

UF DAGRI PAST PAPERS.

**Sir Arthur Lewis Community College
DIVISION OF AGRICULTURE**

**2006/2007 Certificate Programme
End of Semester I Examination**

**Course: Elementary Mathematics (MAT101)
Duration: 2 ½ hours**

Date: 14th December, 2006

Do All Questions

#M29

1. Evaluate the following

- (i) $3459 \div 25$ give answer correct to one decimal (3 marks)
(ii) $4.3 + 5 + 1.12 - 0.001$ (3 marks)
(iii) $8 \div 2 \times 6 + (10 - 3)$ (3 marks)

2. Evaluate

- (i) $(\frac{1}{5} - \frac{1}{10}) \div (\frac{1}{10} + \frac{1}{5})$ (5 marks)
(ii) 2.5×0.005 (3 marks)
(iii) 2.5 % of \$ 1000.00 (3 marks)

3. Simplify the following

- (i) $-20ab + 8cy + 40ab - 80cy$ (2 marks)
(ii) $\frac{3}{5x} - \frac{2}{7x}$ (3 marks)
(iii) $-7r \times (-4t) \times 3q$ (2 marks)

4. Evaluate

- (i) $p \times p \times p \times p$ (2 marks)
(i) $2h^2 \times 3h^{-2}$ (2 marks)
(ii) $(3y^4)^{-2}$ (2 marks)
(iii) $100^{1/2}$ (3 marks)

5. Solve for the unknown in the following

- (i) $6n + 3 = 15$ (3 marks)
(ii) $\frac{v}{4} + \frac{3}{4} = 1$ (3 marks)
(iii) $\frac{2-z}{3} - \frac{2+z}{2} = 1$ (4 marks)
(iv) $64^m = 16$ (4 marks)



6 Solve the following in equations and represent the solutions on a number line.

(i) $7 < q + 3$ (4 marks) (ii) $3y + 2 \leq 5y - 4$ (5 marks)

7 Solve the following pair of simultaneous equation.

(i) $3s + k = 9$
 $2s - k = 11$ (5 marks)

8. Factorise the following algebraic expressions

(i) $mg - gk$ (2 marks) (ii) $7ac - 14ad$ (3 marks) (iii) $px + py + qx + qy$ (4 marks)

9 Kelly had \$12.00 and spent y dollars. Mary had \$6.00 and collected y dollars. The two girls then had the same amount of money. Form an equation and solve it to determine the value of y . (5 marks)

10 A tank was $\frac{2}{5}$ full after a man used 15 litres. How much water does the tank contain when it is $\frac{1}{2}$ full? (5 marks)

11. There are 840 pupils in a school. The ratio of boys to girls in the school is 5:7. Calculate

- (i) the number of boys
(ii) the ratio of girls to the pupils (6 marks)

12. A classroom is 12 m in length, 8 m in width and 4 m in height.

(i) Find the area of the floor of the classroom in cm^2 (4 marks)

(ii) How many students can be seated in this room if each student needs 0.8m^2 of floor space? (4 marks)

(iii) Calculate the volume of the room (3 marks)

