

(Talent & Olympiad Question)

Decimals

Multiple Choice Questions

1. Which decimal number is equivalent to $\frac{78}{100}$?
(a) 0.78 (b) 78.00
(c) 0.078 (d) 7.8
2. How is 3 tenths 5 thousandths written in decimals?
(a) 35.00 (b) 0.35
(c) 3.5 (d) 0.305
3. What is the sum of 0.3, 0.03 and 0.003?
(a) 0.999 (b) 0.393
(c) 0.636 (d) 0.333
4. What is the difference of 32 and 27.091?
(a) 30.791 (b) 5.909
(c) 4.909 (d) 3.909
5. What is the product of 78.12 and 1.5?
(a) 117.81 (b) 117.18
(c) 117.32 (d) 117.80
6. Find the quotient obtained when 125.625 is divided by 0.5 .
(a) 251.25 (b) 2512.5
(c) 25125 (d) 25.125
7. How is 5 thousandths written as a decimal number?
(a) 0.05 (b) 0.005
(c) 5.000 (d) 0.056
8. Identify the decimal number form of 2 tens 6 thousandths.
(a) 20.6 (b) 20.06
(c) 210.6000 (d) 20.006
9. Find the quotient in the division given in the box.

$9.826 \div 10$

(a) 98.26 (b) 982.6
(c) 0.09826 (d) 0.9826
10. Evaluate the product in the box.

$0.05 \times 0.09 \times 5$

(a) 0.025 (b) 0.225
(c) 0.005 (d) 0.0225
11. Study the following sum.

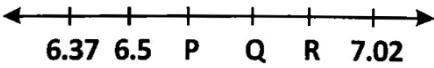
$18.0006 + 14.005 + 12.34 = \boxed{?}$

Find the missing number.
(a) 45.3356 (b) 45.3255
(c) 44.3456 (d) 44.3356
12. If $2805 \div 2.55 = 1100$, find the quotient of $280.5 \div 25.5$.
(a) 1.1 (b) 1.01
(c) 0.11 (d) 11
13. How is 0.23 represented as a vulgar fraction?
(a) $\frac{7}{30}$ (b) $\frac{23}{100}$
(c) $\frac{23}{90}$ (d) $\frac{7}{90}$

14. Find the value of $\left(\frac{0.1}{0.01} + \frac{0.01}{0.1}\right)$.
- (a) 10.1
(b) 1.10
(c) 1.01
(d) 10.01
15. Given 0.111 is approximately equal to $\frac{1}{g}$, what is the approximate value of 0.777?
- (a) $\frac{5}{9}$ (b) $\frac{7}{9}$
(c) $\frac{2}{9}$ (d) $\frac{1}{9}$
16. The cost of 15 pens is. What is the cost of 1 pen?
- (a) Rs.12.80 (b) Rs.8.90
(c) Rs.10.90 (d) Rs.9.90
17. What is the cost of 30.5 litres of milk at the rate of Rs.7.50 per litre?
- (a) Rs.225.75 (b) Rs.223.75
(c) Rs.228.75 (d) Rs.232.75
18. The sum of two numbers is 31.021. If one of them is 11.56, find the other.
- (a) 19.461 (b) 17.461
(c) 18.641 (d) 19.561
19. A shopkeeper sold 12.750 kg of sugar on a day. On the next day he sold 38.250 kg of sugar. On the third day he sold 50.500 kg of sugar. How much of sugar in all did the shopkeeper sell?
- (a) 100 kg (b) 101.5 kg
(c) 102.5 kg (d) 101 kg

