Transweb Educational Services Pvt Ltd
B -147, Sector -6 Noida, UP - 201301,
www.askiitians.com
Email: info@askiitians.com
Tel: 1800-2000-838

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Class: VII
Subject: Math's
Topic: Exponents and power
No. of Questions: 25

Q1. Express in exponential notation
A. 125
B. +64
C. 81
D. -343

Q2. Express 729 a powers of 3

Q3. Express -128 a powers of (-2)

Q4. Write a x a x a x a x b x b x b in exponential form.

Q5. Evaluate
A. 2^6
B. 3^5
C. $(-3)^4$

Q6. Evaluate
(i) $(-2)^3 \times (-3)^2$
(ii) $5^2 \times 2^5$

Q7. Write the base and the exponent in each of the following
(i) 7^7
(ii) 3^{-5}
(iii) 2^4

Q8. Express in exponential form
(i) (-2) x (-2) x (-2) x (-2)
(ii) 8 x 8 x 3 x 3 x (-5) x (-5)

Q9. Evaluate
(i) $(-1)^{19} \times (-1)^{26}$
(ii) $(-1)^{21} - (-1)^{22}$
(iii) $(-1)^{77} - (-1)^5$

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Q10. Find the difference between

(i) 5^2 and 2^5

(ii) 3^4 and 4^3

Q11. Which in greater

(i) 5^3 or 3^5

(ii) 2^6 or 6^2

Q12. Evaluate

(i) $\left(\frac{3}{5}\right)^4$

(ii) $\left(\frac{-4}{5}\right)^5$

Q13. Express in power notation and write down the base and power.

(i) $\frac{49}{81}$

(ii) $\frac{-8}{27}$

Q14. Simplify $\left(\frac{2}{3}\right)^4 \times \left(\frac{10}{15}\right)^2 \times \left(\frac{-9}{16}\right)$

Q15. Simplify using laws of exponents

(i) $a^2 \times a^3 \times a^{-5}$

(ii) $\frac{a^4 \times a^{-2} \times b^4}{a^8 \times a^{-6} \times b^2}$

Q16. Simplify using laws of exponents

(i) $\frac{3^5 \times 2^5 \times 5^2}{2^3 \times 3^2 \times 5^4}$

(ii) $(10^5 \times 3^2 \times 7^2)^0$

Q17. Simplify by factorizing the number into prime factors and using lows of exponents

(i) 108 x 192

(ii) 270 x 1125

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Q18. Find the value of

(i) $(243)^{2/5}$

(ii) $(512)^{\frac{-2}{9}}$

Q19. Simplify: $(18)^{\frac{1}{3}} \times (768)^{\frac{1}{3}}$

Q20. Simplify: $\frac{5^{-2}\times 3^{-3}\times (125)^{\frac{2}{3}}}{(27)^{\frac{-2}{3}}\times (32)^{\frac{-1}{5}}}$

Q21. Using laws of exponents, simplify: $\frac{2^3\times 3^4\times 4}{3\times 32}$

Q22. Simplify: $\frac{(5^2)^3\times 5^4}{5^7}$

Q23. Simplify: $\frac{4^5\times\ a^8\times\ b^3}{4^6\times\ a^7\times\ b^2}$

Q24. Simplify: $\left[\left(\frac{-2}{3}\right)^4 \times \frac{216}{125}\right] \div \left(\frac{6}{5}\right)^2 \times \left(\frac{4}{9}\right)$

Q25. Simplify: $\frac{3^2+3^3+3^4}{3^1+3^2+3^3}$

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