

VILLA THERESA HIGH SCHOOL

STD: VII

Second Unit Test August 2014

Marks: 50

Date: 20/8/14

Subject: Mathematics

Time: 1 hr. 15 min.

Question 1

- $5x^2y(3x^2 - 4y^2)$ [2]
- Divide: $x^4y - 2x^3y^2$ by x^2y [2]
- Divide: $4x^2y - 8xy^2$ by $-2xy$ [2]
- Add: $2ab + 3bc - 5ca$ and $4cb - 3ba + 7ac$ [2]
- Subtract: $3x^3 - 9xy - 3y^2$ from $-10y^2 + 8xy - 4x^3$ [2]
- Solve: $2x + 15 = 23$ [2]
- Solve: $1.3m = 39$ [2]
- $v = u + at$ change the subject of formula to 'a' [2]
- If $x = 3$ and $y = 1$; find z if $z = (x + y)^2 + 5(x - y)$ [2]
- Four times a number decreased by 6 equals 18. Find the number. [2]

Question 2.

- The sum of four times a number decreased by 9 is same as one third the number increased by 31. Find the number. [3]
- Divide $6x^2 + 5x - 6$ by $2x + 3$ [3]
- $C = \frac{5}{9}(F - 32)$. find F when $C = -40$ [4]

Question 3

- Solve: $\frac{1}{2}m + \frac{3m}{4} - m = 2.5$ [3]
- Multiply: $(5 - x + 2x^3)(3x - 5)$ [3]
- Subtract the sum of $2x + 3y - 5z$ and $-3x + y - 2z$ from the sum of $3x - 2y - z$ and $2x + 2y - 3z$ [4]

Question 4

- The father's age is nine times the son's age. After three years, father's age will be five times his son's age. Find their present ages. [3]
- Solve: $15 - 2(5 - 3x) = 4(x - 3) + 13$ [3]
- Frame a formula for each of the following statements:
 - The volume 'V' of a cuboid is equal to the product of its length 'l', breadth 'b' and height 'h'.
 - The final velocity 'v' of a body is equal to the sum of initial velocity 'u' and the product of acceleration 'a' and time 't'. [4]



SCIENCE

Q1) a) Name the following:

(7)

- i) A solid that removes moisture from O₂ gas.
- ii) An eclipse occurring when the earth is between the sun and moon.
- iii) The active component of air.
- iv) A substance that decomposes hydrogen peroxide.
- v) A surface that behaves as a good reflector.
- vi) A method to collect gases that are insoluble or sparingly soluble in water.
- vii) A curved mirror.

b) Classify the following as transparent, translucent or opaque

(2)

- i) Coal ii) Mercury iii) monitor screen iv) chart paper

c) i) What are oxides?

(1)

ii) Redraw and complete the following table.

(5)

Example	Metallic/ Non metallic	Type of oxide	Litmus test
	metallic	basic	
CO ₂			Blue to red
		Neutral	
Al ₂ O ₃			

QII) a) Define: (i) A medium (ii) A ray (iii) Angle of reflection

(3)

b) Give two points of difference between:

- i) Shadow and image
- ii) Real image and virtual image

(4)

Contd.2....

