

NAB Competition 2021- II - 7th

National Analytical Brains Competition 2021-II- 7th

* Required

1. Name *

2. Registration ID *

3. Contact Number (registered one) *

Mathematical Ability

All question are mandatory. Please note there is no negative marking:

4. 1. The sum of any two negative integers will be:

Mark only one oval.

- Negative integer
- Positive integer
- Positive, if the first number is larger
- Negative, if the first number is larger

5. 2. The marked price of an article is ₹ 80. How much percent discount should be given to sell it at ₹76.

Mark only one oval.

- 4
- 5
- 24
- 8

6. 3. Find x, if given rational numbers are equivalent?

$$\frac{-5}{8} \text{ and } \frac{x}{24}$$

Mark only one oval.

- 5
- 5
- 15
- 15

7. 4. By how much does 4 exceed -3?

Mark only one oval.

- 1
- 1
- 7
- 7

8. 5. The sum of two consecutive multiples of 2 is 186. Find the smaller number.

Mark only one oval.

- 46
- 92
- 94
- 48

9. 6. A company is producing two products A and B. The company makes a profit of ₹52 per unit on A and a loss of ₹10 per unit on B. If the company sells 3600 units of product A and 4000 units of products B, find the profit or loss of the company due to the sale.

Mark only one oval.

- Profit of ₹16800
- Profit of ₹147200
- Loss of ₹1472000
- No Profit No Loss

10. 7. A linear equation in one variable has :

Mark only one oval.

- only one solution
- two solutions
- more than two solution
- no solution

11. 8. A piece of string is 36 cm long. What will be the length of each side, if the string is used to form an square?

Mark only one oval.

- 18
- 36
- 12
- 9

12. 9. Write 45% as rational number in its standard form

Mark only one oval.

- 45/100
- 9/20
- 20/9
- 11/20

13. 10. Which of the following is not the additive inverse of 8 ?

Mark only one oval.

- $- (-8)$
- $8 \times (-1)$
- -8
- $8 \div (-1)$

14. 11. $53 \times (-9) - (-109) \times 53$

Mark only one oval.

- 6254
- 5300
- 5300
- 6254

15. 12. Rahul buys a toy for ₹250 and sell it to punnet for ₹ 285. Find his loss or profit percent?

Mark only one oval.

- 7% Loss
- 35% Profit
- 7% Profit
- 14% Profit

16. 13. The amount of water in a tank is three times the amount of water in another tank. If we draw out 60 liters from first and add it to the 2nd one, then amount of water in both the tank is same, Find the initial volume of water in tank First and 2nd respectively.

Mark only one oval.

- 180, 60
- 60, 180
120. 40
- 40, 120

17. 14. What is the value of this expression?

$$[32 + 2 \times 17 + (-6)] \div 15$$

Mark only one oval.

- 24.9
- 12
- 6
- 4

18. 15. In the standard form of a rational number, the common factor of numerator and denominator is always:

Mark only one oval.

- 2
 1
 -1
 0

19. 16. What will be the area of the largest square that can be cut-out of a circle of radius 25 cm?

Mark only one oval.

- 2000
 2500
 1250
 1650

20. 17. The base of a parallelogram is four times its height. If area is 144 sq m , find the base and height of the parallelogram?

Mark only one oval.

- 24 , 6
 6, 24
 32, 8
 12, 3

21. 18. The solution of the equation $ax - b = 0$ is

Mark only one oval.

- a/b
- b
- b/a
- ab

22. 19. I spend $\frac{2}{7}$ of my salary in rent and $\frac{3}{14}$ on food. I give $\frac{3}{7}$ of my salary to pay loan. How much part of the salary do I save?

Mark only one oval.

- $\frac{13}{14}$
- $\frac{8}{14}$
- $\frac{1}{14}$
- $\frac{1}{7}$

23. 20. If m , n and p are integers, then according to the associative law of multiplication, $(m \times n) \times p$ must be equal to:

Mark only one oval.

- $m \times n \times p$
- $(m \times n) + p$
- $(m + n) \times p$
- $m \times (n \times p)$

Logical Reasoning
Ability

All question are mandatory. Please note there is no negative marking:

24. 21. Which of the following will fit into the series?

4, 7, 12, 19, 28, _____

Mark only one oval.

30

36

39

49

25. 22. There is a certain relation between two given words on one side of :: and similar relation is on the other side of :: . Find the missing word of the second pair:

Thunder : Rain :: ? : Night

Mark only one oval.

