NIACL AO Prelims 2021 Memory-Based Questions with Solutions
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1. Ratio of cost price and marked price of an article is 1 : 3 . If profit obtained is Rs. 3500 then the profit percentage is 50%. If discount is 10%, find the selling price of article.
A. Rs. 16400
B. Rs. 21600
C. Rs. 19800
D. Rs. 18900

2. In a container ratio of milk and water is 3 : 4 . 14 litres of mixture is removed and same quantity of water is added to the container. If the final ratio of milk and water is 3 : 5, find the initial quantity of mixture in the container.
A. 112 litres
B. 84 litres
C. 98 litres
D. 126 litres

3. A invest Rs. X at 10% compound interest for 3 years. If difference between the interest of 3rd year and 2nd year is Rs. 1210, find the value of X.
A. 132000
B. 125000
C. 110000
D. 84000

4. Ratio of downstream and upstream speed of a boat is 5 : 2 . If the speed of stream is 3 km/h, find the distance travelled by boat in downstream in 2 hours.
A. 18 km
B. 24 km
C. 20 km
D. 15 km

Direction: What should come in place of the question mark (?) in the following number series?
5.
101, 145, 197, 257, 325, ?
A. 485
B. 401
C. 442

D. 436
6. 105, 86, 69, ?, 41, 30
A. 54
B. 58
C. 60
D. 64

Direction: What approximate value will come in place of the question mark (?) in the following question? (You are not expected to calculate the exact value)
7.
22.03 × 6.97 + 19.01 – 16.02 = ?
A. 180
B. 172
C. 135
D. 157

8. 88% of 901 + 75.02 = ?
A. 910
B. 834
C. 867
D. 815

9. ? + 96.18 – 15.02 = 118.91 + 31.09
A. 80
B. 75
C. 57
D. 69

Direction: In the following question two equations are given in variables X and Y. You have to solve these equations and determine the relation between X and Y.
10.
I. $X^2 + 2X – 24 = 0$
II. $Y^2 + 13Y + 40 = 0$
A. Y > X
B. X > Y
C. X ≤ Y
D. X = Y or no relation can be established

Direction: Study the following information carefully and answer the questions:

Eight boxes A, B, C, D, E, F, G and H are kept one above another. Top position is 1st and bottom position is last. Three boxes are between D and B where D is placed at the second last position . Box G is immediately above box D . 3 boxes are kept between C and A . Box C is above A . There are the same number of boxes between C and H as between H and D . One box is kept between G and F. Box F is below box G.

11.
How many boxes are between A and B?
A. None
B. 1
C. 2
D. 3

12.Which of the following box is at the top position?
A. C
B. A
C. D
D. G

13.Which of the following box is at exactly between E and F?
A. G
B. A
C. D
D. B

14.Which of the following box is above box H?
A. D
B. G
C. F
D. E

15.How many boxes are below F?
A. 1
B. 2
C. 3
D. None

Direction: In the following each question, some statements and some conclusions are given. Considering all the statements to be true, decide the conclusions which logically follow. Study the data carefully and answer the questions accordingly.

16.
Statements:
Only a few Rocket is plane
All plane is Train
Only a few Train is ship
Conclusions:
I. some plane being ship is a possibility
II. some rocket is not plane
A. Only I follows
B. Only II follows
C. Either I or II follows
D. Both I and II follows

17.**Statements:**
All Bottle are Glass
No Bottle is Door
All Window are Door
Conclusions:
I. No Bottle is Door
II. Some Window is Glass
A. Only I follows
B. Only II follows
C. Either I or II follows
D. Neither I nor II follows

18.**Statements:**
Only A few Tiger is Cat
All Tiger is Lion
No Cat is Dog
Conclusions:
I. No Dog is Lion
II. Some Tiger is not Cat
A. Only I follows
B. Only II follows
C. Either I or II follows
D. Neither I nor II follows

Direction: In the following questions assuming the given statement to be true, find which of the conclusion(s) among given conclusions is/are definitely true and then give your answers accordingly.

