educational excellence

## GRADE



## QUESTIONS 50

TOTALMARKS 100

## DURATION



## Instruction for Students:

© Read the question carefully before answering

- Each question has 4 options (A, B, C \& D).
© Grand Finale Marking System:-
Each correct answer carries 2 marks.
For each unattempted question, 2 marks will be deducted.
For each wrong answer, 2.5 marks will be deducted.
© Grand Finale Result will be declared Online after 45 days from the exam date. To know your Result, login to www.neltas.com and use given Seat Number.

1. What is the reciprocal of $2 \frac{1}{9} \times 1 \frac{6}{57}$ ?
(A) $\frac{21}{3}$
(B) $\frac{\mathbf{3 1}}{\mathbf{2}}$
(C) $\frac{3}{7}$
(D) $\frac{\mathbf{3}}{\mathbf{5}}$
2. Represent the rational number $\frac{\mathbf{- 1 4 5}}{\mathbf{5 8}}$ in its simplest form.
(A) $\frac{-5}{3}$
(B) $\frac{-5}{6}$
(C) $\frac{-5}{2}$
(D) None of these
3. Find the average of $4.2,3.04$ and 8.3
(A) 6.18
(B) 6.08
(C) 5.08
(D) 5.18
4. $\sqrt{\mathbf{2 4 , 9 6 4}}=$ $\qquad$ (A) 156
(B) 154
(C) 158
(D) None of these
5. $213-217-29=$ $\qquad$ (A) -35
(B) -33
(C) -32
(D) None of these
6. Find average of $\mathbf{1 1 2 . 2}$ and 50
(A) 80.1
(B) 8.11
(C) 81.1
(D) 82.1
7. $\left(-2^{4}\right)^{2} \times 2^{2}=$ $\qquad$ (A) 1,024
(B) $-1,024$
(C) 1,204
(D) $-1,402$
8. ₹5,000 is divided between 3 students $A, B$ and $C$ in the ratio of 5:3:2.

How much does C get?
(A) ₹1,500
(B) ₹1,250
(C) ₹1,100
(D) ₹1,000
9. HCF of 112 and 184 is $\qquad$
(A) 4
(B) 8
(C) 12
(D) 16
10. Find the whole quantity, if $\mathbf{8 \%}$ of it is $\mathbf{5 6 0}$
(A) 8,000
(B) 7,000
(C) 6,000
(D) 1,000
11. A painting is bought for $₹ 5,000$ and sold for $₹ 6,550$. What is the profit percent?
(A) $31 \%$
(B) $21 \%$
(C) $29 \%$
(D) $35 \%$

12. 0.8 x $\qquad$ $=100.2$
(A) 122.25
(B) 123.25
(C) 124.25
(D) 125.25
13. A man borrowed $₹ 8,000$ from a bank at $8 \%$ per annum.

What is the amount he has to pay after 5 years?
(A) ₹ 11,200
(B) $₹ 10,200$
(C) ₹9,880
(D) ₹ 11,400

14. Write the co-ordinates of the image of the point $A(-5,2)$ when reflected across the $X$ axis.
(A) $(5,-2)$
(B) $(2,5)$
(C) $(-5,-2)$
(D) None of these
15. Which even number between 1 and 10 has a line of symmetry?
(A) 4
(B) 2
(C) 6
(D) 8
16. Subtracting $3 x y z$ from the sum of $-5 y z x$ and $6 x y z$ gives $\qquad$
(A) $2 x y z$
(B) $-2 x y z$
(C) $8 x y z$
(D) $4 x y z$
17. $(a-b)^{2}=$ $\qquad$ (A) $a^{2}+2 a b+b^{2}$
(B) $a^{2}+3 a b+b^{2}$
(C) $a^{2}+b^{2}$
(D) $a^{2}-2 a b+b^{2}$
18. The sum of two numbers is 35 . If one number exceeds the other by 7 , what are the numbers?
(A) 7,14
(B) 12,19
(C) 14,21
(D) 15,20
19. If $s=-8, s^{2}-4 s=$ $\qquad$ (A) 106
(B) 96
(C) 86
(D) None of these
20. The difference in the measures of two complementary angles is 12 degrees. Find the angles.
(A) $40^{\circ}, 50^{\circ}$
(B) $35^{\circ}, 47^{\circ}$
(C) $28^{\circ}, 40^{\circ}$
(D) $39^{\circ}, 51^{\circ}$
21. The base and the corresponding height of a parallelogram are 14 cm and 7 cm respectively. Find the area of the parallelogram.
(A) $108 \mathrm{~cm}^{2}$
(B) $98 \mathrm{~cm}^{2}$
(C) $96 \mathrm{~cm}^{2}$
(D) None of these

22. The side of a square is $\mathbf{1 5} \mathbf{~ c m}$. Find its area.
(A) $225 \mathrm{~m}^{2}$
(B) $250 \mathrm{~cm}^{2}$

15 cm
(C) $225 \mathrm{~cm}^{2}$
(D) $275 \mathrm{~cm}^{2}$

23. $-198 \times 65 \times 0.44 \times 0=$ $\qquad$ (A) $-5,662.8$
(B) 5,662.8
(C) $-5,552.8$
(D) None of these
24. Find the unknown side $x$ of the following right angled triangle:
(A) 18
(B) 9
(C) 19
(D) None of these

