TEST PAPER: MATHEMATICS

Time: 90 Minutes   **Class:** 8th I.C.S.E.
Max. Marks: 50 Marks   **Date:** 22nd July, 2018

Marking Scheme: *Four questions carry 10 marks each. Questions have 3 subparts each. Subparts (a) and (b) carry 3 marks each and subpart (c) carries 4 marks.*

Question 1:
a. Evaluate the square root of 69.8896

b. Evaluate: $(-1/4)^{-3} \times (-1/4)^{-2}$

c. Find the least number of six digits which is a perfect square. Find the square root of this number.

Question 2:
a. Find the smallest number by which 396 must be multiplied so that the product becomes a perfect square.

b. Arrange the following numbers in ascending order:
$$\frac{-21}{105}, \ \frac{12}{21}, \ \frac{16}{5}, \ \frac{20}{105}.$$

c. Find the least number that must be added to 6412 to make it a perfect square.

Question 3:
a. Find the smallest number by which 1100 must be divided so that the quotient is a perfect square.

b. Simplify: $(3/2 \times 1/6) + (5/3 \times 7/2) - (13/8 \times 4/3)$

c. Evaluate:

(i) $\left\{ \left(\frac{1}{3}\right)^{-1} - \left(\frac{1}{4}\right)^{-1} \right\}^{-1}$ (ii) $\left(\frac{5}{8}\right)^{-7} \times \left(\frac{8}{5}\right)^{-4}$

Question 4:
a. By what number should we multiply (-8/13), so that the product may be 24?

b. Represent -11/3 on the number line.

c. Find the value of.
(i) $(3° + 4^{-1}) \times 2^2$
(ii) $(2^{-1} \times 4^{-1}) \div 2^{-2}$

Question 5:
a. Find the value and express as a rational number in standard form:
(i) $2/5 \div 26/15$
(ii) $10/3 \div (-35/12)$

b. From a rope 11 m long, two pieces of lengths 13/5 m and 33/10 m are cut off. What is the length of the remaining rope?

c. Find 4 rational numbers between 2/3 and 6/7.