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NNPC RECRUITMENT PAST QUESTIONS & ANSWERS

Mathematics
English Language
General Knowledge

Content

INTRODUCTION

This e-book is a compilation of the Nigerian National Petroleum Corporation (NNPC) recruitment past questions and answers.

NNPC Past Questions has been compiled to help those sitting for NNPC aptitude test in Nigeria. This ebook will give you an insight on how NNPC set their questions and the format they use.

Using this ebook would give you an edge over others. NNPC aptitude test questions comprise of Mathematics, English questions and specialized fields like Finance/Social Sciences, General Engineering, General Sciences, Information Technology and Medical Questions. These are past questions gathered from a reliable source. It will give you an insight into past exams conducted by NNPC.

Knowing what to expect and practising over and over would help you develop an effective test strategy; improve your speed, accuracy and confidence.

This Past Question material has over 200 questions and comprise of Mathematics, English and General Knowledge.

Preparing with these past questions will give you an insight into the past exams conducted by NNPC and also give an edge over your competitors, also there is a possibility you might come across the some of these past questions in the exam.

The general knowledge part of this e-book contains past questions from Chemistry, Physics, ICT, medicine and finance.

Mathematics Past Questions And Answers

1)   A rectangle is twice as long as it is wide. If the width is a, what is the length of a diagonal?
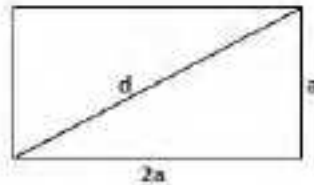
A. $a\sqrt{2}$

B. $a\sqrt{3}$

C. $a\sqrt{5}$

D. 3a

E. 5a

Solution

Draw a diagram and label it. Use the Pythagorean theorem to find d, the length of the diagonal: $a^2 + (2a)^2 = d^2 \Rightarrow a^2 + 4a^2 = d^2 \Rightarrow 5a^2 = d^2 \Rightarrow d = a\sqrt{5}$.
The answer is (C).

2)   Last year Jose sold a painting for $2000. If he made 25% profit on the sale, how much had he paid for the painting?

A. $1200

C. $1500

C. $1600

D. $2400

E. $2500

Jose made 25% profit, so if he bought the painting for x, he sold it for: x + 0.25x = 1.25x = 2000 $\Rightarrow$ x = 2000 ÷ 1.25 = 1600.
The answer is (C).

3)   In the figure below what is the value of b?

A. 30

B. 36

C. 45

D. 60

E. 72

Since vertical angles have the same measure, c = d, d = a, and b = a − b a = 2b.
Therefore, c = d = a = 2b. Also, the sum of the measures of all six angles is 3600,
so a + b + c + d + a − b + d = 2a + c + 2d = 360. Replacing c, d, and a by 2b yields
10b = 360 ⇒b =36.
The answer is (B).

4)   A lacrosse team raised some money. The members used 74% of the money to buy
uniform, 18% for equipment, and the remaining $216 for a team party. How much money did
they raise?

A. 2400

 B. 2450

 C. 2500

 D. 2600

 E. 2700

SINCE 74% + 18% = 92%, THE $216 spent on the party presents the other 8 % 0f the money
raised. Then: 0.08m = 216 ⇒ m = 216 ÷ 0.08 = 2700. The answer is (E).

5)   In the figure below, what is the sum of the degree measures of all of the marked angles?

A. 600

 B. 620

 C. 700

 D. 720

 E. 750

Each of the 10 marked angles is an exterior angle of the pentagon. If you take one angle at each
vertex, the sum of the degree measures of those five angles is 360; the sum of the degree
measures of the other five also is 360: 360 + 360 = 720.
The answer is (720).

6)   In the figure below, ABCD is a parallelogram. What is the value of y – z?

A. 50

 B. 55

 C. 60

 D. 65

 E. 70

The sum of the degree measures of two consecutive angles of a parallelogram is
180, so 180 = (3x – 5) + (2x – 15) = 5x – 20 $\Rightarrow$ 5x = 200 $\Rightarrow$ x =40. Since opposite angles of a
parallelogram are equal, y = 3x – 5 = 115 and z = 2x – 15 = 65. Then y
– z = 50. The answer is (50).

7)   If the length of a rectangle is 4 times its width, and if its area is 144, what is its perimeter?

