Department of Mathematics

Multiple Choice Questions (1 Mark)

1. The additive inverse of $-\dfrac{1}{6}$ is

A	$-\dfrac{1}{6}$	B	$\dfrac{1}{6}$	C	$\dfrac{1}{4}$	D	$\dfrac{1}{4}$

2. By solving $(3^{-1} - 4^{-1})^{-1}$ we get

A	12	B	-12	C	$\dfrac{1}{4}$	D	$\dfrac{1}{3}$

3. Express as the powers of positive exponents $\left\{\left(\dfrac{-3}{2}\right)^{-2}\right\}^{-3}$

A	$\left(\dfrac{3}{2}\right)^{6}$	B	$-\left(\dfrac{3}{2}\right)^{2}$	C	$\left(\dfrac{-3}{2}\right)^{-3}$	D	$\left(\dfrac{-3}{2}\right)^{6}$

4. The cost of $3\dfrac{1}{2}$ metres of ribbon is ₹ $1\dfrac{3}{4}$. Find its cost per metre.

A	4	B	$\dfrac{3}{4}$	C	$\dfrac{1}{2}$	D	2

5. $-(-x)$ is same as

A	x	B	-x	C	$\dfrac{-1}{x}$	D	$\dfrac{1}{x}$

6. The multiplicative inverse of 3^{-4}

A	3^4	B	$\dfrac{4}{3}$	C	$\dfrac{1}{3^{-1}}$	D	$\dfrac{1}{3^4}$

7. The exponential form of $p^{-4} \times p^{6}$ is

A	p^6	B	p^2	C	p^{-2}	D	p^{10}

8. Find the value of m: $(-2)^3 \times (-2)^{-6} = (-2)^{2m-1}$

A	1	B	-1	C	3	D	-3

9. Between two given rational numbers, we can find

A	one and only one rational number	B	only two rational numbers	C	only ten rational numbers	D	infinitely many rational numbers.

10. Find the value of x so that $\left(\dfrac{3}{5}\right)^{2} \times \left(\dfrac{3}{5}\right)^{4x} = \left(\dfrac{3}{5}\right)^{10}$

	A	$x = 6$	B	$x = 1$	C	$x = 10$	D	$x = 2$

11	The value of $(2^0 + 9^0 + 14^0)$ is							
	A	1	B	3	C	25	D	0

12	Evaluate: $\left(\dfrac{3}{5}\right)^{-3} \times (3)^4$							
	A	25	B	125	C	375	D	625

13	Which rational number lies between 1 and 2?							
	A	$\dfrac{3}{2}$	B	$\dfrac{1}{2}$	C	$\dfrac{4}{2}$	D	$\dfrac{5}{2}$

14	Simplify: $\dfrac{(-2)^2 \times 5^{-2} \times 125}{7^{-2} \times (-2)^2 \times 49}$							
	A	25	B	5	C	125	D	50

15	The speed of light is 234598758 m/s. Write in standard form.							
	A	23.4598758×10^7	B	$23.4598758 \times 10^{-7}$	C	2.34598758×10^8	D	$2.34598758 \times 10^{-8}$

16	The value of $\left(\dfrac{2}{7}\right)^{-2}$ is							
	A	$\dfrac{4}{7}$	B	$\dfrac{4}{49}$	C	$\dfrac{49}{4}$	D	$\dfrac{5}{2}$

17	The reciprocal of $\left(\dfrac{3}{5}\right)^{-1}$ is							
	A	$\dfrac{3}{5}$	B	$\dfrac{5}{3}$	C	$-\dfrac{3}{5}$	D	$-\dfrac{5}{3}$

18	Using suitable rearrangement and find the sum: $\dfrac{4}{7} + \dfrac{-4}{9} + \dfrac{3}{7} + \dfrac{-14}{9}$							
	A	1	B	0	C	-1	D	2

