THE OPEN UNIVERSITY OF SRI LANKA

FACULTY OF EDUCATION

BACHELOR OF EDUCATION (HONOURS) IN PRIMARY EDUCATION

LEVEL - 05

FINAL EXAMINATION – 2020/2021

EPU5353 – MATHEMATICS FOR PRIMARY TEACHING

DURATION – TWO (02) HOURS

Date: 29.01.2023	Time: 01.30 p.m. – 03.30 p.m.

Answer All Questions in Part I and any three (03) questions from Part II.

PART - I

01. Find the value

(a) $18 - 10 \div 2$

(b) Find the

i. Least common Multiple (LCM)

ii. Highest Common Factor (HCF)

of the following numbers: 12, 15, 18

02. Simplify

(i) $\dfrac{7}{8} - \dfrac{1}{2}$ (ii) 1.24×3.4 (iii) $72.78 \div 0.18$

03. Simplify

(i) $8(3x^3 + 4x^2 - 2x + 1) - 3(x^3 - x^2 + x + 3)$

(ii) $(4x - 3)(5x + 2)$

04.   Solve

   (i) $6(x + 2) - 5(2x - 1) = 5$

   (ii) $x + 2y = 21$

          $x + 3y = 29$

05.   The first three terms of an arithmetic procession are -5, -1 and 3

   (i)   Find the 32nd term of the procession

   (ii)   Find the sum of first 32 terms

06.   Two sets of A and B are given

       A = {22,24,25,27,30,32},   B = {23,24,25,26,27}
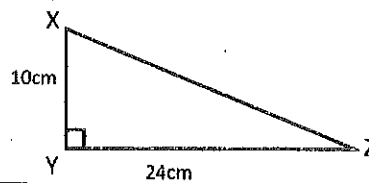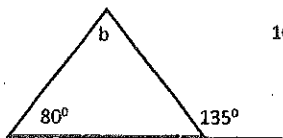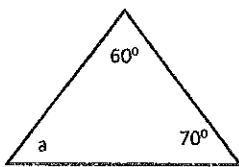
   (i)   Represent the sets A and B in Venn diagram

   (ii)   Write the elements of A ∩ B and A ∪ B

   (iii)   Write n(A), n(B), n(A∪B), n(A ∩ B).

07.   Find the mean, median and mode of following numbers

       11, 17, 15, 16, 15, 17, 12, 13, 14, 19, 18

08.   Find a, b and length X Z and Cos Z

                                                    (8 x 5 = 40 marks)

2

PART - II

09. (i) Find the answers

a) $\frac{1}{4} + \frac{1}{2}$ b) $\frac{2}{3} - \frac{1}{8}$

c) $3548 + 3.548 + 35.48 + 354.8$ d) $\frac{18.9 \times 4.2}{12.6}$

(4 x 2 = 08 marks)

(ii) Define the following with relevant examples.

(a) Prime Numbers

(b) Square Numbers

(c) Even Numbers

(3 x 1 = 03 marks)

(iii) Find the

(a) 21st odd number

(b) 31st even number

(2 x 1 = 2 marks)

(iv) Write prime numbers between 20 and 30.

(02 marks)

(v) There are 40 students in a classroom. 15% students are boys. Find the number of girls in that classroom.

(02 marks)

(vi) There are 60 persons in a hall. Those are Sinhalese, Tamils and Muslims. The ratio of Sinhalese, Tamils and Muslims are 3:2:1.

Find the number of Sinhalese, Tamils and Muslims in that hall separately.

(03 marks)

3

10. (a) Factorise

(i) $3y^2 + 7y - 6$ (ii) $4x^2 - 25$

(06 marks)

(b) Using the knowledge of factorization find the value of

(i) $72^2 - 28^2$ (ii) $2.7 \times 1.4 + 7.3 \times 1.4$

(06 marks)

(c) The sum of three consecutive even numbers is 66. Find those numbers.

(08 marks)

11. (a) Simplify $\frac{2}{x-3} + \frac{1}{x+2}$ (04 marks)

(b) Solve $(x + 2)^2 - 20 = (x - 2)^2 + 4$ (06 marks)

(c) The price of 3 bananas and 2 mangoes are Rs.154 and the price of 2 bananas and 3 mangoes are Res, 186. Find the price of (i) banana (ii) mango.

(Hind: Let the price of a banana and mangoes be Rs. b and Rs. m. Construct 2 equations and find b and m)

(10 marks)

12. a) The first terms of an arithmetic profession are 2 and 7th term is 44

i)   Find the common difference of this progression.

ii)   Find the 51st term of this progression.

iii) Find the sum of first 51 terms in this progression.

iv)   Find the sum of first 76 terms in this progression.

v)   695 is which term of this progression.

(5 x 2 = 10 marks)

b) 2, 6, 18, ………. are the first three terms of a geometric series.

i) Write the first term and common ratio   (04 marks)

ii) Find the 10th terms of this series   (03 marks)

iii) Find the sums of first 17th terms   (03 marks)

13. a) Find the x, y and z..
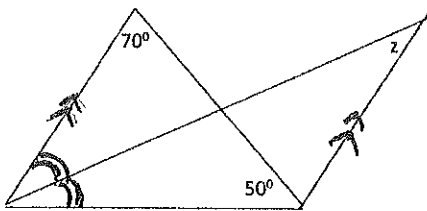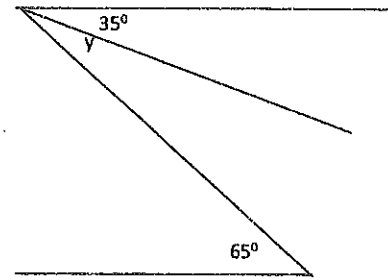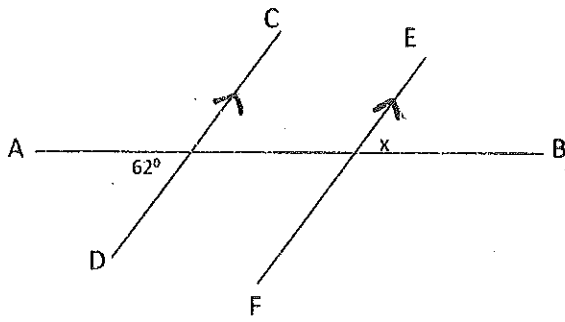
(06 marks)

b) i. To draw graph for the equation $y = x + 7$ and $y = -2x - 2$, fill in the blanks of the tables give below

$$y = -2x - 2$$

x	-4	-3	-1	0	1	2	3
y				-2			-8

$$y = x + 7$$

x	-4	-3	-1	0	1	2	3
y		4			8		

(10 marks)

iii. Draw both equations in same grid.

(04 marks)

5