TOPIC – Laws of Indices

Subject : Mathematics **Class-9** **First Term** **F. M. 15**

WORKSHEET NO. - 1 **Solutions** **Date: 16.01.2021**

Q.1) **Choose the correct option:** **(1x15=15)**

i) If $3^x = 9^y$ then the value of $x : y$ is
   c) 2 : 1

ii) If $4^x = 8$, then the value of x is
   c) 3/2

iii) If $3^{2x} = 81$, then the value of 3^{-x} will be
   b) 1/9

iv) If $4 \times 5^x = 500$, then the value of x^x is
   d) 27

v) If $4^{2x} = 8^2$, then the value of x is
   a) 3/2

vi) If $2 \times 5^x = 5 \times 2^x$, then the value of x is
   b) 1

vii) If $9 \times 3^x = (27)^{2x-5}$ then the value of x is
   b) 13/5

viii) If $20^{-x} = 1/7$, which one of the following is the value of $(20)^{2x}$
   c) 49

ix) If $4^x = 8^{1/3}$, then the value of x will be
   d) 1/2

x) If $4^x = 8^3$, then the value of x is
   d) 9/2

xi) Solve $25^x = 5^3$
   a) 3/2

xii) If $2^{x+1} + 2^{x-2} = 9$, then which one of the following is the value of x
   b) 2

xiii) Solve $2^{x+3} \cdot 3^{x-3} = 64$
   a) 3

xiv) Which one of the following is the value of $2^{1/2} \cdot 4^{1/4} \cdot 16^{-1/4}$
   a) 1

xv) If $10^{2x} = 25$, then the value of 10^{-x}
   a) 1/5

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