

SNUSAT Sample Paper

Section : Logical Ability

QUESTION.1 If $\times$ means $+$, $\div$ means $\times$, $-$ means $\div$, and $+$ means $-$, then what will be the value of the following expression? $32 \times 6 + 10 - 4 \div 8 = ?$

1. 18
2. 20
3. 22
4. 24

QUESTION.2 Three statements are given followed by four conclusions numbered 1, 2, 3, and 4. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically does NOT follow(s) from the statements.

Statements:

Some Nights are Great

No Great is a Van.

All Vans are Chips.

Conclusions:

- 1) Some Greats are not Vans.
- 2) No Van is a Light.
- 3) Some Chips are not Great.
- 4) Some Great are Chips.

1. Only conclusion 4 does not follow.
2. Only conclusion 2 does not follow.
3. Only conclusion 1 does not follow.
4. Only conclusion 3 does not follow.

QUESTION.3 If A denotes '+', B denotes ' $\times$ ', C denotes ' $-$ ', and D denotes ' $\div$ ', then what will be the value of the following expression?

$25 \text{ C } 21 \text{ D } 7 \text{ B } 3 \text{ A } 4$

1. 20
2. 21
3. 24

4. 43

QUESTION.4 Sneha went from her home for 51 m towards the south and then turns left and walks 44 m. Now she turns left again and walks 83 m. How far is she from a pole that is exactly 32 m north from her home now?

1. 14 m
2. 44 m
3. 7 m
4. 39 m

QUESTION.5 If 31 December 2013 was a Wednesday, then what was the day of the week on 7 March 2015?

- Ans 1. Tuesday
2. Sunday
 3. Saturday
 4. Monday

QUESTION.6 Select the word-pair that best represents a similar relationship to the one expressed in pair of words given below. (The words must be considered as meaningful English words)

Lend : Borrow

- Ans 1. Happy : Joyous
2. Stern : Strict
 3. Exciting : Boring
 4. Sharp : Edged

QUESTION.7 Select the option that is related to the third term in the same way as the second term is related to the first term and sixth term is related to fifth term.

6 : 32 :: 10 : ? :: 11 : 117

- Ans 1. 99
2. 110
 3. 88
 4. 96

QUESTION.8 If A denotes '+', B denotes 'x', C denotes '-', and D denotes '÷', then what will come in place of '?' in the following equation?

27 B 5 C 38 A 16 D 4 A 42 C 8 B 4 = ?

1. 130
2. 120

3. 111

4. 109

QUESTION.9 In a certain code language, 'ANYWAY' is written as 'YNAYAW' and 'BATTLE' is written as 'TABELT'. How will 'COSTLY' be written in that language?

1. SOCYLT

2. SCTOLY

3. OCTSLY

4. YLTSOC

QUESTION.10 Select the correct combination of mathematical signs to sequentially replace the * signs and balance the given equation.

$$234 * 345 * 456 * 567 * 678 * 12$$

1. -, +, +, -, =

2. ÷, -, +, -, =

3. +, ×, +, -, =

4. +, -, +, -, =

QUESTION.11 In a code language, 'SPACE' is written as '5-91' and 'ROTTEN' is written as '6-70'. How will 'MEAN' be written in that language?

1. 4-75

2. 4-74

3. 4-73

4. 4-76

QUESTION.12 Which option represents the correct order of the given words as they would appear in the English dictionary?

1 Method

2 Methanol

3 Metrics

4 Metro

5 Melody

1. 5,2,1,3,4

2. 5,3,1,2,4

3. 5,2,1,4,3

4. 5,1,2,4,3

QUESTION.13 Select the set in which the numbers are related in the same way as are the numbers of the following sets. (NOTE : Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

(17, 12, 612)

(6, 14, 252)

1. (3, 6, 108)

2. (11, 4, 144)

3. (13, 7, 273)

4. (2, 3, 12)

QUESTION.14 If $\times$ means $+$, $\div$ means $-$, $+$ means $\times$, $-$ means $\div$, what will come in place of the question mark (?) in the given expression?

$$182 - 13 \times 5 + 16 \div 44 = ?$$

1. 50

2. 62

3. 86

4. 48

QUESTION.15 Select the combination of letters that when sequentially placed in the blanks of the given series, will complete the series.