Evening

Dark

Day

Dusk

26. 23. Out of the five words four are alike and one is different. Find the different one:

Mark only one oval.

Walk

Pull

Hear

Jump

Run

27. 24. Out of the five Numbers four are alike in some way and one is different.
Find the different one:

Mark only one oval.

6

12

18

9

7

28. 25. In a certain code, SUMMER is written as RUNNER, then the code for WINTER will be:

Mark only one oval.

SUITER

VIOUER

WALKER

SUFFER

29. 26. If A is to south of B and C is to the east of B, in what direction is A with respect to C.

Mark only one oval.

North-East

North-west

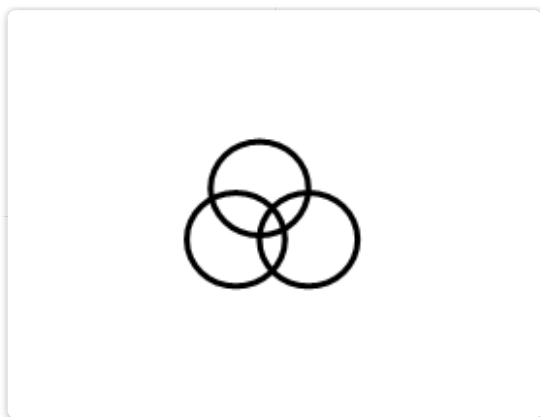
South-east

South-west

30. 27. Which of the following diagrams can best represent the relation of:

Indoor Games, Chess, Table Tennis

Mark only one oval.



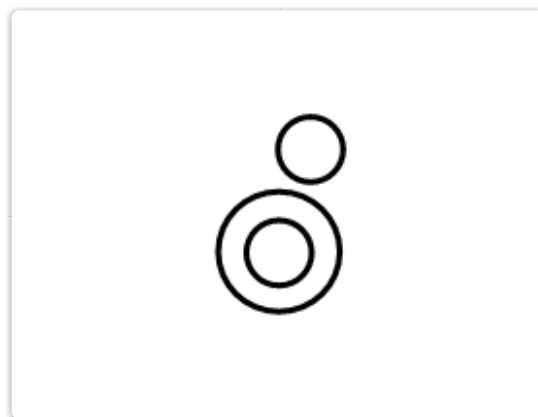
Option 1



Option 2



Option 3



Option 4

31. 28. Out of the below five words, which will come in middle if arranged alphabetically as in a dictionary:

Mark only one oval.

- Sport
- Spouse
- Squash
- Sporadic
- Sprout

32. 29. If Feb 01, 2004 is Wednesday then what day is Mar 03, 2004?

Mark only one oval.

Monday

Sunday

Saturday

Friday

33. 30. if + means \div , \div means -, - means \times , \times means +, then $12 + 6 \div 3 - 2 \times 8 = ?$

Mark only one oval.

-2

2

4

8

34. 31. If you write down all the numbers from 1 to 100, then how many times do you write 3 ?

Mark only one oval.

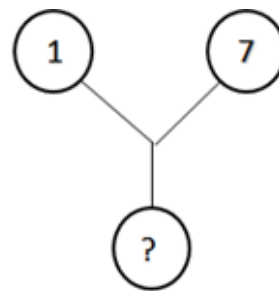
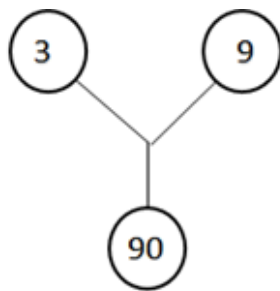
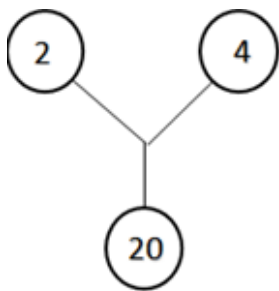
19

18

20

21

35. 32. Find the missing number:



Mark only one oval.

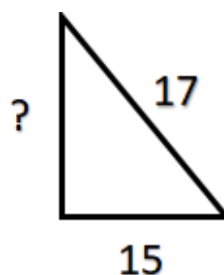
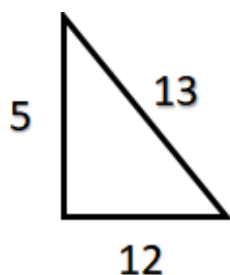
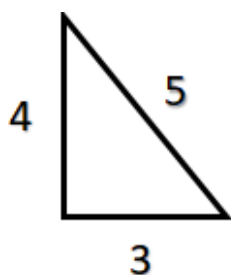
20

25

50

75

36. 33. Find the missing number:



Mark only one oval.

