



TEST PAPER: MATHEMATICS

Time: 40 Minutes

Class: 9th I.C.S.E.

Max. Marks: 30 Marks

Date: 29th July, 2018

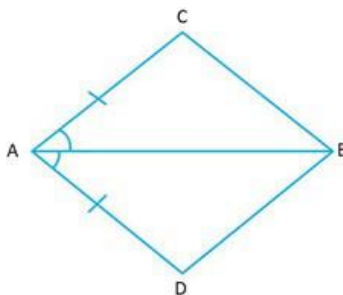
Marking Scheme: Four questions carry 10 marks each. Questions have 3 subparts each. Subparts (a) and (b) carry 3 marks each and subpart (c) carries 4 marks.

Question 6:

- A certain sum amounts to \$ 72900 in 2 years at 8% per annum compound interest, compounded annually. Find the sum.
- If $a - b = 1$ and $ab = 12$, find $a^2 + b^2$
 - If $3c - \frac{1}{3c} = 8$, find the value of $3c^2 - \frac{1}{3c^2}$
- In a two-digit number. The units digit is thrice the tens digit. If 36 is added to the number, the digits interchange their place. Find the number.

Question 7:

- The sum of two numbers is 8. If their sum is 4 times their difference, find the numbers.
- If 2 is added to the numerator and denominator it becomes $\frac{9}{10}$ and if 3 is subtracted from the numerator and denominator it become $\frac{4}{5}$. Find the fractions.
- In a quadrilateral ACBD, $AC = AD$ and AB bisects angle A. Show that $\triangle ABC \cong \triangle ABD$. What can you say about BC and BD.



Question 8:

- Simplify $(2 - 3x)^2 - (5 + 3x)^2$
 - Expand: $(2a + 3b - 4c)^2$
- Calculate the amount and the compound interest on Rs. 6000 for 2 years when the rates of interest for successive years are 5% and 6% respectively.
- In the adjoining figure $PS = QR$ and $\angle SPQ = \angle RQP$. Prove that:
 - $\triangle PQS \cong \triangle QRP$
 - $PR = QS$ and
 - $\angle QPR = \angle PQS$

