Department of Mathematics

Multiple Choice Questions

Q.1. Choose a rational number greater than -3.

A	-3	B	-4	C	-5	D	$\dfrac{-1}{2}$

Q.2. If we multiply $\dfrac{7}{13}$ by the reciprocal of $\dfrac{-7}{16}$ the answer is:

A	$\dfrac{13}{16}$	B	$\dfrac{16}{13}$	C	$\dfrac{-16}{13}$	D	$\dfrac{-13}{16}$

Q.3. If $x = \dfrac{-4}{9}$ and $y = \dfrac{7}{18}$, then $x \div y$ is

A	$\dfrac{-8}{7}$	B	$\dfrac{-7}{8}$	C	$\dfrac{7}{8}$	D	$\dfrac{4}{7}$

Q.4. The value of $\left(\dfrac{-16}{21} \times \dfrac{-3}{4}\right)$ is:

A	$\dfrac{-4}{7}$	B	$\dfrac{7}{4}$	C	$\dfrac{4}{7}$	D	$-\dfrac{7}{4}$

Q.5. The value of x which makes the two rational numbers $\dfrac{5}{24}$ and $\dfrac{x}{120}$ equivalent is:

A	25	B	$\dfrac{1}{25}$	C	20	D	5

Q.6. The standard form of the rational number $\dfrac{18}{72}$ is:

A	$\dfrac{1}{2}$	B	$\dfrac{1}{3}$	C	$\dfrac{1}{4}$	D	$\dfrac{1}{5}$

Q.7. Identity element for multiplication of rational numbers is:

A	1	B	0	C	-1	D	does not exist

Q.8. The additive inverse of $\dfrac{-7}{8}$ is:

A	$\dfrac{8}{7}$	B	$\dfrac{-8}{7}$	C	$\dfrac{7}{8}$	D	$\dfrac{-7}{8}$

Q.9 Sum of a number and its additive inverse is equal to:

A	0	B	1	C	-1	D	Not defined

Q.10	Multiplicative inverse of $-2\frac{5}{8}$ is:							
	A	$\frac{11}{8}$	B	$\frac{-8}{21}$	C	$\frac{21}{8}$	D	$\frac{-21}{8}$

LONG ANSWER QUESTIONS:

Q.11	Simplify $\frac{5}{4} - \frac{7}{6} - \left(-\frac{2}{3}\right)$
Q.12	Find the reciprocal of $\frac{88}{36} \div \frac{55}{186}$
Q.13	Compare the following pairs of rational numbers: a) $\frac{-7}{11}, \frac{-5}{8}$　　　　　b) $\frac{3}{4}, \frac{7}{10}$
Q.14	Simplify $\left(\frac{6}{55} \times \frac{-22}{9}\right) - \left(\frac{27}{25} \times \frac{-10}{9}\right)$
Q.15	Represent the following rational numbers on a number line. $\frac{5}{10}, \frac{-2}{10}, \frac{7}{10}, 0, \frac{3}{10}, \frac{-5}{10}$
Q.16	Fill in the blanks: (i) The product of a positive number and its reciprocal is _____. (ii) The rational number _____ has no reciprocal. (iii) The reciprocal of the reciprocal of a number is _____. (iv) The rational number _____ is neither positive nor negative. (v) _____ is the only rational number which is equal its additive inverse.
Q.17	Write any 6 rational numbers between $\frac{-2}{7}$ and $\frac{-4}{9}$.
Q.18	Evaluate the following: $i)\ \frac{6}{-8} \times \frac{-5}{4}$　　　$ii)\ \frac{2}{5} \div \frac{26}{-15}$　　　$iii)\ \frac{1}{12} - \frac{2}{15}$　　　　$iv)\ \frac{-8}{9} + \frac{11}{6}$
Q.19	Write four rational numbers equivalent to $a)\ \frac{-7}{6}$　　　　$b)\ \frac{3}{11}$
Q.20	**CASE STUDY** A book has total of 288 pages. Reena has completed reading $\frac{2}{3}$ of the book. Her friend Shyam has completed $\frac{1}{2}$ of the book and Mayank has completed $\frac{1}{6}$ of the book. Based on the given information, answer the following questions: 　　a) Arrange the completion of reading of all the three friends in descending order. 　　b) Who finishes maximum portion of the book? 　　c) Using number line, represent the portions read by all the three friends.

ANSWERS

Q.1	D	Q.2	C	Q.3	A
Q.4	C	Q.5	A	Q.6	C
Q.7	A	Q.8	C	Q.9	A
Q.10	B	Q.11	$\dfrac{3}{4}$	Q.12	$\dfrac{15}{124}$
Q.13	a) $<$ b) $>$	Q.14	$\dfrac{14}{15}$	Q.16	i)1 ii) 0 iii) same number iv) 0 v) 0
Q.17	$\dfrac{-19}{63}, \dfrac{-20}{63}$, $\dfrac{-21}{63}, \dfrac{-22}{63}, \dfrac{-23}{63}$	Q.18	i) $\dfrac{15}{16}$ ii) $\dfrac{-3}{13}$ iii) $\dfrac{-1}{20}$ iv) $\dfrac{51}{54}$	Q.19	a) $\dfrac{-14}{12}, \dfrac{-21}{18}, \dfrac{-28}{24},$ $\dfrac{-35}{30}$
Q.19	b) $\dfrac{6}{22}, \dfrac{9}{33}, \dfrac{12}{44}, \dfrac{15}{55}$	Q.20	a) $\dfrac{2}{3}, \dfrac{1}{2}, \dfrac{1}{6}$ b) Reena		