

**Note : All questions carry 1 mark each.**

1.  $(-7)^3$  is equal to  
 (a) 343                      (b) 21                      (c) -343                      (d) -21
2. The value of  $(-1)^{131}$  is equal to  
 (a) 0                      (b) 1                      (c) -1                      (d) 2
3. Which is greatest?  
 $3^2, 2^3, 3^3, 2^2$   
 (a)  $3^2$                       (b)  $2^3$                       (c)  $3^3$                       (d)  $2^2$
4.  $(11^3)^2$  is equal to  
 (a)  $11^{32}$                       (b)  $11^6$                       (c)  $11^1$                       (d)  $11^5$
5. Simplify:  $5 \times 5^4 \div 5^3$   
 (a) 5                      (b) 25                      (c) 125                      (d) 1
6. Simplify :  $(3^0 + 4^0)^0 \times 5^0$   
 (a) 1                      (b) 0                      (c) -1                      (d) 2
7. If  $(-5)^4 \times (-5)^5 = (-5)^x$ , then x is equal to  
 (a) 5                      (b) 4                      (c) 9                      (d) 13
8. Evaluate :  $(2^0 + 3^0 + 4^0) \div (12)^0$   
 (a) 0                      (b) 1                      (c) 2                      (d) 3
9. Which of the following is true?  
 (a)  $100^{10} = 10^{100}$                       (b)  $3^4 \times 4^3 = 12^7$                       (c)  $9 \times 9^8 = 81^8$                       (d)  $3^5 \times 4^5 = (12)^5$
10. Compare :  $a = 87.5 \times 10^{11}$  and  $b = 8.78 \times 10^{12}$   
 (a)  $a > b$                       (b)  $a < b$                       (c)  $a = b$                       (d) can't be determine
11. Write number for expanded form :  
 $5 \times 10^7 + 4 \times 10^4 + 7 \times 10^3 + 8 \times 10^1 + 3 \times 10^0$   
 (a) 50047083                      (b) 547830                      (c) 504783                      (d) 500470830

12. The number expressed in scientific notation should have the decimal point after the  
 (a) first zero digit (b) first non-zero digit  
 (c) second non-zero digit (d) last non-zero digit
13. The standard form of 8156,00,00,00,00,000 is  
 (a)  $8.156 \times 10^{11}$  (b)  $8.156 \times 10^{14}$  (c)  $81.56 \times 10^{11}$  (d)  $8.56 \times 10^{11}$
14.  $[(-3)^2]^3$  is equal to  
 (a)  $(-3)^8$  (b)  $(-3)^6$  (c)  $(-3)^5$  (d)  $(-3)^{23}$
15. For any two non-zero rational numbers  $x$  and  $y$ ,  $x^5 \div y^5$  is equal to  
 (a)  $(x \div y)^1$  (b)  $(x \div y)^0$  (c)  $(x \div y)^5$  (d)  $(x \div y)^{10}$
16. If  $2^{1998} - 2^{1997} - 2^{1996} + 2^{1995} = K \cdot 2^{1995}$ , then the value of  $K$  is  
 (a) 1 (b) 2 (c) 3 (d) 4
17. Which of the following is not equal to 1 ?  
 (a)  $\frac{2^3 \times 3^2}{4 \times 18}$  (b)  $[(-2)^3 \times (-2)^4] \div (-2)^7$   
 (c)  $\frac{3^0 \times 5^3}{5 \times 25}$  (d)  $\frac{2^4}{(7^0 + 3^0)^3}$
18. Which of the following has the largest value?  
 (a) 0.0001 (b)  $\frac{1}{100000}$  (c)  $\frac{1}{10^6}$  (d)  $\frac{1}{10^6} \div 0.1$
19. Which of the following is not true?  
 (a)  $3^2 > 2^3$  (b)  $4^3 = 2^6$  (c)  $3^3 = 9$  (d)  $2^5 > 5^2$
20. Which power of 8 is equal to  $2^6$ ?  
 (a) 3 (b) 2 (c) 1 (d) 4
21. Assertion . The value of  $(-8)^2 \times (-5)^3$  is 8000 .

Reason :  $(-1)^{\text{odd number}} = -1$  and  $(-1)^{\text{even number}} = 1$

- (a) If both Assertion and Reason are true and Reason is the correct explanation of Assertion.  
 (b) If both Assertion and Reason are true but Reason is not the correct explanation of Assertion.  
 (c) If Assertion is true but Reason is false.

(d) If Assertion is false but reason is true.

22. Assertion :  $8^{18} \times 8^7 \div 8^{25}$  can be written as  $10^0$ .

Reason : If  $a$  is any non-zero rational number and  $m$  and  $n$  are two whole numbers, then  $a^m \div a^n = a^{m-n}$  and  $a^m \times a^n = a^{m+n}$ .

(a) If both Assertion and Reason are true and Reason is the correct explanation of Assertion.

(b) If both Assertion and Reason are true but Reason is not the correct explanation of Assertion.

(c) If Assertion is true but Reason is false.

(d) If Assertion is false but reason is true.

23. Assertion : If  $(x^2)^3 = \frac{1}{64}$ , then  $x$  is equal to  $\frac{1}{2}$ .

Reason : If  $x^m = x^n$ , then  $m \neq n$ .

(a) If both Assertion and Reason are true and Reason is the correct explanation of Assertion.

(b) If both Assertion and Reason are true but Reason is not the correct explanation of Assertion.

(c) If Assertion is true but Reason is false.

(d) If Assertion is false but reason is true.

24. Assertion : In standard form, the number 285600000 can be expressed as  $2.856 \times 10^8$ .

Reason : To write large numbers, we use the form  $K \times 10^n$ , where  $K$  lies between 1 to 10 including 1 and  $n$  is an integer.

(a) If both Assertion and Reason are true and Reason is the correct explanation of Assertion.

(b) If both Assertion and Reason are true but Reason is not the correct explanation of Assertion.

(c) If Assertion is true but Reason is false.

(d) If Assertion is false but reason is true.