19.
Statements:

F ≤ Q ≤ G ≥ R = P, A ≥ G ≥ C
Conclusions:
I. C < P
II. A ≥ F
A. Only I follows
B. Only II follows
C. Either I or II follows
D. Neither I nor II follows

20.**Statements:**
M ≤ G > C ≤ R, F ≤ T = G, P < F ≥ U
Conclusions:
I. U < R
II. P > M
A. Only I follows
B. Only II follows
C. Either I or II follows
D. Neither I nor II follows

Direction: In the given question, a part of the sentence is emboldened. Below the sentence, alternatives to the emboldened part are given as (A), (B), (C) and (D), which may help improve the sentence. Choose the correct alternative out of the given five options. In case the given sentence is correct, your answer will be option (E), i.e., "No correction required".
21.
My wife and I **regularly remind ourselves** how fortunate we were to have gotten away for a wonderful vacation in New Zealand, last January.
A. regularly reminds us
B. regularly reminds ourself
C. regularly remind oneself
D. No correction required

22.I have had so many moments **where ideally** I knew the right decision, but deep inside my intuition was telling me differently.
A. Where obviously
B. Where substantially
C. Where logically
D. Where necessarily

Direction: In the given question, a statement has been divided into five segments, each of which is denoted by (A), (B), (C), (D) and (E). Rearrange all the segments to form a coherent statement.
23.
Rearrange all the segments to form a coherent statement.
A) calls for a few
B) chance of thunderstorms, all
C) showers and the
D) easing up during the evening
E) today's weather forecast
A. ACBDE
B. BCADE
C. EDBAC
D. EACBD

24.Rearrange all the segments to form a coherent statement.
A) as you drive on
B) speed limits change
C) and exit highways
D) different kinds of
E) roads or enter
A. BCDEA
B. BADEC
C. ABCDE
D. DECAB

Direction: In the given question, five words are printed in bold and are numbered A, B, C and D. The positions of some highlighted words may be incorrect and need to be exchanged with another highlighted to make the sentence correct. Find the words that need to be exchanged.
25.
The counselor was **affected** (A) to **speak** (B) with anyone **ready** (C) by the tragedy **left** (D) by the hurricane.
A. A-B
B. B-C
C. A-C
D. C-D

Direction: Read the sentence to find out whether there is an error in it. The

error, if any, will be in one part of the sentence. The number corresponding to that part will be your answer. If the given sentence is correct as it is, mark the answer as 'No error'. Ignore the errors of punctuation, if any.

26.
She spoke to several(1)/ specialists about her (2) problem, but nobody (3) knows why she is sick. (4)
A. 1
B. 2
C. 3
D. 4

Direction: In the following question, a sentence with four words printed in bold is given. These words are numbered as (1), (2), (3) and (4). One of these four words may either be misspelt or inappropriate in the context of the sentence. Find out the word(s) that is wrongly spelt or inappropriate and mark the relevant option as your answer. If all the words printed in bold are correct, mark option (E), i.e. 'All are correct', as the answer.

27.
This is **grate** (1) **news** (2) so let us all go and tell **grandmother** (3) about our **success** (4).
A. 1
B. 2
C. 3
D. 4

28. I just **twested** (1) my **hair** (2) up in a **knot** (3) and went on about my **business** (4).
A. 1
B. 2
C. 3
D. 4

29. Leena was always **lost** (1) without her **calculator** (2) until the day she learnt **mental** (3) **mathmatics** (4).
A. 1
B. 2
C. 3
D. 4

30. He was a **simple** (1) person but **becoming** (2) an actor **changed** (3) the way he lived **forever** (4).
A. 1
B. 2
C. 3
D. All are correct

###ANSWERS###

1. Ans. D.
Let the cost price be Rs. x.
According to question,
50% of x = 3500
$\Rightarrow$ x = 3500 × 2 = Rs. 7000
Marked price = 3 × 7000 = Rs. 21000
Selling price when discount is 10% = 21000 × 0.9 = Rs. 18900

2. Ans. A.
Let the quantity of milk and water in initial mixture be 3x and 4x respectively.
Quantity of milk removed, when 14 litres of mixture is taken out
= $\frac{3}{7}$ × 14 = 6 litres
Quantity of water removed, when 14 litres of mixture is taken out
= $\frac{4}{7}$ × 14 = 8 litres
So, $\frac{3x-6}{4x-8+14} = \frac{3}{5}$
$\Rightarrow$ 15x − 30 = 12x + 18
$\Rightarrow$ 3x = 48
$\Rightarrow$ x = 16
Initial quantity of mixture = 3x + 4x = 7x = 7 × 16 = 112 litres

3. Ans. C.
Let the sum invested be 1000k.
Amount after 1 year = 1000k × 1.1 = 1100k
Sum after 2 years = 1100k × 1.1 = 1210k
Interest of 2nd year = 1210k − 1100k = 110k
Sum after 3 years = 1210k × 1.1 = 1331k
Interest of 3rd year = 1331k − 1210k = 121k
121k − 110k = 1210
$\Rightarrow$ 11k = 1210
$\Rightarrow$ k = 110
Hence, X = 1000 × 110 = 110000

