## NIGERIAN NAVY DSSC 22 ENLISTMENT APTITUDE TEST-2013

## M ATHEMATICS AND QUANTITATIVE APTITUDE QUESTION

## Time Allowed: 1 Hours Instructions.

This paper has $\mathbf{1 0 0}$ multiple choice questions and each question has 5 possible answers A, B, C, D or E Consider each question carefully and choose the correct answer from the alternatives A to E .

1. Express $2 \sqrt{3}$ as the square root of a single number.
A. $\sqrt{4}$
B. $\sqrt{5}$
C. $\sqrt{6}$
D. $\sqrt{12}$
2. Numbers That cannot be written as ratios are called irrational Numbers. Which is an irrational number
A. 2.5
B. 7
C. 0.4
D. $2 \sqrt{7}$
E. $\sqrt{4}$
3. A right angle triangle has sides of length $\sqrt{10} \mathrm{~cm}$ and $\sqrt{6} \mathrm{~cm}$ What is the length of the hypotenuse
A. $\sqrt{14} \mathrm{~cm}$
B. $\sqrt{16} \mathrm{~cm}$
C. $\sqrt{60} \mathrm{~cm}$
D. 4 cm
E. 16 cm
4. A right angle triangle has sides $a$ and $b$ as well the hypotenuse side $h$, which of these is not correct
A. $h^{2}=a^{2}+h^{2}$
B. $h^{2}=a^{2} / h^{2}$
C. $a^{2}=h^{2}-b^{2}$ D. $b^{2}=h^{2}-a^{2}$
$\mathrm{E} . \mathrm{h}$ is the longest side
5. An officer is twice as old as his son. In five years time, the sum of their ages will be 85 years. What is the officers age now?
A. 20 years
B. 42.5 years
45 years
D. 50 years
E. 55 years
6. A square of sides 7 cm , a Rectangle of sides 8 and 6 cm and a circle of radius diameter 7 cm are placed side by side. Which of these objects has the largest area
A. Rectangle
B. Circle
C. All
D. Square
$E$. None, the areas are equal
7. The value of a boat depreciates by $10 \%$ at the end of each year. If the boat cost $\$ 2$ million now. What will be its value in naira after two years? (Take $\$ 1=\mathrm{N} 150$ )
A. N 270 m
B. N 240 m
C. N 300 m
D. N 243 m
E. N 280 m
8. An item is marked N10,000 VAT inclusive. If VAT rate is $5 \%$, how much will the buyer pay and how much VAT will the Government receive on this sale?
A. N 10,500 and $N 500$
B.N 10 and N 5
C. N 9,500 and N 500
D. N 10.000 and N5
E. N10.000 and N 500
9. Asettee is advertised as $\mathrm{N} 9,000$ plus VAT. If VAT is $5 \%$. How much will a buyer pay
A. $\mathrm{N} 9,500$
B. $\mathrm{N}, 450$
C. N8,550
D. N9,005
E. N9,000

## Use the information below to answer Question 10-12.

A young officer earns N 1.8 million basic per per annum and allowances of $\mathrm{N} 45,000$ per month.
The personal Income Tax rate is 10\%
10. What amount of tax does he pay per month?
A. N12,000
B. N18,000
C. $\mathrm{N} 10,000$
D. N180,000
E. N15,000
11. What is the young officer's take home per month?
A. N195,000
B. $\mathrm{N} 180,000$
C.N 175,500
D. N185,000
E.N200,000
12. If the young officer does a compulsory mortgage contribution of $20 \%$ of his take home salary. How much is left of his salary?
A. $\mathrm{N} 160,000$
B. 156,000
C. 150,000
D. $\mathrm{N} 144,000$
E. 200,000

The table below gives the distance travelled by an object against time. Use it to answer Q 13-15

| Time in Seconds | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Distance in Meters | 10 | 40 | 50 | 100 | 160 | 180 | 200 | 210 | 250 | 280 | 330 |