A. 6

 B. 24
C. 30

 D. 60

 E. 96

Solution

Draw a diagram and label it.
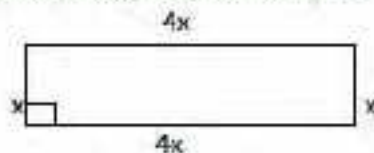
Since the area is 144, then: $144 = 4x^2 \Rightarrow x^2 = 36 \Rightarrow x = 6$. The width is 6, the
length is 24, the perimeter is 60. The answer is (D).

8) If the measures of the angles of a triangle are in the ratio of 1:2:3, and if the perimeter of the triangle is 30 + 10 (3)½, what is the length of the smallest side?

A. 20

B. 18

C. 15

D. 12

E. 10

Solution

If the measures of the angles are in the ratio of 1:2:3, then, $x + 2x + 3x = 180 \Rightarrow 6x = 180 \Rightarrow x = 30$. The triangle is a 30-60-90 right triangle, and the sides are a, 2a, and $a\sqrt{3}$. The perimeter therefore is $3a + a\sqrt{3} = a(3 + \sqrt{3})$, so $a(3 + \sqrt{3}) = 30 + 10\sqrt{3} = 10(3 + \sqrt{3}) \Rightarrow a = 10$. **The answer is (10).**

9) What is the area of Triangle ABC?

A. 350

B. 360

C. 370

D. 375

E. 390

The area of Triangle CDE = 0.5(8)(15) = 60. Since the ratio of similitude for the two triangles (as calculated in solution C15) is 2.5, the area of Triangle ABC is $(2.5)2$ times the area of CDE: $(2.5)2 \times 60 = 6.25 \times 60 = 375$. The answer is (375).

10) What is the perimeter of Triangle ABC?

A. 80

B. 85

C. 95

D. 100

E. 105

Solution

By the Pythagorean theorem, $8^2 + 15^2 = (CE)^2$ $(CE)^2 = 64 + 225 = 289$ $CE = 17$. Then the perimeter of CDE = 8 + 15 + 7 = 40. Triangles ABC and CDE are similar (each has a 90° angle, and the vertical angle at C are congruent). The ratio of similitude is = 2.5, so the perimeter of ABC is 2.5 × 40 = 100. The answer is (100).

11)   If the difference between the measures of the two smaller angles of a right triangle is 20°, what is the measure, in degrees, of the smallest angle?

A. 30

B. 35

C. 40

D. 45

E. 50

Solution

. Draw a diagram and label it. Write the equations, letting x = larger angle and Y = smaller angle:

$$x + y = 90$$
$$+ \underline{x - y = 20}$$

. Add the equations:

$$2x = 110$$

Then x = 55, and y = 90 − 55 = 35. **The answer is (35).**

12. What is the perimeter of Triangle ABC

A. 48

B. $48 + 12\sqrt{2}$

C. $48 + 12\sqrt{3}$

D. 72

E. It cannot be determined from the information given

Solution

Triangle ADB is a right angle triangle whose hypotenuse is 15 and one whose leg is 9, so this is a 3x-4x-5x triangle with x = 3, and AD = 12. Now ADC is a 30-60-90 triangle, whose shorter leg is 12. Hypotenuse AC is 24, and leg CD is $12\sqrt{3}$, so the perimeter is $24 + 15 + 9 + 12\sqrt{3} = 48 + 12\sqrt{3}$. **The answer is C.**

13) What is the area of Triangle BED in the figure below were ABCD is a triangle?

A. 12

B. 24

C. 36

D. 48

E. 60

You can calculate the area of the rectangle and subtract the area of the two white right triangles, but don't. The shaded area is a triangle whose base is 4 and whose height is 12. The area is (4)(12) = 24. The answer is (B).

14) What is the value of PS in the triangle below?

A. $5\sqrt{2}$

B. 10

C. 11

D. 13

E $12\sqrt{2}$

Use the Pythagorean Theorem twice, unless you recognize the common right triangle in the figure. Since PR = 20 and QR = 16, PQR is a 3x-4x-5x right triangle with x = 4. Then PQ = 12, and PQS is a right angle triangle whose legs are 5 and 12. The hypotenuse, PS, therefore is 13. The answer is (D).