2

6

8

64

37. 34. Below numbers follow a trend either row wise or column wise. Find out that trend and choose the best fit choice:

1	4	?
4	2	5
2	2	3
49	64	169

Mark only one oval.

- 3
- 4
- 5
- 6

38. 35. If PAW is coded as 458, BAW as 758, and SAW as 358, then the code of BAWS is:

Mark only one oval.

- 7583
- 7580
- 6537
- 3581

39. 36. Namishk ranked 11 from the top and thirty-eighth from the bottom in a class. How many students are there in the class?

Mark only one oval.

- 49
- 50
- 48
- 47

40. 37. One term is missing in the below series. Find the correct alternative that will come in place of “?”

T, R, P, N, L, ?

Mark only one oval.

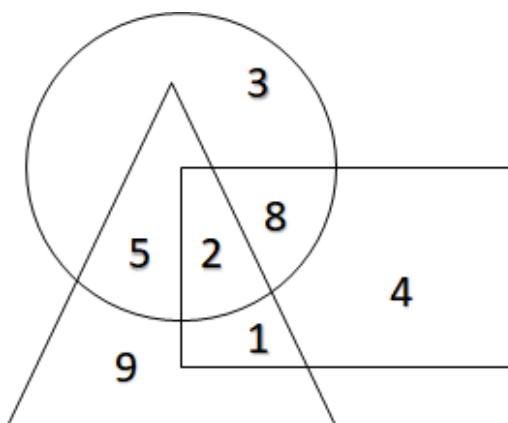
G

J

K

H

41. 38. Find out the number which lies inside all the figures.



Mark only one oval.

2

5

7

There is no such number

42. 39. In the below series, some letters are missing. Choose the correct option to fill the series.

a _ b a _ b _ b _ a _ b

Mark only one oval.

- abaab
 abbab
 aabba
 bbabb

43. 40. In the below series, how many pairs of successive numbers have a difference of 2 each?

6 4 1 2 2 8 7 4 2 1 5 3 8 6 2 1 7 1 4 1 3 2 8 6

Mark only one oval.

- Four
 Five
 Six
 Seven

On the basis of the information provided below, Answer Questions from 41 to 45

Six people A, B, C, D, E and F are sitting on the ground in a hexagonal shape. All the sides of the hexagon so formed are of same length. A is not adjacent to B or C, D is not adjacent to C or E, B and C are adjacent; F is in the middle of D and C.

44. Q 41: Which of the following is not a correct neighbor pair?

Mark only one oval.

A and F

D and F

B and E

C and F

45. Q 42: Who is at the same distance from D as E is from D?

Mark only one oval.

B

C

D

F

46. Q 43: Which of the following is in the right sequence ?

Mark only one oval.

A, F, B

F, A, E

B, C, F

D, A, B

47. Q 44: If one neighbor of A is D, who is the other one ?

Mark only one oval.

B

C

E

F

48. Q 45: Who is placed opposite to E?

Mark only one oval.

F

B

C

D

On the basis of the information provided below, Answer Questions from 46 to 50

Ministry of environment and forest has granted environmental clearance to the Karkatla open-cast expansion project of the Central Coal Fields Ltd. in Bihar that envisages exploitation of non-cocking coal reserves. The present production level of 0.8 million tonnes is proposed to be expanded to 1.6 million tonnes per annum at an estimated cost of 67.82 crores under the project. The total land area requirement for the proposed mining activities is about 651 hectares which includes about one-sixth of it as forest land.

49. Q 46: How much forest land will be required for the expansion?

Mark only one oval.

651 acres

108.5 acres

542.5 acres

Cannot be determined

50. Q 47: Karkatla open-cast mine is the only one of non-cocking coal in the country.

Mark only one oval.

Above Statement is true

Above statement is false

Data is not sufficient

51. Q 48: From reading paragraph do you think :

Mark only one oval.

- There is a demand for non-cocking coal
- There is no demand for non-cocking coal
- Data is not sufficient

52. Q 49 . What is the approximate production cost of one tonne of non-cocking coal from Karkatla mine ?

Mark only one oval.

- ₹ 450 Approx.
- ₹4500
- ₹45 Approx.
- ₹67.82 Approx.

53. Q 50: From the above paragraph can you conclude “Environmental concern gets less priority over the need of the coal”

Mark only one oval.

- True
- False
- No such fact mentioned in paragraph

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