

Attempt all questions**1.** [1x3=3]

- i. If $B \times B = AB$, then either $A = 2, B = 5$ or $A = \underline{\quad}, B = \underline{\quad}$.
- ii. Find the side of the cubical box whose volume is 9261 cubic metres.
- iii. Find the value of the letters:

$$\begin{array}{r}
 \text{a)} \quad \begin{array}{r} A B \\ X A B \\ \hline 6 A B \end{array}
 \end{array}$$

2. [2x4=8]

- i. If 6130z782 is divisible by 11, where z is a digit, what is the value of z?
- ii. Write the cubes of two-digit prime numbers.(any two)
- iii. If a, b, c are three digits of a three-digit number, prove that $abc + bca + cab$ is a multiple of 37.
- iv. Simplify: $\sqrt[3]{5 - \frac{10}{27}}$

3. [3x3=9]

- i. In a 3-digit number, unit's digit is one more than the hundred's digit and ten's digit is one less than the hundred's digit. If the sum of the original 3-digit number and numbers obtained by changing the order of digits cyclically is 2664, find the number.
- ii. Evaluate the following :
 - a) $\sqrt[3]{(-1331) \times (3375)}$
 - b) $\sqrt[3]{27} + \sqrt[3]{0.008} + \sqrt[3]{0.064}$
- iii. Divide 259875 by the smallest number so that the quotient is a perfect cube. Also find the cube root of the quotient.

*******END*******