15)

In the figure below, lines k and l are parallel. What is the value of y − x?
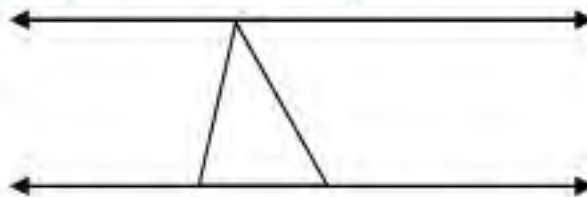
A. 40

B. 45

C. 50

D. 55

E. 57

Solution

Since lines l and k are parallel, the angle marked y in the given diagram and the sum of the angles marked x and 45 are equal:

Y = x + 45 y – x = 45.the answer is (45).

16)   In an office there was a small cash box. One day Ann took half of the money plus $1 more. Then Dan took half of the money plus $1 more. Stan then took the remaining $11. How many dollars were originally in the box?

A. $50

B. $45

C. $42

D. $40

E. $38

Solution

You can avoid some massy algebra by working backwards. Put back the $11 Stan took; then put back the extra $1 that Dan took. There is now $12, which means that, when Dan took his half, he took $12. Put that back. Now there is $24 in the box. Put back the extra $1 that Ann took. The box now has $25, so before Ann took her half, there was $50. The answer is ($50).

17)   Each of the 10 players on the basketball team shot 100 free throws, and the average number of baskets made was 75. When the highest and lowest scores were eliminated the average number of baskets for the remaining 8 players was 79.What is the smallest number of baskets anyone could have made?

A. 22

B. 20

C. 18

D. 16

 E. 14

Since the average of all 10 players was 75, the total number of baskets made was 10 × 75 = 750. Also, since 8 of the player had an average of 79, they made a total of 8 × 79 = 632 points. The other 2 players, therefore, made 750- 632 = 118 baskets. The most baskets that the player with the highest number could have made was 100, so the player with the lowest number had to have made at least 18. The answer is 18.

18)   Karen played a game several times. She received $5 every time she won and had to pay $2 every time she lost. If the ratio of the number of times she won to the number of times she lost was 3:2, and if she won a total of $66, how many times did she play the game?

A. 30

 B. 35

 C. 40
 D. 45

 E. 48

Karen won 3x times and lost 2x times, and thus played a total of 5x games. Since she got $5 every time she won, she received $5(3x) = $15x. Also, since she paid $2 for each loss, she paid out $2(2x) = $4x. Therefore, her net winning were $15x – 4x = $11x, which you are told was $66. Then, 11x = 66 ⇒ x = 6, and so 5x = 30.
The answer is 30

19)   Since 1950, when martin graduated from high school, he has gained 2 pounds every year. In 1980 he was 40% heavier than in 1950. What percent of his 1995 weight was his 1980 weight?

A. 80

 B. 85

 C. 87.5

 D. 90

 E. 95

Solution

Let x = Martin's weight in 1950. By 1980, he had gained 60 pounds (2 pounds per year for 30 years) and was 40% heavier:

$60 = 0.40x$ $x = 60 \div 0.4 = 150$. In 1980, he weighed 210 pounds, 15 years later, in 1995, he weighed 240:

$210/240 = 7/8 = 87.5\%$. The answer is C.

20) Henry drove 100 mile to visit a friend. If he had driven 8 mile per hour faster than he did, he would have arrived in of the time he actually toke. How many minute did the trip take?

A. 100

B. 120

C. 125

D. 144

E. 150

Solution

Let t = time, in hours, and r = rate, in miles per hour, that Henry drove. Then: $t = \frac{100}{r}$ and $\frac{5}{6}t = \frac{100}{r-8}$. Multiply the second equation by $\frac{6}{5}$.

$\frac{6}{5}\left[\frac{5}{6}t\right] = \frac{6}{5}\left[\frac{100}{r-8}\right] \Rightarrow t = \frac{600}{5r-40}$, so Cross multiply: $500r + 4000 = 600r \Rightarrow 100r = 4000 \Rightarrow r = 40$.

Henry drove at 40 miles per hour, and the trip took $100 \div 40 = 2.5$ hours = 150 minutes. (Had he driven at 48 miles per hour, the trip would have taken 125 minutes.). The answer is E.

21) Two printing presses working together can complete a job in 2.5 hours. Working alone, press A can do the job in 10 hours. How many hours will press B take to do the job by itself?

A. 10/3

B. 4

C. 5

C. 25/4

E. 15/12

Solution

Let x = number of hours press B would take working alone.