19	Find the product of $\dfrac{15}{13}$ and multiplicative inverse of $\dfrac{-5}{26}$.							
	A	-6	B	$\dfrac{20}{26}$	C	$\dfrac{-6}{26}$	D	$\dfrac{10}{13}$

20	The equivalent rational number of $\dfrac{7}{9}$, whose denominator is 45 is							
	A	$\dfrac{35}{9}$	B	$\dfrac{12}{45}$	C	$\dfrac{7}{45}$	D	$\dfrac{35}{45}$

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21	Fill in the blanks: Name the appropriate property used

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(i) $\dfrac{-3}{5} \times 1 = 1 \times \dfrac{-3}{5} = \dfrac{-3}{5}$ _____

(ii) $\dfrac{1}{7} \times \left(\dfrac{-3}{5} + \dfrac{6}{7}\right) = \left(\dfrac{1}{7} \times \dfrac{-3}{5}\right) + \left(\dfrac{1}{7} \times \dfrac{6}{7}\right)$ _____

(iii) $\dfrac{3}{5} \times \left(\dfrac{7}{11} \times \dfrac{4}{3}\right) = \dfrac{7}{11} \times \left(\dfrac{3}{5} \times \dfrac{4}{3}\right)$ _____

22 Fill in the blanks:

(i) The additive inverse of $\dfrac{1}{3} \times 3$ is_____

(ii) The multiplicative inverse of $-1\dfrac{1}{7} \times (-21)$ is_____

(iii) The multiplicative identity for rational number 2 is _____

23 Mr Holland bought 2500 kg of rice, 500 kg of sugar and 150 litres of cooking oil as monthly stock for his Fast food Restaurant. Mr. Holland pays ₹ 1.7×10^5 for his purchase.

I	Write weight 2500 kg in grams. Give your answer in standard form.						
	A	25×10^6 kg	B	2.5×10^6 kg	C	2.5×10^3 kg	D	2.5×10^5 kg

II	One grain of rice weighs 0.03g. Write the weight of one grain of rice in standard form.						
	A	3.0×10^6 kg	B	3×10^5 kg	C	3.0×10^{-5} kg	D	3.0×10^{-3} kg

III	If a sugar crystal weighs 0.000008 Kg. Express the weight of one crystal of sugar in standard form.						
	A	0.8×10^6	B	8.0×10^{-6}	C	8.0×10^{-4}	D	8.0×10^{-5}

IV	Write the total amount paid by him in usual form.						
	A	₹1,70,000	B	₹70,000	C	₹10,70,000	D	₹17,000

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<table>
<tr><td rowspan="5">Answers</td><td>1</td><td>$\dfrac{1}{6}$</td><td>2</td><td>12</td><td>3.</td><td>$\left(\dfrac{-3}{2}\right)^6$</td><td>4</td><td>$\dfrac{1}{2}$</td></tr>
<tr><td>5</td><td>x</td><td>6</td><td>3^4</td><td>7</td><td>p^2</td><td>8</td><td>-1</td></tr>
<tr><td>9</td><td>infinitely many rational numbers</td><td>10</td><td>$x = 2$</td><td>11</td><td>3</td><td>12</td><td>375</td></tr>
<tr><td>13</td><td>$\dfrac{3}{2}$</td><td>14</td><td>5</td><td>15</td><td>2.34598758×10^8</td><td>16</td><td>$\dfrac{49}{4}$</td></tr>
<tr><td>17</td><td>$\dfrac{3}{5}$</td><td>18</td><td>-1</td><td>19</td><td>-6</td><td>20</td><td>$\dfrac{35}{45}$</td></tr>
<tr><td></td><td>21</td><td>(i) Multiplicative identity
(ii) Distributivity
(iii) Associativity</td><td>22</td><td>(i) -1
(ii) $\dfrac{1}{24}$
(iii) 1</td><td>23</td><td>2.5×10^6 kg
3.0×10^{-5} kg
8.0×10^{-7}
₹1,70,000</td><td></td><td></td></tr>
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