



## NISA - NATIONAL ANALYTICAL APTITUDE TEST 2022

21st Century Skills Test for Students to be Future ready | Initiative by NISA (National Independent Schools Alliance)

## DO NOT OPEN THIS BOOKLET UNTIL ASKED TO DO SO

**Total Questions: 40** 

Time: 60 Minutes

### Instructions for the Candidate

- (a) You have 40 multiple-choice questions in this Test Paper. Attempt each question and write answers that are most correct according to you. There is only one right answer for each question.
- (b) Manage your time properly. Remember that, on average, you can spend upto 1.5 minute on each question.
- (c) Start the test only when your Teacher / Invigilator gives you the permission to start and on completion of the test, please wait for her / his instruction before returning the OMR Sheet.
- (d) Mark all your answers on the OMR sheet provided
- (e) While marking on the OMR sheet, ensure that you are marking the appropriate option with a dark coloured pencil. The correct method is shown below:



(f) If you need to change an answer that you have already marked – erase the first marking completely, before marking the new answer. Answers with multiple markings, different markings or incomplete markings will be scored as wrong.





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### PART - I SECTION 1 – MATH ABILITY

1)	Simplify 36 <sup>1/2</sup> x 27 <sup>1/3</sup> x (125) <sup>1/3</sup>				
	A) 60	C) 15			
	B) 90	D) 55			
2)	In a bag there are 50 apples and 50 oranges. Of the 50 o variety. What is the probability that a Nagpur variety is	branges 20 are of Nagpur variety and remaining of Yercaud picked at random, if one fruit is selected from the bag?			
	A) 50%	C) 20%			
	B) 40%	D) 10%			
3)	A car travels 295km at 50km/hour. How long does the	journey take? Give answer i n hours and minutes.			
	A) 5 hrs. 54 mins.	C) 5.9 hrs. 45 mins. #			
	B) 5 hrs. 50 mins.	D) 59.5 hrs. 30 mins. #			
4)	Find the compound interest when Rs. 3000 is invested yearly.	for 1 <sup>1</sup> / <sub>2</sub> years @ 8.5%. The interest is compounded half			
	A) 333.98	C) 339.9			
	B) 399	D) 382.5			
5)	What rate must be paid for a principal of Rs.750/- to ear	rn simple interest of Rs.180/- in 4 years?			
	A) 6%	C) 8%			
	B) 6.5%	D) 9%			
6)	6) The angles of a triangle are x°, y° and 40°. The difference between two unknown angles is 30°. The size of th unknown angles are & ?				
	A) 30° & 65°	C) 85° & 55°			
	B) 70° & 100°	D) 65° & 95°			
7)	The exterior angle of a regular nonagon is				
	A) 60°	C) 45°			
	B) 35°	D) 40°			
8)	Convert 3.2 Km <sup>2</sup> to m <sup>2</sup>				
	A) 32000 m <sup>2</sup>	C) $3.2 \times 10^3 \text{ m}^2$			
	B) 3200000 m <sup>2</sup>	D) 3.2 x 10 <sup>4</sup> m <sup>2</sup>			
9)	Find the area of the following shapes, ABCD is a paral	lelogram			
	$ \begin{array}{c c}  & 15 \text{ cm} \\  & 8 \text{ cm} \\  & 7 \text{ cm} \\  & D \\  & & 7 \text{ cm} \\  & & & 7 \text{ cm} \\  & & & & 7 \text{ cm} \\  & & & & & 7 \text{ cm} \\  & & & & & & & \\  & & & & & & & & \\  & & & &$				
	A) 157.5 cm <sup>2</sup>	C) 112 cm <sup>2</sup>			
	B) 29 cm <sup>2</sup>	D) $120 \text{ cm}^2$			