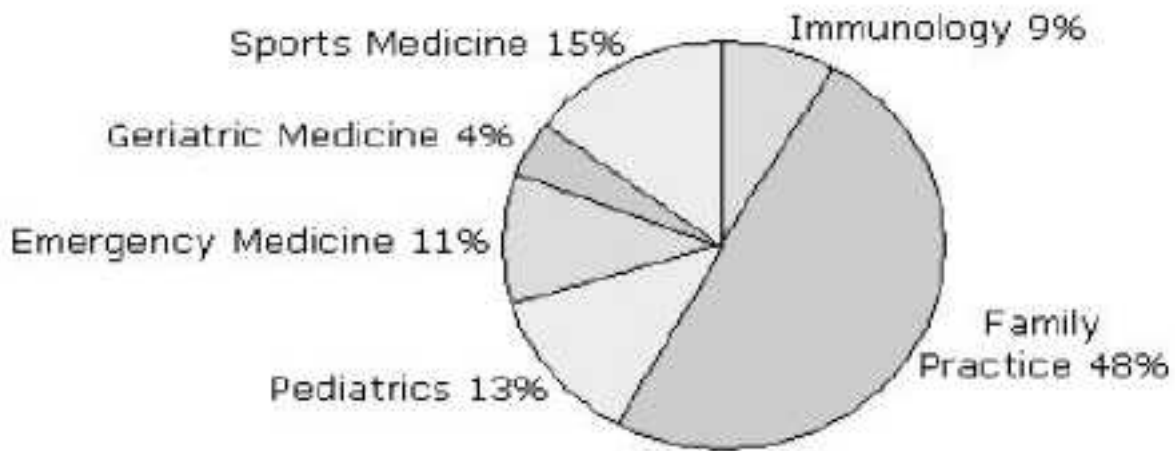|	Press A Alone	Press B Alone	Together
Part of job that can be Completed in 1 hour	$\frac{1}{10}$	$\frac{1}{x}$	$\frac{1}{2.5}$
Part of the job can be Completed in 2.5 hours	$\frac{2.5}{10}$	$\frac{2.5}{x}$	1

• Write the equation: $\frac{2.5}{10} + \frac{2.5}{x} = 1$

Multiply each term by 10x: 2.5x + 25 = 10x
.Subtract 2.4x from each other: 25 = 7.5x
. Divide each side by 7.5: x = 3 hours. The answer is A.

North West Medical School Graduates 2005

The table above shows the specializations of North West Medical School graduates in 2005. Percentages have been rounded to the nearest whole number. One hundred and nineteen students graduated that year. Use this information to answer the following.

22)   If seven students changed their specialization from family practice to paediatrics, approximately what fraction of students would then be specializing in paediatrics?

A. 1/7
B. 1/4
C. 1/7
D. 1/5
E. 1/15

Answer: D

Explanation: Thirteen percent of 119 students (119/100) * 13 = 15 specialized in paediatrics. If 7 students joined them then there would be 22 students studying it. This equates to
22/119 = 0.18 which is approximately 1/5.

23)   What is the approximate ratio of students specializing in sports medicine, emergency medicine and family practice?

A. 6:4:10
B. 1:4:5
C. 2:8:10
D. 3:2:10
E. 3:2:5

Answer: D

Explanation: The ratio of students specializing in each is (15:11:48) which approximates to 3:2:10.

24)   One twelfth of the students who chose to specialize in family practice plan to work abroad. How many is this?

A. 7
B. 8
C. 5
D. 9
E. 3

Answer: C
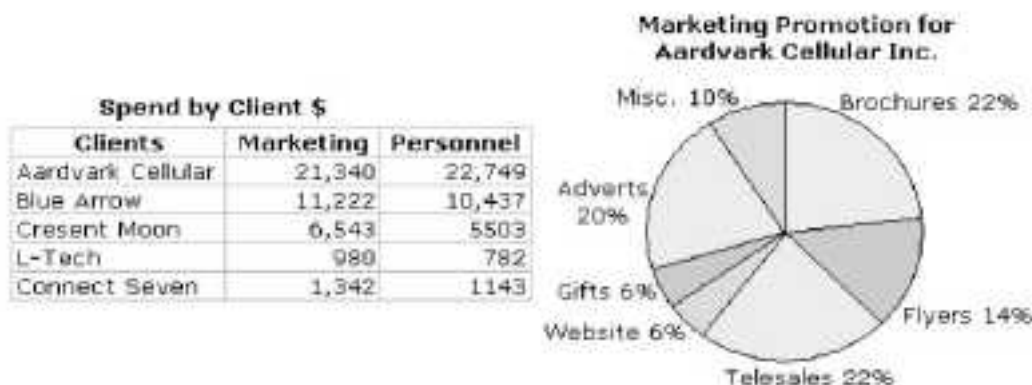
Explanation: Forty eight percent of 119 students (119/100) * 48 = 57 specialized in family practice. One twelfth of these equates to 57/12 = 5 who planned to work abroad.