25. A square lawn is surrounded by a path 2 m wide.

If the area of the path is $240 \mathrm{~m}^{2}$, find the area of the lawn.
(A) $784 \mathrm{~m}^{2}$
(B) $748 \mathrm{~m}^{2}$
(C) $684 \mathrm{~m}^{2}$
(D) None of these

## 240 m $^{2}$

$\xrightarrow[2 m]{ }$
26. Complete the following pattern: $0.2,-0.6,1.8,-5.4$,
(A) -15.2
(B) 16.2
(C) 17.2
(D) None of these


A survey to find the favourite ice-cream flavour was conducted on a set of students in an event.
Answer questions $\mathbf{2 7}$ to $\mathbf{3 0}$ based on the bar graph below:

27. How many students are involved in the survey?
(A) 75
(B) 80
(C) 100
(D) 120
28. Which is the most favourite ice-cream flavour?
(A) Mango
(B) Chocolate
(C) Strawberry
(D) None of these

29. Which two types of flavours are liked in the ratio of $1: 4$ ?
(A) Vanilla and chocolate
(B) Butterscotch and Blueberry
(C) Vanilla and Mango
(D) Butterscotch and Chocolate
30. Which is the least favourite flavour in this survey?
(A) Butterscotch
(B) Vanilla
(C) Mango
(D) Blueberry

31. Find angle $\mathbf{x}$ in degrees in the given figure.
(A) $30^{\circ}$
(B) $45^{\circ}$
(C) $60^{\circ}$
(D) $50^{\circ}$

32. In a basket of 87 fruits, $1 / 3$ are rotten. How many fruits are fresh?
(A) 29
(B) 39
(C) 58
(D) 68
33. Compare the rational numbers -4 and $3 / 2$ and say which of the following statements is correct.
(A) -4 is greater than $3 / 2$
(B) -4 comes to the right of $3 / 2$ in the number line
(C) -4 comes to the left of $3 / 2$ in the number line
(D) None of these
34. $30.045 \div 0.15=$ $\qquad$ (A) 20.03
(B) 200.3
(C) 20.3
(D) None of these
35. $(-12)^{3}=$ $\qquad$ (A) $-1,728$
(B) 1,728
(C) $-1,628$
(D) None of these
36. $(-20) \times(-6) \times(-2)=$ $\qquad$ (A) -120
(B) 120
(C) -240
(D) 240
37. Find the average of the following: 2.3, 3.4, 4.05, 6.6, 7.77
(A) 4.834
(B) 4.348
(C) 4.824
(D) 4.884
38. $(-1)^{529}=$ $\qquad$ (A) 0
(B) 1
(C) -1
(D) -11
39. 16:18 and 8:9 are in proportion. Say true or false.
(A) FALSE
(B) TRUE
(C) Cannot say
(D) None of these
40. Find the LCM of 15, 30, 105.
(A) 120
(B) 105
(C) 210
(D) 201
41. A shop has 85 pastries of which 17 has eggs. What percentage of the pastries are eggless?
(A) $70 \%$
(B) $75 \%$
(C) $80 \%$
(D) $85 \%$
42. Find the cost price if there is a loss of $₹ 5,300$ on selling an article at $₹ 10,000$
(A) ₹ 4,700
(B) $₹ 15,600$
(C) ₹ 15,300
(D) None of these

| Selling Price | $₹ \mathbf{1 0 , 0 0 0}$ |
| :---: | :---: |
| Cost Price | $?$ |
| LOSS | $₹ 5,300$ |

43. Find the circumference of a circle with radius of 35 cm .
(A) 210 cm
(B) 220 cm
(C) 190 cm
(D) 230 cm
44. If ₹ $\mathbf{1 0 0}$ becomes ₹ $\mathbf{2 0 0}$ in $\mathbf{5}$ years with simple interest, then the rate of interest is $\qquad$
(A) $30 \%$
(B) $50 \%$
(C) $20 \%$
(D) $40 \%$
45. A 240m long train crosses a platform double its length in 54 seconds. What is the speed of the train?
(A) $15 \mathrm{~m} / \mathrm{s}$
(B) $13.5 \mathrm{~m} / \mathrm{s}$
(C) $13.33 \mathrm{~m} / \mathrm{s}$
(D) $15.33 \mathrm{~m} / \mathrm{s}$

46. $A$ and $B$ together can do a piece of work in 15 days, while $B$ alone can finish it 20 days. In how many days can $A$ alone finish the work?
(A) 30 days
(B) 15 days
(C) 60 days
(D) 75 days
47. Find the value of $\mathbf{b}+\mathbf{1 1 0}$, if $\mathbf{b}=\mathbf{1 1}$.
(A) 111
(B) 122
(C) 211
(D) 121
48. $(19 a b-9 a)-(9 a-19 a b)=$ $\qquad$ (A) $0 a+0 a b$
(B) $38 a b+18 a$
(C) 18 a
(D) 38ab-18a
49. Solve for x : $2 \mathrm{x}-4=6$
(A) $x=6$
(B) $x=5$
(C) $x=-6$
(D) $x=-5$
50. Five years from now Sam will be $\mathbf{1} \frac{\mathbf{1}}{\mathbf{2}}$ times his present age. How old is he now?
(A) 20
(B) 10
(C) 5
(D) 15

## ANSWERS

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C | C | D | C | B | C | A | D | B | B |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| A | D | A | C | D | B | D | C | B | D |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| B | C | D | B | A | B | C | B | D | A |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| B | C | C | B | A | C | C | C | B | C |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| C | C | B | C | C | C | D | D | B | B |