4. Ans. C.
Let the speed of boat be x km/h.
$\frac{x+3}{x-3} = \frac{5}{2}$
$\Rightarrow$ 2x + 6 = 5x − 15
$\Rightarrow$ 3x = 21
$\Rightarrow$ x = 7
Downstream speed = 7 + 3 = 10 km/h
Required distance = 10 × 2 = 20 km

5. Ans. B.
The pattern of the series is:
$10^2 + 1 = 101$
$12^2 + 1 = 145$
$14^2 + 1 = 197$
$16^2 + 1 = 257$
$18^2 + 1 = 325$
$20^2 + 1 = 401$
Hence, the missing number is 401.

6. Ans. A.
The pattern of the series is:
105 − 19 = 86
86 − 17 = 69
69 − 15 = 54
54 − 13 = 41
41 − 11 = 30
Hence, the missing number is 54.

7. Ans. D.
By approximation, we get:
? = 22 × 7 + 19 − 16
 = 154 + 19 − 16
 = 173 − 16
 = 157

8. Ans. C.
By approximation, we get:
? = 88% of 900 + 75
= 792 + 75
= 867

9. Ans. D.
By approximation, we get:
? + 96 − 15 = 119 + 31
$\Rightarrow$? + 81 = 150
$\Rightarrow$? = 150 − 81 = 69

10. Ans. D.
I. $X^2 + 2X − 24 = 0$
$\Rightarrow X^2 + 6X − 4X − 24 = 0$
$\Rightarrow X(X + 6) − 4(X + 6) = 0$
$\Rightarrow (X + 6)(X − 4) = 0$
$\Rightarrow X = 4, −6$
II. $Y^2 + 13Y + 40 = 0$
$\Rightarrow Y^2 + 8Y + 5Y + 40 = 0$
$\Rightarrow Y(Y + 8) + 5(Y + 8) = 0$
$\Rightarrow (Y + 8)(Y + 5) = 0$
$\Rightarrow Y = −8, −5$
Hence, no relation can be established.

11. Ans. B.

C
E
B
H
A
G
D
F

12. Ans. A.

C
E
B
H
A
G
D
F

13. Ans. B.

C
E
B
H
A
G
D
F

14. Ans. D.

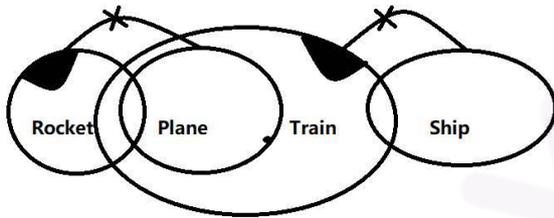| C |
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15. Ans. D.
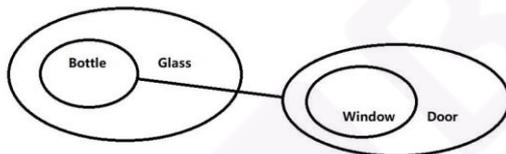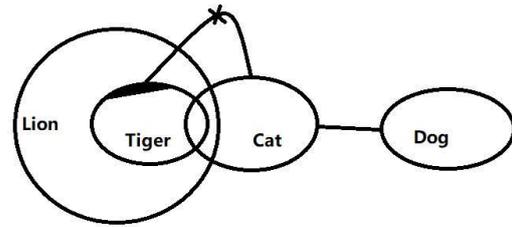
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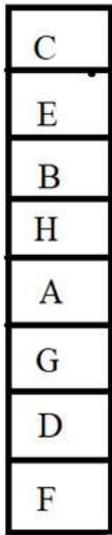
16. Ans. D.

17. Ans. A.

18. Ans. B.

19. Ans. B.
20. Ans. D.
21. Ans. D.
The correct option is E.
22. Ans. C.
The correct option is C.
23. Ans. D.
The correct option is D.
24. Ans. B.
The sentence is "Speed limits change as you drive on different kinds of roads or enter and exit highways".
The correct option is B.
25. Ans. C.
The correct option is C.
26. Ans. A.
The correct option is A.
27. Ans. A.
The correct option is A.
28. Ans. A.
The correct option is A.
29. Ans. D.
The correct option is D.
30. Ans. D.
The correct option is E.