EXERCISE

Q.1 Find the number of digits in the cube root if number of digits in perfect cube numbers as follows.

(i) 6   (ii) 5   (iii) 4   (iv) 3

(v) 2   (vi) 1   (vii) 7

Q.2 Find the value of $\sqrt{117 + \sqrt[3]{19683}}$.

Q.3 Which of the following are perfect cube ?

(i) 10   (ii) 100   (iii) 1000 (iv) 10^4

(v) 10^5 (vi) 10^6

Q.4 Find the value of $\dfrac{(2)^3 + (10)^3}{\sqrt{1016064}}$

Q.5 Find the sum of cubes of first 10 natural numbers.

Q.6 Find the value of
$(1^3 + 2^3 + 3^3 + 4^4 + ... + 15^3) - (1^2 + 2^2 + 3^2 + ... + 10^2)$

Q.7 Find the cube root of the following numbers by inspection.

(i) 12167   (ii) 46.656   (iii) 6859   (iv) 912673

(v) 29791

Q.8 Find cube root of [$5\sqrt{100} + \sqrt{49} + (79507)^{1/3}$].

Q.9 Find cube root by prime factorisation

(i) 4913 (ii) 13824 (iii) 175616 (iv) 456533

Q.10 Find the least number by which when multiply the following numbers, such that the number become perfect cube.

(i) 2048   (ii) 1029   (iii) 45   (iv) 5832

Q.11 Find the least number by which when divide the following numbers. The number become perfect cube also find cube root of new number

(i) 4394   (ii) 8575   (iii) 7986 (iv) 28672

ANSWER KEY

1. (i) 2   ; (ii) 2 ; (iii) 2 ; (iv) 1 ; (v) 1 ; (vi) 1; (vii) 3   **2.** $\sqrt{117 + 27} = 12$

3. (iii), (vi)   **4.** 1   **5.** 3025   **6.** 14015

7. (i) 23 ; (ii) 3.6; (iii) 19; (iv) 97; (v) 31   **8.** 10

9. (i) 17;(ii)24; (iii) 56; (iv) 77   **10.** (i) 2; (ii) 9; (iii) 75; (iv) 1

11. (i) 2, 13; (ii) 25, 7; (iii) 6, 11; (iv) 7, 16