



# ST. LAWRENCE HIGH SCHOOL



## TOPIC –Laws of Indices

Subject : Mathematics

Class-9

F. M. 15

WORKSHEET NO. - 2

First term

Date: 18.01.2021

### Q.1) Choose the correct option:

(1x15=15)

- i) Which one of the following is the value of  $(27)^{-2/3}$   
a) 9                                  b) -9                                  c) 1/9                                  d) -1/9
- ii) Which one of the following is the value of  $(-32)^{-3/5}$   
a) 8                                  b) -8                                  c) 1/8                                  d) -1/8
- iii) If  $x = 5$ ,  $y = 3$ , then the value of  $(x+y)^{x/y}$  will be  
a) 2                                  b) 4                                  c) 8                                  d) 32
- iv) Which among the numbers  $3^{1/3}$ ,  $2^{1/2}$ ,  $8^{1/4}$ ,  $4^{1/6}$  is least  
a)  $3^{1/3}$                                   b)  $8^{1/4}$                                   c)  $2^{1/2}$                                   d)  $4^{1/6}$
- v) The simplest value of  $9^{1/3} \times (27)^{1/9} \times (4)^{-1/4} \times 2^{1/2}$  is  
a) 1                                  b) 2                                  c) 3                                  d) 4
- vi) The simplest value of  $3^3 \times (243)^{-2/3} \times 9^{-1/3}$  is  
a) 1/3                                  b) 3                                  c) 9                                  d) 1/9
- vii) The simplest value of  $(27/8)^{2/3} - (1/4)^{-2} + 5^0$  is  
a) 5/4                                  b) - 51/4                                  c) - 5/4                                  d) 13/4
- viii) If  $2^{(5x-1)} = 4 \times 2^{(3x+1)}$ , then the value of x is  
a) 1                                  b) -1                                  c) 2                                  d) 1/2
- ix) The value of  $(0.001)^{-1/3}$  is  
a) 20                                  b)  $10^{-1}$                                   c) 10                                  d) 12
- x) The value of  $(0.027)^{-2/3}$  is  
a) 100/9                                  b) 9c) 100                                  d) 9/5
- xi) The value of  $7^0 \times (25)^{-3/2} - 5^{-3}$  is  
a) 150                                  b) 25                                  c) 50 d) 0
- xii) If  $3^{3x} = 1/9$ , then the value of x is  
a) -2/3                                  b) 2/3                                  c) 0                                  d) 3/2
- xiii) If  $(729)^x = 9^{-6}$ , then the value of x is  
a) 1                                  b) -2                                  c) 3                                  d) 2
- xiv) The value of  $(32)^{-4/5}$  is  
a) 0                                  b) 8                                  c) 1/16                                  d) 16
- xv) If  $3^x \cdot 9^y = 81$ , then  $x + 2y$  is  
a) 4                                  b) 1/2                                  c) 2                                  d) 1/4

-Chaitali Roy