20. What type of decimals are the numbers given?

16.37	18.97
12.26	21.48

- (a) Like decimal numbers
(b) Unlike decimal numbers
(c) Equivalent decimal numbers
(d) Estimated decimal numbers
21. Study the decimal number line given.
- 
- What is the value of $P + Q - R$?
- (a) 5.59 (b) 6.47
(c) 6.5 (d) 20.27
22. What the value is of 11.047 rounded off to the nearest tenth?
- (a) 11.0 (b) 11.1
(c) 11.2 (d) 12.04
23. What is the number obtained on rounding off 32.4 to the nearest ones?
- (a) 30 (b) 32
(c) 33 (d) 35
24. Which one of the following is the best estimate for 9.85×23.099 ?
- (a) 9×23 (b) 9×24
(c) 10×23 (d) 10×24
25. How many hundredths less than 5.47 is 5.07?
- (a) 40
(b) 500
(c) 4000
(d) 4

26. How many hundredths more than 1.98 is 21 tenths?

- (a) 21 (b) 15
(c) 1.2 (d) 12

27. What is the value of p rounded off to 1 decimal place?

- (a) 0.875 (b) 0.9
(c) 0.88 (d) 0.8

28. What is the value of

$$14 + \frac{8}{10} + \frac{108}{100} + \frac{345}{1000} ?$$

- (a) 16.225 (b) 15.262
(c) 16.252 (d) 16.255

29. 65 hundredths of a number is 130. What is the number?

- (a) 200 (b) 150
(c) 300 (d) 260

(30-31): A tank can hold 20.145 l of water. $\frac{3}{5}$ of the water in the tank is used for different purposes.

30. What amount of water is used?

- (a) 4.029l (b) 9.058l
(c) 12.087l (d) 60.435l

31. What quantity of water is remaining in the tank?

- (a) 8.185l (b) 9.158l
(c) 8.508l (d) 8.058l

32. What is the product when the sum of 1.048 and 3.162 is multiplied by 39?

- (a) 4.21
(b) 43.21
(c) 124.36

(d) 164.19

33. A nylon string 18 m long is cut into equal pieces of 0.2 m each. How many equal pieces are obtained?

- (a) 180 (b) 90
(c) 9 (d) 360

34. Which of the following decimal numbers has the greatest value?

- (a) 0.109 (b) 0.19
(c) 0.11 (d) 0.101

35. A shopkeeper mixed 3.6 kg of grade-II cashew nuts in 0.75 kg of grade-I cashew nuts. He packed the mixture equally into 5 boxes. What is the mass of each box?

- (a) 21.75 kg (b) 4.35 kg
(c) 2.85 kg (d) 0.87 kg

36. A coil of wire 12.948 m long is cut into 4 pieces. The length of 3 pieces is 3.085 m each. What is the length of the fourth piece?

- (a) 2.693 m (b) 3.693 m
(c) 5.693 m (d) 4.693 m

37. Study the decimal numbers given in the box.

0.684	68.4	684	6.84
P	Q	R	S

Find the correct descending order of numbers.

- (a) P, Q, R, S
(b) Q, R, P, S
(c) R, Q, S, P
(d) R, Q, P, S

38. The mass of a table is 29.437 kg . What is the approximate mass of 5 such tables?

- (a) 145 kg (b) 154 kg
(c) 150 kg (d) 100 kg

39. The height of a wooden block is 12.28 cm . What is the approximate height of 14 similar blocks stacked on top of each other?

- (a) 171 cm (b) 168 cm
(c) 170 cm (d) 171.92 cm

40. 15 packets of rice each weighing 6.25 kg are repacked into packets weighing 4 kg . During the repacking, 1.75 kg of rice is lost. How many 4 kg packets of rice were obtained?

- (a) 8 (b) 38
(c) 23.5 (d) 23

41. The cost of a pencil and an eraser is $\text{Rs.}0.70$. Priya bought 3 pencils and 4 erasers and paid $\text{Rs.}240$. How much do 2 pencils and 2 erasers cost?

- (a) $\text{Rs.}3.40$
(b) $\text{Rs.}2.50$
(c) $\text{Rs.}1.40$
(d) $\text{Rs.}1.10$

42. 20 cakes were baked using 74.4 kg of flour. How much flour is needed to bake 13 cakes?

