Exponents and Powers

Question 1.
The value of 7^2 is
(a) 7
(b) 49
(c) 2
(d) 14

Answer: (b) 49

Question 2.
16 is the multiplicative inverse of
(a) 2^{-4}
(b) 2^8
(c) 8^2
(d) 2^4

Answer: (a) 2^{-4}

Question 3.
In 10^2 the base is
(a) 1
(b) 0
(c) 10
(d) 100

Answer: (c) 10

Question 4.
Charge of an electron is 0.000,000,000,000,000,000,16 coulomb and in exponential form it can be

written as
(a) 16×10^{-18} coulomb
(b) 1.6×10^{-21} coulomb
(c) 1.6×10^{-19} coulomb
(d) 16×10^{-21} coulomb

Answer: (c) 1.6×10^{-19} coulomb

Question 5.
Evaluate the exponential expression $(-n)^4 \times (-n)^2$, for n = 5.
(a) 25
(b) 15625
(c) 3125
(d) 625

Answer: (b) 15625

Question 6.
Value of $(3^0 + 2^0) \times 5^0$ is
(a) 1
(b) 25
(c) 2
(d) 0

Answer: (c) 2

Question 7.
When we have to add numbers in standard form, we convert them into numbers with the _____ exponents.
(a) same
(b) different
(c) not equal
(d) None of these

Answer: (a) same

Question 8.
Fill in the blank $a^m \times a^n = a$ …….. where m and n are natural numbers:-

(a) mn
(b) m + n
(c) m – n
(d) $\frac{m}{n}$

Answer: (b) m + n

Question 9.
Very small numbers can be expressed in standard form using _____ exponents.
(a) equal
(b) negative
(c) positive
(d) none of these

Answer: (b) negative

Question 10.
Multiplicative inverse of 7^{-2} is _____
(a) 49
(b) 5
(c) 7
(d) -14

Answer: (a) 49

Question 11.
The value of 1000^0 is
(a) 0
(b) 1000
(c) 1
(d) None of these

Answer: (c) 1

Question 12.
The standard form of 9030000000 is given by
(a) 9.03×10^9
(b) 90.3×10^7

(c) 903×10^6
(d) 9.03×10^{-9}

Answer: (a) 9.03×10^9

Question 13.
The multiplicative inverse of 2^{-3} is
(a) 2
(b) 3
(c) 3
(d) 2^3

Answer: (d) 2^3

Question 14.
Find the value of the expression a^2 for a = 10.
(a) 100
(b) 1
(c) 10
(d) None of these

Answer: (a) 100

Question 15.
Evaluate exponential expression -2^5.
(a) 15
(b) -32
(c) 16
(d) none of these

Answer: (b) -32

Question 16.
In exponential form 149,600,000,000 m is given by :
(a) 1.496×10^{11} m
(b) 1.496×10^8 m

(c) 14.96×10^8 m
(d) 14.96×10^{11} m

Answer: (a) 1.496×10^{11} m

Question 17.
The value of 3^0 is _____.
(a) 0
(b) 3
(c) 1
(d) None of these

Answer: (c) 1

Question 18.
The value of $(\frac{1}{3})^{-2}$ is equal to
(a) 9
(b) 1
(c) -6
(d) 1/3

Answer: (a) 9

Question 19.
The Base in the expression 10^{24} is _____.
(a) 1
(b) 10
(c) 0
(d) 24

Answer: (b) 10

Question 20.
$(a^m)^n$ is equal to
(a) a^{m+n}
(b) a^{m-n}

(c) a^{mn}
(d) a^{n-m}

Answer: (c) a^{mn}
