MID TERM III EXAMINATIONS 2019

S.2 MATHEMATICS

TIME: 2 HOURS

INSTRUCTIONS

- *Attempt all questions from both sections **A** and **B**.*

SECTION A

1. Solve the simultaneous equation

$4x + 3y = 17$

$5x - 2y = 4$

2. Find the gradient of the line passing through (4,-12) and (3, -9)

3. Without using tables or calculator, evaluate

$7.46^2 - 2.54^2$

4. Solve the equation: $x^2 + 5x-6=0$
5. A TV dealer bought a television for shs 828000 and sold it at a profit of 20%. Find the selling price of the TV
6. Find the value of
   a) $15^{2x-4} = 3^{2x-4}$
   b) Simplify $(8/27)^{-1/3}$ $X(64/9)^{1/2}$ X 2^{-1}
7. Make x the subject of the formula

8. Given that $a*b = a^2 - b^2$, find the value of 3*4

9. Solve for x

10. Using a pair of compasses and a ruler only,
    a) Construct triangle PQR such that QR=10.6cm and angle PRQ=75^0 and PQR=60^0
    b) Construct a circumcircle of triangle PQR with o as it's centre
    c) Measure length PQ and PR and the radius of the circle
    d) Find the area of the circle and the area of triangle PQR (12mks)

11. Simplify

a) $\sqrt{45} - \sqrt{12}$

b) $(\sqrt{3} + \sqrt{2})(\sqrt{3} - \sqrt{2})$