General Instructions:

1. This question paper consists of **15 multiple-choice questions (MCQs)**.
2. Each question carries **1 mark**. The maximum marks for this test are **15**.
3. The total time allowed to complete this test is **20 minutes**.
4. All questions are compulsory.
5. Each question has **four options (A), (B), (C), and (D)**. Only one option is correct.
6. Students must choose the **most appropriate option** for each question.
7. No marks will be deducted for incorrect answers.
8. Calculators and other electronic devices are **not permitted**.
9. Rough work should be done neatly in the space provided (if any).
10. Read each question carefully before answering.

Chapter: Exponents and Powers **Class:** 7
Test Code: 2026/Exponents/VII/02
Max Marks: 15

Q.1 If $x = \left(\frac{2}{3}\right)^2 \times \left(\frac{2}{3}\right)^0$, then the value of x^{-2} is:

(a) 16/81

(b) 81/16

(c) 4/9

(d) 9/4

Q.2 Find the value of m if $9^m \times 3^2 \times 3^m = 3^{11}$.

(a) 3

(b) 4

(c) 5

(d) 2

Q.3 The value of $(5^{-1} \times 3^{-1})^{-1} \div 6^{-1}$ is:

(a) 90

(b) 15

(c) 1/90

(d) 60

Q.4 Simplify: $\frac{3^{-5} \times 10^{-5} \times 125}{5^{-7} \times 6^{-5}}$.

(a) 5^2

(b) 5^5

(c) 3^5

(d) 1

Q.5 If $\left(\frac{125}{8}\right)^x = \left(\frac{2}{5}\right)^{-12}$, then the value of x is:

(a) 3

(b) 4

(c) -4

(d) 2

Q.6 The reciprocal of $\left(\frac{2}{5}\right)^{-2}$ is:

(a) 4/25

(b) 25/4

(c) 2/5

(d) 5/2

Q.7 Which is greater: 2^{10} or 10^2?

(a) 2^{10}

(b) 10^2

(c) Both are equal

(d) Cannot be determined

Q.8 If $x = 10^{100}$ and $y = 100^{10}$, then:

(a) $x = y$

(b) $x < y$

(c) $x > y$

(d) $x = 2y$

Q.9 Find the value of x such that $\left(\frac{3}{5}\right)^3 \times \left(\frac{3}{5}\right)^{-6} = \left(\frac{3}{5}\right)^{2x-1}$.

(a) -1

(b) 1

(c) -2

(d) 2

Q.10 The standard form of the thickness of a human hair, which is 0.00002 m, is:

(a) 2×10^{-4} m

(b) 2×10^{-5} m

(c) 0.2×10^{-4} m

(d) 20×10^{-6} m

Q.11 If $2^n = 1024$, then 2^{n-2} is:

(a) 512

(b) 256

(c) 128

(d) 64

Q.12 Simplify: $\left(\frac{x^a}{x^b}\right)^{a+b} \cdot \left(\frac{x^b}{x^c}\right)^{b+c} \cdot \left(\frac{x^c}{x^a}\right)^{c+a}$.

(a) 0

(b) 1

(c) x

(d) x^{a+b+c}

Q.13 Find the value of $\left(\frac{1}{2}\right)^{-2} + \left(\frac{1}{3}\right)^{-2} + \left(\frac{1}{4}\right)^{-2}$.

(a) 29

(b) 61

(c) 20

(d) 13

Q.14 If $3^x = 9^{x-2}$, then the value of 2^x is:

(a) 8

(b) 16

(c) 4

(d) 32

Q.15 The value of $\frac{(2^3)^2 \times 5^2}{8^2 \times 25}$ is:

(a) 1

(b) 2

(c) 4

(d) 0

— End of Question Paper —