

MARCH 2021  
EBS 101  
ELEMENTARY ALGEBRA  
1 HOUR 20 MINUTES

Candidate's Index Number
ABCE/MS/2020/44
Signature:

UNIVERSITY OF CAPE COAST  
COLLEGE OF EDUCATION STUDIES  
SCHOOL OF EDUCATIONAL DEVELOPMENT AND OUTREACH  
INSTITUTE OF EDUCATION

COLLEGES OF EDUCATION  
FOUR-YEAR BACHELOR OF EDUCATION (B.ED)  
FIRST YEAR, END-OF-FIRST-SEMESTER EXAMINATION, MARCH 2021

MARCH 30, 2021

ELEMENTARY ALGEBRA

2:40 PM – 4:00 PM

SECTION B  
(60 marks)

Answer only THREE questions from this section. Show all workings clearly.

1. a) Find the intercepts of the equation,  $y + 3x + 4 = 0$ . [ 8 Marks]
- b) Draw the graph of the given equation using only its intercepts obtained in 1.a). [5 Marks]
- c) Solve for  $x$  in the following:  $24_{five} + 11_x = 17_{ten}$  [7 Marks]

2. a) The University of Cape Coast awards a grade any percentage score earned. The grades and the associated range of scores are shown in the table below. Use the table to answer the questions that follow.

Grade	A	B+	B	C+	C	D+	D	E
Percentage Scores	$\geq 80$	75 - 79	70 - 74	65 - 69	60 - 64	55 - 59	50 - 54	Less than 50

- i) Is grade a function of the percent grade? Give reason for your answer. [ 3 Marks]
  - ii) Is the percent grade a function of the grade-point average? Give reason for your answer. [ 3 Marks]
- b) If  $m\Delta n = mn + m + n$ , show that the operation  $\Delta$  is associative on the set of real numbers. [10 Marks]
- c) Determine whether the following sets are equal or not. Give a reason for your answer.

$$F = \{3, 5, 7, 9\}$$
$$G = \{5, 7, 9, 11\}$$