25)   How many students decided to specialize in immunology?

A. 9
B. 11
C. 14
D. 7
E. 15

Answer: B

Explanation: Nine percent of 119 students decided to specialize in immunology. This equates to (119/100) * 9 = 11 students

Spend by Client $		
Clients	Marketing	Personnel
Aardvark Cellular	21,340	22,749
Blue Arrow	11,222	10,437
Cresent Moon	6,543	5503
L-Tech	980	782
Connect Seven	1,342	1143

Marketing Promotion for Aardvark Cellular Inc.

Misc. 10%, Brochures 22%, Adverts 20%, Gifts 6%, Website 6%, Telesales 22%, Flyers 14%

The table above shows the amount spent by Ace Marketing Consultancy to promote their clients. 'Marketing' spend does not include the time of any Ace employees, this is billed separately as 'Personnel'. Use this information to answer the following questions.

26) Approximately what percentage of Ace Marketing's total business is accounted for by their three smallest clients?

A. 18%
B. 17%
C. 20%
D. 16%
E. 22%

Answer: C

Explanation: The total value of Ace's business is $41,427 (marketing) plus $40,614 (personnel) which gives $82,041. Since we know that Aardvark account for 54% of the business, the quickest way to work out how much the three smallest clients account for is to calculate how much Blue Arrow accounts for ($21,659 which is 26%), add this to the
54% to give 80%, which leaves 20% to be accounted for by the smallest three

27) Approximately what percentage of Ace Marketing's total business is for Aardvark Cellular?

A.49%
B. 57%
C. 50%
D. 54%
E. 56%

Answer: D

Explanation: The total value of Ace's business is $41,427 (marketing) plus $40,614 (personnel) which gives $82,041. Aardvark Cellular account for (21,340+22,749 =) $44,089.
This equates to (44,089/82,041) * 100 = 54%.

28) If flyers for Aardvark Cellular cost $150 per thousand. Approximately, how many thousand have been produced?

A. 23
B. 20
C. 17
D. 14
E. 18

Answer: B

Explanation: Fourteen percent of $21,340 was spent on flyers for Aardvark Cellular. This equates to (21340/100) * 14 = $2,987. If flyers cost $150 per thousand then approximately (2987/150 =) 20,000 have been produced.

29)   If Ace charges their clients cost price plus 20%, how much will they bill Aardvark Cellular for their website?

A. $1,536
B. $1,174
C. $1,744
D. $1,280
E. $1,474

Answer: A

Explanation: Six percent of $21,340 was spent on the website for Aardvark Cellular. This equates to (21340/100) * 6 = $1,280. If Ace add 20% then they will bill Aardvark for $1,280 * 1.2 = $1,536.

30)   Approximately how much was spent by on brochures for Aardvark Cellular?

A. $4,994
B. $4,774
C. $4,632
D. $4,694
E. $4,624

Answer: D

Explanation: Twenty two percent of $21,340 was spent on brochures for Aardvark Cellular. This equates to (21340/100) * 22 = $4,694.

SleazyJet Passengers 2004 – 2005

The table above shows the numbers of passengers flying from New York to four European capital cities by low cost airline SleazyJet. These numbers have been rounded to the nearest thousand. Use this information to answer the following questions.

31)   Approximately, what fraction of passengers who travelled in Q4 2005 flew to Berlin?

A. 1/8
B. 1/4
C. 1/7
D. 1/5
E. 1/15

Answer: C

Explanation: The number of passengers travelling in Q4 2005 was:
London 10,000
Paris 14,000
Rome 20,000
Berlin 7,000
This gives a total of 51,000 of whom 7,000 were travelling to Berlin.
This equates to (7,000/51,000 = 1/7.

32)   How many more passengers travelled to Rome in Q2 2005 than in the same quarter the previous year?