_ SSRS _ _ SS _ S _

1. RRRSR

2. RSRRS

3. SRRSR

4. RSSRR

QUESTION.16 If $W \# Q @ T \& Y @ M \% S$, then how is S related to T?

$A \# B$ means 'A is the mother of B'

$A @ B$ means 'A is the sister of B'

$A \& B$ means 'A is the father of B'

$A \% B$ means 'A is the wife of B'

1. Wife's brother

2. Son

3. Daughter's husband

4. Brother

QUESTION.17 Seven people, P, Q, R, S, T, U and V, are sitting in a straight row, facing the north. Only two people sit to the right of U. Only two people sit to the left of R. Only two people sit between U and **QUESTION.** Only three people sit between R and V. T is not an immediate neighbour of U. S sits to the right of U. Who sits to the immediate right of U?

1. P
2. S
3. R
4. T

QUESTION.18 Which of the following numbers will replace the question mark (?) in the given series?

822, 817, 807, 787, ?

1. 755
2. 754
3. 750
4. 752

QUESTION.19 In a code language, 'WINNER' is written as 'XJOOF5' and 'RALLY' is written as 'SBMMZ'. How will 'CARTOON' be written in that language?

1. DBSOPPU
2. CAPTOON
3. DBSUPPO
4. CAPNOOT

QUESTION.20 Three of the following four letter-clusters are alike in a certain way and one is different. Pick the odd one out.

1. EIO
2. YCI
3. PTY
4. DHN

Quantitative Reasoning

QUESTION.1 A seller uses faulty weight in place of a 20 kg weight and earns a 25% profit. He claims that he is selling on the cost price in front of the customers but uses a faulty weight. How much error is there in the 20 kg weight to gain 25%?

1. 2500 g
2. 4000 g
3. 5000 g

4. 3000 g

QUESTION.2 Two trains - A and B- having the lengths 195 m and 165 m, respectively, are running in the same direction on parallel lines. If the speed of A and B be 77 km/h and 85 km/h, respectively, what will be the time (in seconds) taken by them to cross each other?

1. 162

2. 164

3. 160

4. 166

QUESTION.3 The angles of a triangle are in the ratio 1 : 1 : 2. What percentage of the total internal angle is the greatest angle?

1. 50%

2. 65%

3. 45%

4. 40%

QUESTION.4 $\triangle ABC$ and $\triangle DEF$ are two triangles such that $\triangle ABC \cong \triangle FDE$. If $AB = 5$ cm, $\angle B = 40^\circ$ and $\angle A = 80^\circ$, then which of the following options is true?

1. $DF = 5$ cm, $\angle E = 60^\circ$

2. $DE = 5$ cm, $\angle F = 60^\circ$

3. $DE = 5$ cm, $\angle D = 60^\circ$

4. $DE = 5$ cm, $\angle E = 60^\circ$

QUESTION.5 To do a certain task X would take 3 times as long as Y and Z together; and Z would takes 4 times as long as Y and X together. Three of them together can complete the task in 10 days. How much time is taken by X and Z to complete the task?

1. $18\frac{2}{9}$

2. $20\frac{1}{9}$

3. $21\frac{1}{9}$

4. $22\frac{2}{9}$

QUESTION.6 There are three papers in an examination. Marks obtained by four students have been tabulated below: Who are the students who got the highest marks in P1, P2 and P3 respectively?

Student	P1	P2	P3
Mukesh	79	78	77
Shivam	73	87	80
Vishal	82	74	83

Rakesh	77	89	86
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1. Rakesh, Vishal, Mukesh
2. Vishal, Rakesh, Rakesh
3. Shivam, Rakesh, Vishal
4. Mukesh, Rakesh, Vishal

QUESTION.7 If $a : b = 4 : 5$, $b : c = 3 : 4$ and $c : d = 2 : 5$, then $a : d$ is:

1. $2 : 5$
2. $6 : 25$
3. $5 : 2$
4. $25 : 6$

QUESTION.8 Find the perimeter of major sector of a circle of radius 12 metres, whose minor sector subtends an angle of 75° at the centre.

