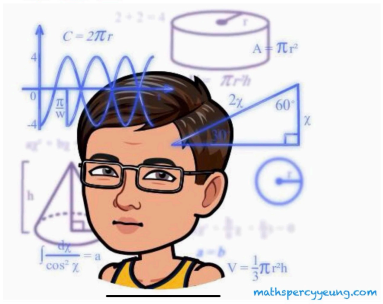

2018 – 2019

S.3 Mathematics Uniform test 1

Question-Answer Book

Date: 26 – 09 – 2018
Time: 35 minutes
This paper must be answered in English

Instructions :

1. Write your name, class and class number in the spaces provided on this cover.
2. Answer ALL questions in this paper. Write your answers in the spaces provided in this Question-Answer Book.
3. Write your answers with black or blue ball-pens, and draw graphs or figures with HB pencils.
4. Unless otherwise specified, all working must be clearly shown.
5. Unless otherwise specified, numerical answers should be either exact or correct to 3 significant figures.
6. The diagrams in this paper are not necessarily drawn to scale.

Section A :
Multiple Choices Questions

Question	Full marks	Score
1-4	8	
Section A Total	**8**	

Section B :
Conventional Questions

Question	Full marks	Score
5	4	
6	4	
7	6	
8	5	
9	8	
10	5	
11	5	
12	5	
Section A Total	**42**	

Paper Total	**50**	

Section A : Multiple Choices Questions (8 marks)

Choose the *best* answer for each question and fill in the boxes.

1.	2.	3.	4.

1. Which of the following expressions can **not** be factorized?
   A. $x^2 + 4y^2$
   B. $2x^3 - 8x$
   C. $x^2 + 2x + 1$
   D. $x^2 - 3x + 2$

2. Which of the following are the factors of $6m^2 - mn - 2n^2$?
   I. $3m - 2n$
   II. $3m - n$
   III. $2m + n$
   A. I and II only
   B. I and III only
   C. II and III only
   D. I, II and III

3. $(p + 2)^3 + (2 - p)^3 =$
   A. 4.
   B. $-4p$.
   C. $4(p^2 + 4)$.
   D. $4(3p^2 + 4)$.

4. Which of the following has/have $a + 2b$ as a factor?
   I. $a^3 - 8b^3$
   II. $(a - 2b)^3 + 64b^3$
   III. $(3b - a)^3 + (2a - b)^3$
   A. I only
   B. I and II only
   C. II and III only
   D. I, II and III

Section B: Convention Questions (42 marks)

5. Factorize the following expressions.

(a) $a^2 + 4a + 3$ (2 marks) **(b)** $2x^2 + 3x + 1$ (2 marks)

6. Factorize the following expressions.

(a) $p^2 - 9p + 14$ (2 marks) **(b)** $z^2 - 13z + 40$ (2 marks)

7. Factorize the following expressions.

(a) $3n^2 + 21n - 132$ (3 marks) **(b)** $-22xy + 15y^2 - 9x^2$ (3 marks)

8. Factorize the following expressions.

(a) $-x^2 - 10xy - 9y^2$ (3 marks) **(b)** $x^2 + 8xy + 15y^2$ (2 marks)

9. Factorize the following expressions.

(a) $30 - (x + 1)(x - 6)$ (4 marks) **(b)** $6m(3m - 1) - 12$ (4 marks)

10. Factorize the following expressions.

(a) $m^3 - 8$ (2 marks) **(b)** $(y-1)^3 + 1$ (3 marks)

11. **(a)** Factorize $y^2 - 9y - 22$. (2 marks)

(b) Hence, factorize $(2z+1)^2 - 9(2z+1) - 22$. (3 marks)

12. Factorize the following expressions.

(a) $5m - 10n$ (1 mark)

(b) $m^2 + mn - 6n^2$ (2 marks)

(c) $m^2 + mn - 6n^2 - 5m + 10n$ (2 marks)

- End of Test -