MATILI TECHNICAL TRAINING INSTITUTE

MATHEMATICS

END OF YEAR EXAMS

JULY SERIES 2018

CLASS: BCC18J

TIME: 2 HRS

INSTRUCTIONS

1. Write your name, admission number, and class in the spaces below.

2. Answer all questions in **section A** and any three in **section B.**

3. Mobile phones should be switched off while in the examination room.

4. Cheating is highly prohibited and no carrying extra materials in the examination room.

NAME: ....

ADM NO: .... CLASS: ....

SIGNATURE: .... DATE: ....

1. Given the data:

   11.8   12.5   12.8 13.4 13.5 13.6 13.7   13.9   14.3   14.4   14.4   14.5   14.5   14.7
   15.2   and 15.3

   a) Draw a frequency distribution table. (4 mks)

 b) Use the table to find:

   i) Mode

   ii) Mean

iii) Median

2. Find: (9 mks)

a) Modal class

b) Median

c) Mean from the table below

Class	130-139	140-149	150-159	160-169	170-179	180-189	190-199
Frequency	2	9	8	9	8	13	1

3. Draw a frequency polygon to represent the information below. (5 mks)

Class	0-2	3-5	6-8	9-11	12-14	15-17
Frequency	20	6	9	8	7	4

4. a) Use graphical method to solve simultaneous linear equations below. (6 mks)

$$3x-2y=8$$

$$2x+3y=14$$

b) Solve the equations below using the method indicated in the brackets. (12 mks)

i) $5x^2-21x+4=0$. (factorization)

ii) $6x^2 + 7x +2=0$. (completing the square method)

iii) $4x^2 - 4x - 35$ (quadratic formula)

5. a) A right pyramid stands on a rectangular base of sides 8cm x 6cm the slant height of the pyramid is 15cm. Calculate(10 mks)

i) The height of the pyramid

ii) The total surface area

b) The second term of a G.P is -8 while the fifth term is 1. Determine the sum of the first 20 terms of the series to 2 d.p. (7 mks)