A. 5,000
B. 4,000
C. 3,000
D. 2,000
E. 1,000

Answer: E

Explanation: The number of passengers travelling in to Rome Q2 2004 was 12,000.
The number of passengers travelling in to Rome Q2 2005 was 13,000.
Therefore 1,000 more passengers travelled in Q2 2005.

33)   What was the ratio of passengers travelling to London and Paris in Q2 2004?

A. 2.2:1
B. 1.8:1
C. 2:1

D. 0.75:1
E. 1:2

Answer: B

Explanation: The number of passengers travelling in to London Q2 2004 was 18,000.
The number of passengers travelling in to Paris Q2 2004 was 10,000.
This equates to a ratio of 1.8:1

34)   How many passengers travelled in Quarter 4 2004?

A. 46,000
B. 44,000
C. 43,000
D. 45,000
E. 42,000

Answer: A

Explanation: The number of passengers travelling in Q4 2004 was:
London 11,000
Paris 14,000
Rome 13,000
Berlin 8,000
This gives a total of 46,000.
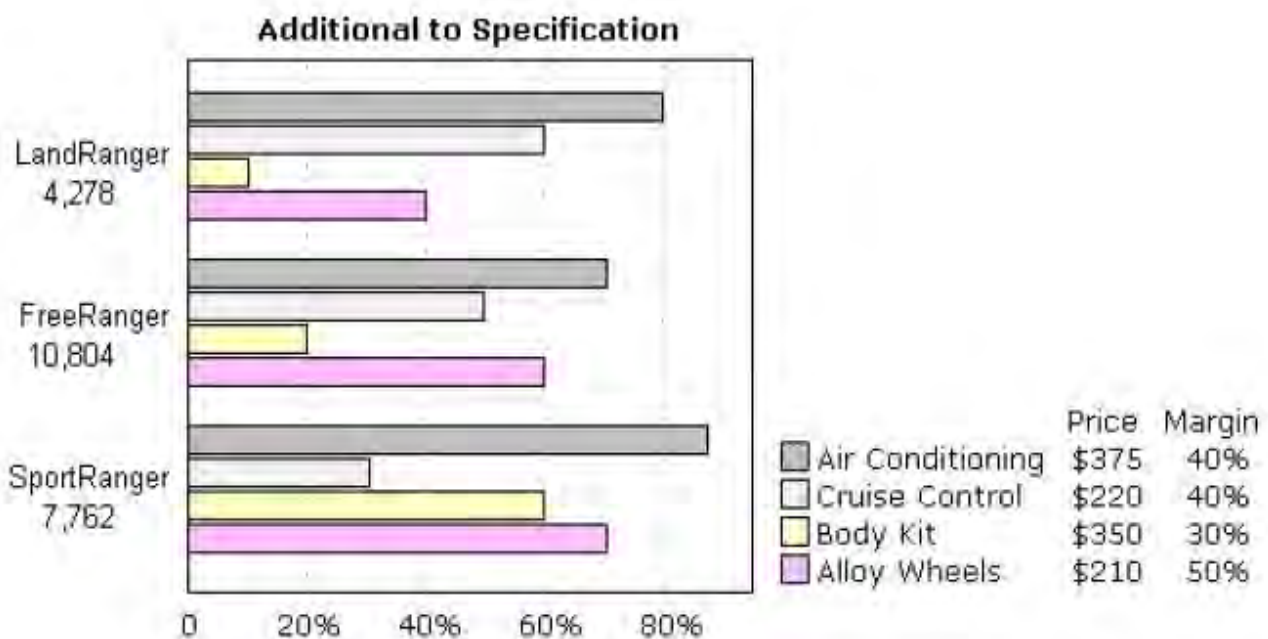
Additional to Specification

	Price	Margin
Air Conditioning	$375	40%
Cruise Control	$220	40%
Body Kit	$350	30%
Alloy Wheels	$210	50%

The table above shows the total sales figures for three models of SUV. It also shows the percentage of customers who specified additional equipment when buying from the dealer network. Use this information to answer the following questions.

35)   How much extra profit would be generated if dealers doubled the number of Body Kits fitted when they sold a FreeRanger?

