of 10000. Write answer in standard form 3 mks

2. Simplify: 3 mks each

- (a)  $80 - 100 + 12 - 20 - 54$   
(b)  $6y + 56k - 5g - 10y - 60k$   
(c)  $2r/4 - 5m/8$

3. Solve for the unknown in each of the following equations. 5 mks each

(a)  $3y - 4 = 8 + y$  (b)  $\frac{5t}{8} + 2 = 12$  (c)  $\frac{x+1}{2} + \frac{x-3}{5} = 4$

4. Evaluate the following when  $x = -4$ ,  $y = 2$ ,  $z = -10$  5 mks each

(a)  $x + y - z$  (b)  $\frac{x+3}{y}$  (c)  $x^2 - y^2$  (d)  $\frac{x}{y} - 3x$  (e)  $y(3z - 2x + y^2)$

5. One-sixth less than two-thirds of a number is equal to two-thirds less than five-sixths of that same number. Write an equation for the above and solve for the unknown.

6. Solve by method of substitution

(a)  $2m - 3n = 9$   
 $m + 2n = -13$  5 mks

(b)  $d - k = 4$   
 $2d + k = 11$  5 mks



7. Complete the following 4 mks

- (a)  $564 \text{ cm} = \dots \text{ m}$       (b)  $3 \text{ m}^2 = \dots \text{ cm}^2$   
(c)  $500 \text{ kg} = \dots \text{ g}$       (d)  $154 \text{ inches} = \dots \text{ feet}$

8. A man placed \$11500 in a fixed deposit for 5 years at 8% per annum:

- (a) Calculate the total amount received at the end of the period under compound interest?  
(b) Determine the total amount received at the end of the period under simple interest?  
(c) State the difference in interest received

## SECTION 2

**Do any Two questions**

**10 mks each**

1. Jack gave Mary  $\frac{1}{2}$  of his marbles and  $\frac{1}{2}$  of the remainder to Bill.  $\frac{2}{3}$  of what was still left was given to Sam. If Sam got 24 marbles, how many marbles had Jack at first?
2. A rectangular floor measures 10m by 8m. A piece of carpet measuring 9m by 7m is placed on the floor.
- (a) Find the area of the uncovered part of the floor.  
(b) Determine the cost of cleaning the carpet at a rate of \$0.80 per  $1000 \text{ cm}^2$
3. A car cost \$25 200.00, 5% discount is given for paying cash. The car can also be bought by paying 30 monthly instalments of \$912.00. Find the cost of the car
- (a) when it is bought cash  
(b) when it is paid for by instalments.  
(c) Find the difference between paying in cash and paying by instalments.