- (a) 48 kg
(b) 48.36 kg
(c) 51 kg
(d) 49 kg

43. Study the equation given.

$$7.8 + 2.4 \div 60 - 0.09 = R$$

Find the value of R rounded off to one decimal place.

- (a) 7.8 (b) 7.75
(c) 7.7 (d) 8

44. Suman had to multiply 14.36 by 23 . Instead, he added the two numbers. What is the difference between his answer and the actual answer?

- (a) 291.92 (b) 292
(c) 293.92 (d) 292.92

45. In which place is the digit 7 in the number given?

645.7849

- (a) Tenths (b) Ones
(c) Hundredths (d) Thousandths

46. Find the resulting decimal number when the given decimal expression is evaluated?

$$2 \times 0.5 + 9 \div 0.3 + 10 \times 0.92$$

- (a) 33.0 (b) 40.2
(c) 6.0 (d) 31.2

47. Find the quotient of the given division,

$$17.28 \div 12$$

$$3.6 \times 0.2$$

- (a) 0.2 (b) 2
(c) 20 (d) 0.02

48. What is the resultant of $0.3 \div 0.3 \times 3$?

- (a) $\frac{1}{3}$ (b) 0.3
(c) $\frac{1}{0.3}$ (d) 3

Answers with Explanation

1. (a) $\frac{78}{100} = 0.78$

2. (d) 3 tenths 5 thousandths

3. (d) $= \frac{3}{10} + \frac{5}{1000} = 0.305$

4. (c) The required difference
 $= 32 - 27.091 = 4.909$

5. (b) $78.12 \times 1.5 = 117.18$

6. (a) $125.625 \div 0.5$
 $= \frac{125625}{1000} \div \frac{5}{10} = 251.25$

7. (b) 5 thousandths $= \frac{5}{1000} = 0.005$

8. (d) 2 tens 6 thousandths
 $= 20 + 0.006 = 20.006$

9. (d) When a decimal number is divided by 10, the decimal shifts left by 1 place.
 So, $9.826 \div 10 = 0.9826$

10. (d) $0.05 \times 0.09 \times 5 = 0.0225$

11. (c)

$$\begin{array}{r} 18.0006 \\ 14.005 \\ +12.34 \\ \hline 44.3456 \end{array}$$

12. (d) As $2805 \div 2.55 = 1100$

$$280.5 \div 25.5 = \frac{1100}{100} = 11$$

13. (b) $0.23 = \frac{23}{100}$

14. (a) $\frac{0.1}{0.01} + \frac{0.01}{0.1} = 10 + \frac{1}{10} = 10 + 0.1$

15. (b) $0.777 = 7 \times 0.111$
 $= 7 \times \frac{1}{9} = \frac{7}{9}$

16. (d) The cost of 15 pens = Rs. 148.50
 The cost of 1 pen = Rs. $148.50 \div 15$
 $= \text{Rs. } 9.90$

17. (c) The cost of 1 litre of milk = Rs. 7.50
 \therefore The cost of 30.5 litres of milk
 $= \text{Rs. } 7.50 \times 30.5 = 228.75$

18. (a)

19. (b)

20. (a)

21. (c) From the given decimal number line, the distance between two consecutive markings is
 $6.5 - 6.37 = 0.13$
 \therefore The value of P is $6.5 + 0.13 = 6.63$
 The value of Q is $6.63 + 0.13 = 6.76$
 The value of R is $6.76 + 0.13 = 6.89$
 $\therefore P + Q - R = 6.63 + 6.76 - 6.89$
 $= 6.50 = 6.5$

22. (a) 11.047 rounded to the nearest tenth is 11.0 as $4 < 5$.

23. (b) 32.4 rounded to the nearest ones is 32 as $4 < 5$ in the tenths place.