13. What was the speed in the last 10 seconds?
A. $20 \mathrm{~m} / \mathrm{s}$
B. $5 \mathrm{~m} / \mathrm{s}$
C. $80 \mathrm{~m} / \mathrm{s}$
D. $10 \mathrm{~m} / \mathrm{s}$
E. $330 \mathrm{~m} / \mathrm{s}$
14. What is the average speed of the object?
A. $33 \mathrm{~m} / \mathrm{s}$
B. $330 \mathrm{~m} / \mathrm{s}$
C. $32 \mathrm{~m} / \mathrm{s}$
D. $3.3 \mathrm{~m} / \mathrm{s}$
E. $3.2 \mathrm{~m} / \mathrm{s}$
15. The object recorded the highest speed between
A. 10 and 20 s
B. 20 and 30 s
C. 30 and 40 s
D. 90 and 100 s
E. 80 and 90 s
16. If numbers can be written with a tolerance of 0.5 , what is the range of values for the sum of 10 and 11 ?
A. 20-22
B. 20-21
C. 21
D. 21-22
E.19-20
17. A chart that represents the totality of data using a circle is called a
A. Pie chart
B. Histogram
C. Circular Chart
D. Bar chart
E. Pictogram
18. If a Equilateral Triangle of sides 7 cm is placed on a square of sides 7 cm . what is the perimeter of the composite shape?
A. 21 cm
B. 14 cm
C. 49 cm
D. 35 cm
E. 28 cm
19. What is the simple interest on $\mathrm{N} 15,000$ for 5 years at $10 \%$ per annum?
A. $\mathrm{N} 150,000$
B. $\mathrm{N} 5,000$
C. N10, 000
D.N7,500
E.N15,000
20. Arrange the following fractions in order of their sizes from smallest to largest: $1 / 4,1 / 2$ and $3 / 4$
A. $1 / 4,1 / 2$ and $3 / 4$
B. $1 / 4,3 / 4$ and $1 / 2$
C. $1 / 2,1 / 4$ and $3 / 4$
D. $3 / 4,1 / 4$ and $1 / 2$
E. $3 / 4,1 / 2$ and $1 / 4$
21. If N37,700.56 is rounded off to the nearest thousand .you'll get
A. $\mathrm{N} 37,700.6$
N37,000
C.N37,701
D.N40,000
E. N38,000
22. The device used to measure angle is called a.
A. T-square
B. Angle Bar
C. Protractor
D. Compass
E. Set Square
23. A machine makes a product every five Seconds. How many hours are required to make 1440?
A. 2 hours
B. 4 hours
C. 14 hours
D. 3 hours
E. 5 hours
24. A worker completes $3 / 4$ of a job in 12 days. At this rate, how many more days are required to finish the job?
A. 16 days
B. 7 days
C. 9 days
D. 4 days
E. 3 days
25. A boy was asked to calculate $2^{4} \times 3^{2}$ and got 80 as his answer. what is the difference between his answer and the actual answer.
A. 0
B. 1
C. 18
D. 8
E. 9
26. The boys and girls in a class room are in the ration $3: 2$. If the class has a total of 35 students, how many are boys?
A. 14
B. 32
C. 28
D. 21
E. 5
27. If $A$ is twice as fast $a B$ and $C$ is three time as fast as $A$. $A$ journey covered by $B$ in $11 / 2$ hrs will be covered by Cin.
A. 15 minutes
B. 15 hours
C. 18 minutes
D. 30 minutes
E. 9 hours
28. If the sides of a rectangle are reduced by $20 \%$, the area is reduced by
A. $20 \%$
B. 40\%
C. 64\%
D. 10\%
E. 36\%
29. Assume, 27 January 1996 was a M onday, what day of week was 10 march 1996?
A. M onday
B. Tuesday
C. Wednesday
D. Thursday
E. Friday
30. What is the percentage yield of N 1 shares at N 1.08 with dividend of $10 \%$ ?
A. $8 \%$
B. $9.3 \%$
C. 8\%
D. 1.08\%
10.8\%

## Diagram

31. How many pupils are in the class?
A. 45
B. 30
C. 37
D. 40
E. 35
32. How many pupils prefer English only?
A. 13
B. 7
C. 24
D. 20
E. 27
33. How many pupils prefer English or Mathematics?
A. 5
B. 31
C. 37
D. 30
E. 6
34. How many pupils prefer Mathematics and General Science?
A. 4
B. 15
C. 37
D. 30
E. 6
35. How many pupils prefer all 3 subjects?
A. 2
B. 3
C. 4
D. 6
E. 5

## From the Figures Question 36-40 <br> Diagram

36. In which of these curve(s) does Point B represent point of inflection.
A. I x II
B. I, II, III \& IV
C. III \& IV
D. III only
E. IV only
37. In which of these curves does Point $B$ represent turning points.
A. 1
B. II
C. III
D. IV
E. None
38. In which of these curves does point B represent a maxima Point.
A. None
B. II
CIII
D. IV
E. None
39. In which of these curves does point B represents turning points.
A. None
B. I \& II
C. II \& III
D.IV
E. All the curves
40. In which of these curves does the gradient change from positive to negative.
A. I
BII
C. III
D. IV
E. None
41. Convert N4125 into dollars (15 equals N165.00)
A. 5250.00
B. 52.50
C. 5165.00
D. 525.00
E. 541.25
42. Express 4957 cm in km to 2 decimal places.
A. 0.04
B. 0.005
C. 0.049
D. 49.57
E.50.00

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