



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND
TECHNOLOGY
SCHOOL OF EDUCATION
UNIVERSITY EXAMINATION FOR THE DIPLOMA IN SPECIAL NEEDS
EDUCATION
YEAR 2 SEMESTER 1 2018/2019 ACADEMIC YEAR
REGULAR
MAIN CAMPUS**

COURSE CODE: ESN 2211

COURSE TITLE: MATHEMATICS

EXAM VENUE:

STREAM: (DIP. SNE)

DATE:

EXAM SESSION:

TIME: 1.30 HOURS

Instructions:

- 1. Answer question 1 (compulsory) and any other 2 questions.**
- 2. Candidates are advised not to write on the question paper.**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room.**

Question One

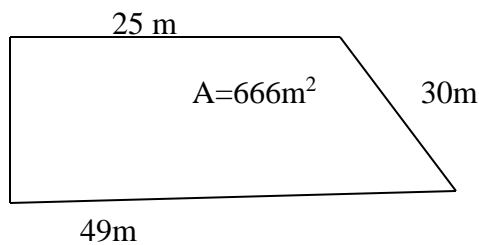
- a) What is meant by a number value? (2 marks)
- b) Differentiate between whole and counting numbers (3 marks)
- c) You have been given 2,1,0 and %. Use them to write the largest and smallest numbers. Calculate the product of the two numbers (6 marks)
- d) Use two different methods to prove that: $\frac{8}{21}$ and $\frac{40}{105}$ are equivalent (4 marks)
- e) 31 and 37 fall under the same category of numbers from 30 to 40. Apply the same rule to calculate the sum of the same type of numbers between 60 and 70 (3 marks)
- f) Calculate the area of a rectangular plot of land of side 84m by 60m giving your answer in hectare to 2 significant figures (6 marks)
- g) Determine the base (y) of a right angle triangle given the hypotenous (d) and height (k) (4 marks)

Question two

- a) Draw a triangle XYZ where angle $\text{YXZ}=80^\circ$, line $\text{XZ}=8\text{cm}$ and line $\text{XY}=7\text{cm}$ (4 marks)
- b) Determine
 - i. Angle XYZ and YZX (3 marks)
 - ii. Line YZ (2 marks)
- c) Inscribe a circle in the triangle then determine its diameter (D) (11 marks)

Question Three

a)



Odera shambas has the same shape as the figure above calculate its perimeter (14 marks)

b) Work out:

$$\frac{0.24 \times 0.36 \times (0.3 + 0.5)}{0.16 \times 0.12}$$

Write your answer to 2 sig.figure

Question Four

a) the marked price of a laptop is 24,000 /= John bought it on hire purchase terms by paying a deposit of Sh. 8800, followed by 8 monthly installments of sh. 2500 each. Otieno bought it in cash getting a discount of 10%.

i) Determine the %age increase for higher purchase (6 marks)

ii) How much more did John pay than Otieno (4 marks)