24. (c) $9.85 \approx 10$ and $23.099 \approx 23$
 $\therefore 9.85 \times 23.099 \approx 10 \times 23$

25. (a) The difference of 5.47 and 5.07
 $= 5.47 - 5.07$
 $= 0.40 = 40$ hundredths

26. (d) 21 tenths = 2.1
 The difference of the given numbers
 $= 2.1 - 1.98 = 0.12 = 12$ hundredths

27. (b) $\frac{7}{8}$

$$\begin{array}{r} 0.875 \\ 8 \overline{)7000} \\ \underline{-64} \\ 60 \\ \underline{-56} \\ 40 \\ \underline{-40} \\ 0 \end{array}$$

$\therefore \frac{7}{8} = 0.875 \approx 0.9$

28. (a) $14 + \frac{8}{10} + \frac{108}{100} + \frac{345}{1000}$
 $= 14 + 0.8 + 1.08 + 0.345 = 16.225$

29. (a) 65 hundredths = 0.65
 The required number is $130 \div 0.65$
 $= 130 \times \frac{100}{65} = 200$

30. (c) Quantity of water the tank can hold = 20.145ℓ

Fraction of water used = $\frac{3}{5}$

\therefore Quantity of water used

$$= \frac{3}{5} \times (20.145)\ell = 12.087\ell$$

31. (d) Quantity of water used = $\frac{3}{5} \times 20.145\ell$

\therefore Quantity of water remaining in the tank

$$= \left(1 - \frac{3}{5}\right) \times (20.145)\ell$$

32. (d) The required product
 $= 39 \times (1.048 + 3.162)$
 $= 39 \times 4.210 = 164.19$

33. (b) Total length of the string = 18 m

Length of each equal part = 0.2 m

$$\therefore \text{No. of pieces} = \frac{18 \text{ m}}{0.2 \text{ m}} = \frac{180}{2} = 90$$

34. (b) $0.19 > 0.11 > 0.109 > 0.10$
 So, 0.19 has the greatest value.

35. (d) Mass of grade I cashew nuts = 0.75 kg

Mass of grade II cashew nuts = 3.6 kg

\therefore Total mass of cashew nuts

$$= (3.6 + 0.75)\text{kg}$$

$$= 4.35 \text{ kg}$$

The mixture is packed equally into 5 packets.

\therefore Mass of each packet

$$= \frac{4.35}{5} \text{ kg} = 0.87 \text{ kg}$$

36. (b)

37. (c)

38. (a)

39. (b) The height of a wooden block

$$= 12.28 \text{ cm} \approx 12 \text{ cm}$$

\therefore The height of 14 similar blocks stacked on top

$$= 12 \times 14 = 168 \text{ cm}$$

40. (d)

41. (c)

42. (b)

43. (a) $7.8 + 2.4 \div 60 - 0.09 = R$

$$7.8 + \left(\frac{2.4}{60} \right) - 0.09 = R$$

$$7.8 + \left(\frac{24}{600} \right) - 0.09 = R$$

$$7.8 + 0.04 - 0.09 = R$$

$$7.84 - 0.09 = R$$

$$\therefore R = 7.75$$

Rounding off R to 1 decimal place, we get 7.8.

44. (d) Actual: $14.36 \times 23 = 330.28$

$$\text{Addition: } 14.36 + 23 = 37.36$$

The difference between his answer and the actual answer

$$= 330.28 - 37.36 = 292.92$$

45. (a) 7 is the first digit of the decimal part of the given number.

So, 7 is in tenths place.

46. (b) $2 \times 0.5 + 9 \div 0.3 + 10 \times 0.92$

$$= 1 + 30 + 9.2 = 40.2$$

$$\begin{aligned} 47. \quad (b) \quad \frac{17.28 \div 12}{3.6 \times 0.2} &= \frac{17.28 \times \frac{1}{12}}{0.72} \\ &= \frac{1728}{72 \times 12} = \frac{1728}{864} = 2 \end{aligned}$$

48. (d) $0.3 \div 0.3 \times 3 = 1 \times 3 = 3$