10)	Calculate the length of the side BC, Angle $A = 90^{\circ}$ .						
	С						
	Ň						
	16m						
	A 12 m B						
	A) 14	C) 20					
	B) 16	D) 18					
11)	There is a group of 300 people in a hall. A girl calculat	ed that the possibility of randomly meeting someone that					
	she knows from the group is 0.05. Calculate the number	er of people in the group that the girl knows.					
	A) 15	C) 150					
	B) 6000	D) 60					
12)	Two numbers are in a ratio 5:7. If 7 is added to each of	Sthem, the ratio becomes 3:4. Find the numbers.					
	A) 12:14	C) 15:28					
	B) 8:11	D) 35:49					
13)	Find the cost price, if the selling price = 2200 and gain	is 10%.					
	A) 220	C) 1200					
	B) 2400	D) 2000					
14)	14) A fort has provisions for 150 men for 45 days. After 10 days 25 men left the fort. How long will the food will 1						
	at the same rate.						
	A) 40 days	C) 270 days					
	B) 42 days	D) 21 days					
15)	One of the diagonals of the rhombus is equal to one of $A = A = D$	its sides. Find angles of the rhombus given that					
	AD-AD-BD find angle ABC and angle BAD.						
	$D \overline{\Delta} C$						
	A / B						
	A) 60° & 60°	C) 120° & 60°					
	B) 150° & 30°	D) 60° & 120°					
16)	Solve $x = 3 - 2x$						
	$\frac{1}{5}$ $\frac{1}{6}$ $\frac{1}{3}$						
	A) $x = 2/15$	C) $x = 15/14$					
	B) $x = -15/14$	D) $x = -15/26$					
17)	Solve $1.32v + 0.02v = 1.19 + v$	2) 1 10.20					
	A) $v = 3.5$	C) $y = 7.5$					
	B) v = 3	D) y = 1.01					
18)	If $a/b = (2/3)^{-3} x (4/6)^{0}$ . Find the value of $(a/b)^{-3}$						
	A) 8/27	C) $(2/3)^{-6}$					
	B) 27/8	D) $(2/3)^9$					



19)	What number should be subtracted from $4/-8$ to get $-13/12$ .					
	A) -5/24	C) -4/12				
	B) 5/24	D) 7/12				
20)	Evaluate: $3\frac{3}{4} - 1\frac{11}{16}$					
	A) 33/16	C) -2 <sup>1</sup> / <sub>2</sub>				
	B) -12/16	D) 2 <sup>1</sup> / <sub>2</sub>				

#### **SECTION 02 – LOGICAL REASONING**

21)	Complete the analogy : Elated:Depressed::	:Delight									
	A) Happiness	C) Morose									
	B) Love	D) Friendship									
22)	Complete the analogy : Symphony:Compose	r ::									
	A) Car : Driver	C) Art : Architect									
	B) House : Artist	D) Music : Composer									
23)	Of the following pair of words which one would not fit the analogy : Lentils:Dal Makhni::										
	A) Potatoes : Channa Masala	C) Okra : Bhindi Fry									
	B) Chickpeas : Chole	D) None of the above									
24)	Of the following pair of words which one wo	ould not fit the analogy : Jio : Telecom ::									
	A) Instagram : Followers	C) LinkedIn : Connections									
	B) Twitter : Followers	D) YouTube : Likes									
25)	Complete the analogy : Qatar: 2022 ::										
	A) Russia : 2026	C) Brazil : 2014									
	B) Germany : 2010	D) Japan : 2018									
26)	Find the odd one out : 26,39,52,76										
	A) 26	C) 52									
	B) 39	D) 76									
27)	Find the odd one out : 625,150,375,480										
	A) 625	C)480									
	B)150	D) 375									
28)	Find the odd one out : ZW,XV,DA,JG										
	A) ZW	C) DA									
	B) XV	D) JG									
29)	Find the odd one out : CAAC,DBBD,ZXZX,	JHHJ									
	A) CAAC	C) ZXZX									
	B) DBBD	D) JHHJ									
30)	Find the odd one out : Z26,M13,Y25,K10										
	A) M13	C) Y25									
	B) Z26	D) K10									

#### Questions 31 - 40 : Read the following paragraph to answer the questions below:

**Paragraph:** 6 friends A,B,C,D E&F are standing in a straight line watching the rising sun. D is third to the left of F and is also on the left most end. B is on the right most end and is third to the right of A.E is on the immediate left of B.

31)	Which direction is everyone fa	acing?							
	A) North	C) South							
	B) West	D) East							
32)	How many people are there be	etween B & C							
	A) 2	C) 1							
	B) 3	D) 4							
33)	Who is situated second to the	left of F?							
	A) B	C) A							
	B) D	D) C							
34)	Who is situated 3rd to the righ	t of E ?							
	A) A	C) D							
	B) C	D) None of the above							
35)	Who among the following is situated south of B?								
	A) A	C) Both							
	B) C	D) Neither							
36)	Who among the following is situated to the north of F?								
	A) A	C) Both							
	B) C	D) Neither							
37)	Who is situated between A & I	B?							
	A) E	C) Both							
	B) F	D) Neither							
38)	Who is situated between F & I	Ε?							
	A) E	C) Both							
	B) F	D) Neither							
39)	Who is situated between F & G	C?							
	A) D	C) E							
	B)A	D) B							
40)	Who is situated 3rd to the righ	t of A?							
	A) D	C) C							
	B) F	D) B							

### SPACE FOR ROUGH WORK

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