1. $24 + 5\pi$ metres
2. $24 + 19\pi$ metres
3. $24 - 5\pi$ metres
4. $24 - 19\pi$ metres

The value of $\frac{\sqrt[3]{-2744} \times \sqrt[3]{-216}}{\sqrt[3]{\frac{64}{729}}}$ is: **QUESTION.9**

1. 164
2. 152
3. 189
4. 156

QUESTION. 10 If $x = \frac{2\sin\theta}{(1 + \cos\theta + \sin\theta)}$, then the value of $\frac{(1 - \cos\theta + \sin\theta)}{(1 + \sin\theta)}$ is:

1. $x / (1 + x)$
2. x
3. $1 / x$
4. $(1 + x) / x$

QUESTION.11 Simplify the following:

$$81^{3/4} + [(20 \div 5 \text{ of } 3 \times 6) + \{(8 \div 24 \text{ of } 3) \times 4\} - 10 \div 5] - (1/32)^{-1/2}$$

1. $24 \frac{1}{4}$
2. $21 \frac{1}{9}$
3. $27 \frac{4}{5}$
4. $29 \frac{4}{9}$

QUESTION.12 Find the total surface area of a hemisphere closed at bottom. Radius of the hemisphere is given as $5/\sqrt{\pi}$ in square unit

1. 75
2. 70
3. 60
4. 50

QUESTION.13 A tradesman marks his goods at 26% above the cost price. He allows his customer a discount of 12% on the marked price. His profit per cent is:

1. 10.88%
2. 11.08%
3. 10.50%
4. 10%

QUESTION.14: If $x^4 + x^{-4} = 47$, $x > 0$, then find the value of $x^1 + x^{-1} - 2 =$

1. 1
2. 0
3. 5
4. 3

QUESTION.15 $\left\{ \frac{\sec \theta - 1}{\sec \theta + 1} \right\}^n = \operatorname{cosec} \theta - \cot \theta$, then $n = ?$

1. 1
2. 0.5
3. -1
4. -0.5

QUESTION.16 $10 \sec^2 A - 10 \tan^2 A = ?$

1. 9
2. 10
3. 16
4. 1

QUESTION.17 The cost of two varieties of tea is ₹300 and ₹375 respectively. If both the varieties of tea are mixed together in the ratio 3 : 2, then what should be the price of mixed variety of tea per kg?

1. 340
2. 330
3. 350
4. 360

QUESTION.18 find the value of $(2 \cos^2 A - 1) \left[\frac{1 + \tan \theta}{1 - \tan \theta} + \frac{1 - \tan \theta}{1 + \tan \theta} \right] = ?$

1. 2
2. 0
3. $\sqrt{3}/2$
4. 1

QUESTION.19 In $\triangle ABC$, $DE \parallel BC$ in such a way that $A-D-B$ and $A-E-C$. If $m \angle ACB = 40^\circ$, then $m \angle DAE + m \angle ADE = ?$

1. 240°
2. 120°
3. 140°
4. 230°

QUESTION.20 The ratio between the height and radius of the base of a cylinder is 7 : 5. If its volume is 14836.5 cm^3 , then find its total surface area (take $\pi = 3.14$).

1. 3391.2 cm^2
2. 5391.2 cm^2
3. 4391.2 cm^2
4. 5591.2 cm^2

ANSWER KEY

QUESTION. Number- Answer	Logical Ability	Quantitative Reasoning
1	1. 18	2.4000
2	1. Only 4 does not follow.	1.162
3	1. 20	1. 50%
4	2. 44m	1. $DF = 5 \text{ cm}$, $\angle E = 60^\circ$
5	3. Saturday	4. $22\frac{2}{9}$
6	3. Exciting : Boring	2. Vishal, Rakesh, Rakesh
7	4.96	2. 6 : 25
8	3.111	2. $24 + 19\pi$ metres
9	1. SOCYLT	3.189
10	4. +, -, +, -, =	2. X
11	4-75	4. $29\frac{4}{9}$
12	1. 5,2,1,3,4	1. 75
13	3. (13, 7, 273)	3. 10.50%
14	1. 50	1. 1
15	2. RSRRS	2. 0.5
16	3. Daughter's husband	2. 10
17	2. S	2.330
18	4. 752	1. 2
19	3. DBSUPPO	3. 140
20	3. PTY	1. 3391.2 cm^2

