HARRISON COLLEGE

FIRST FORM MATHEMATICS

INTERNAL PROMOTION EXAMINATION 2014 – 2015



DURATION: 1 hour and 20 minutes

GENERAL INSTRUCTIONS TO CANDIDATES

- 1. This question paper consists of FOUR printed pages.
- 2. Write your name clearly on **EACH** sheet of paper used.
- 3. ALL questions are to be attempted.
- 4. Number your responses carefully and identically (including any associated parts) as they appear on the question paper.

<u>DO NOT</u> write ANY of your responses beside each other.

- 5. Calculators are **NOT** allowed.
- 6. The maximum mark for this examination is 45.

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO

SECTION A

Write the letter that matches your response for Questions 1 to10 on your foolscap. One mark is allocated for each question in this section.

- 1. 23.6987 correct to 2 significant figures is
 - A) 24 B) 23.7 C) 23.69 D) 23
- 2. $\frac{7}{8} + \frac{2}{7} =$ A) $\frac{2}{8}$ B) $\frac{9}{15}$ C) $\frac{9}{56}$ D) $\frac{65}{56}$
- 3. What is the value of $\left(1\frac{2}{3} \frac{5}{6}\right) \div 2\frac{5}{12}$ A) $\frac{10}{29}$ B) $\frac{5}{12}$ C) $2\frac{2}{9}$ D) $2\frac{1}{12}$
- 4. Which of the following is a composite number?

I. 2	II. 47	III. 57	
A) I only	B) III only	C) II and III only	D) I and II only

- 5. $3.2 \times 0.02 =$ A) 6.4 B) 0.64 C) 0.064 D) 0.0064
- 6. 3.5 + 72 + 0.015 =A) 10.715 B) 75.515 C) 12.2 D) 77
- 7. Which statement below is incorrect?
 A) (-8) + (-4) = -12
 C) (-8) ÷ (-4) = 2
 - B) $(-8) \times (-4) = -32$ D) (-8) (-4) = -4
- 8. 1011_{two} converted to base 10 is
 - A) 2 B) 1101 C) 8 D) 11
- 9. 19_{ten} converted to base two is

A) 11001	B) 10111	C) 10011	D) 01101

10. Jamar mowed $\frac{5}{9}$ of a lawn. Sonia mowed $\frac{1}{3}$ of the same lawn. What fraction of the lawn remains to be mowed?

A)
$$\frac{8}{9}$$
 B) $\frac{1}{9}$ C) $\frac{2}{3}$ D) $\frac{4}{9}$

- 11. What is the value of a(b-c) when a = -2, b = 3 and c = -3? [2]
- 12. A total of 30000 tickets were sold for a concert. Of this amount, $\frac{1}{4}$ were sold for \$150 each, $\frac{1}{3}$ for \$100 each and the remainder for \$75 each. How many tickets were sold at \$75 each? [3]



In the Venn diagram above

- U = {students who play games}
- C = {students who play cricket}
- F = {students who play football}

The number of students in each case is indicated.

a)	How many students play neither cricket nor football?	[1]
b)	Determine $n(F \cup C)$.	[1]
c)	Determine $n(F \cap C)'$.	[2]

14. i) The marked price of a laptop is \$1200. How much will it cost if there is a 20% discount for cash? [2]

ii) A washing machine can be bought on hire purchase for a deposit of \$768 plus 12 monthly payments of \$74 each. What is the total hire purchase price? [3]

iii) When the price of a dress is reduced by 12%, it is sold for \$2156. What is the original price? [3]

15. Solve the following equations:

a) 5x - 10 = 3x + 12

b)
$$6 - 2y = 4y - 12$$

c)
$$3z - 22 = 7$$



Determine the size of the angle labeled P.

[3]

[3]

[2]

[2]

[2]



The pie chart represents the masses of ingredients in a cake. The total mass is 240g.

- a) What is the value of x + y? [2]
- b) What is the combined mass (in grams) of fruits and butter? [2]



ABCDE is a pentagon. AB is half of ED.

Calculate:

17.

- a) The perimeter of the pentagon. [2]
- b) The area of the pentagon.