A. $2,268
B. $4,534
C. $1,130
D. $1,238
E. $226

Answer: A

Eplanation: Twenty percent of the 10,804 FreeRangers sold (2,161) were fitted with body kits. The total revenue generated was 2,161 * $350 = $756,000. The profit margin on this is 30%, therefore (756,000/100) * 30 =) $2,268. If dealers doubled the number sold then the additional profit would be $2,268.

Additional to Specification

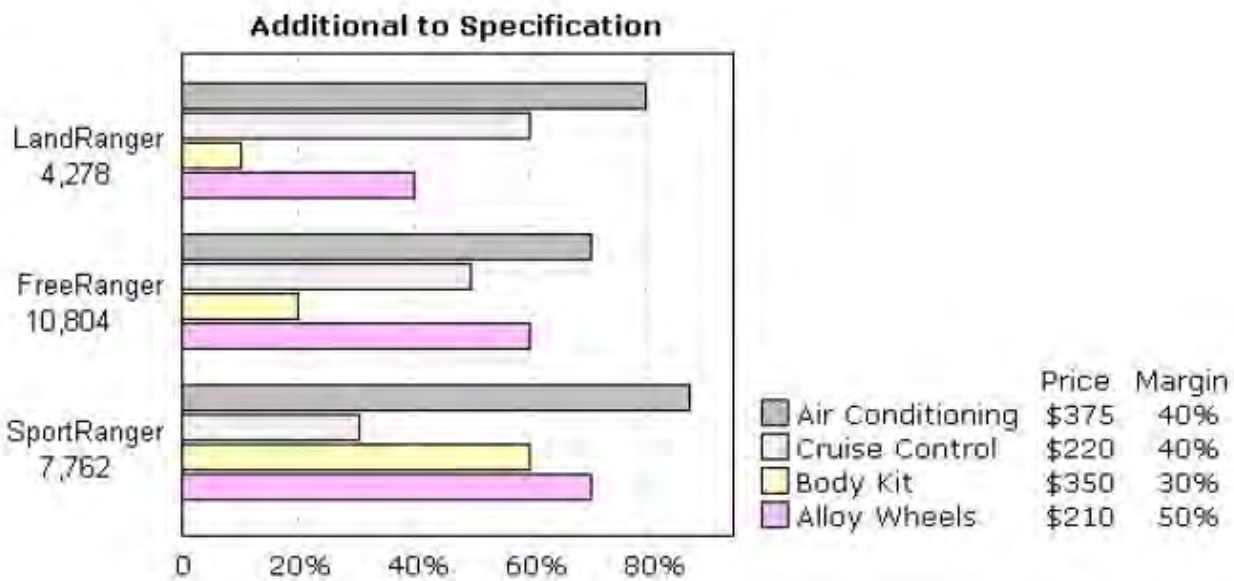|	Price	Margin
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The table above shows the total sales figures for three models of SUV. It also shows the percentage of customers who specified additional equipment when buying from the dealer network. Use this information to answer the following questions.

36)   How much profit (margin), in millions of dollars, can be attributed to Cruise Control fitted to the FreeRanger?

A. 0.61
B. 0.48
C. 0.21
D. 4.80
E. 3.60

Answer: B

Explanation: Fifty percent of the 10,804 FreeRanger customers (5,402) specified cruise control. The total revenue generated was 5,402 * $220 = $1.19 million. The profit margin on this is 40%, therefore (1.19/100) * 40 =) $0.48 million.

37)   How much profit (margin), in millions of dollars, can be attributed to Body Kits fitted to the SportRanger?

A. 0.49
B. 1.48
C. 4.80
D. 0.36
E. 0.21

Answer: A

Explanation: Sixty percent of the 7,762 SportRangers sold (4,657) were fitted with body kits. The total revenue generated was 4,657 * $350 = $1.63 million. The profit margin on this is 30%, therefore (1.63/100) * 30 =) $0.49 million

38)   How much total revenue, in millions of dollars, did Alloy Wheels generate for FreeRanger sales?

A. 1.41
B. 1.28
C. 1.30
D. 1.36
E. 11.20

Answer: D

Explanation: Sixty percent of the 10,804 FreeRangers sold (6,482) were fitted with alloy wheels. Therefore the total revenue generated was 6,482 * $210 = $1.36 million.

39)   How many customers specified cruise control when ordering a FreeRanger?

A. 5,320
B. 2,566
C. 4,861
D. 2,861
E. 5,402

Answer: E

Explanation: Fifty percent of the 10,804 FreeRanger customers (5,402) specified cruise control.
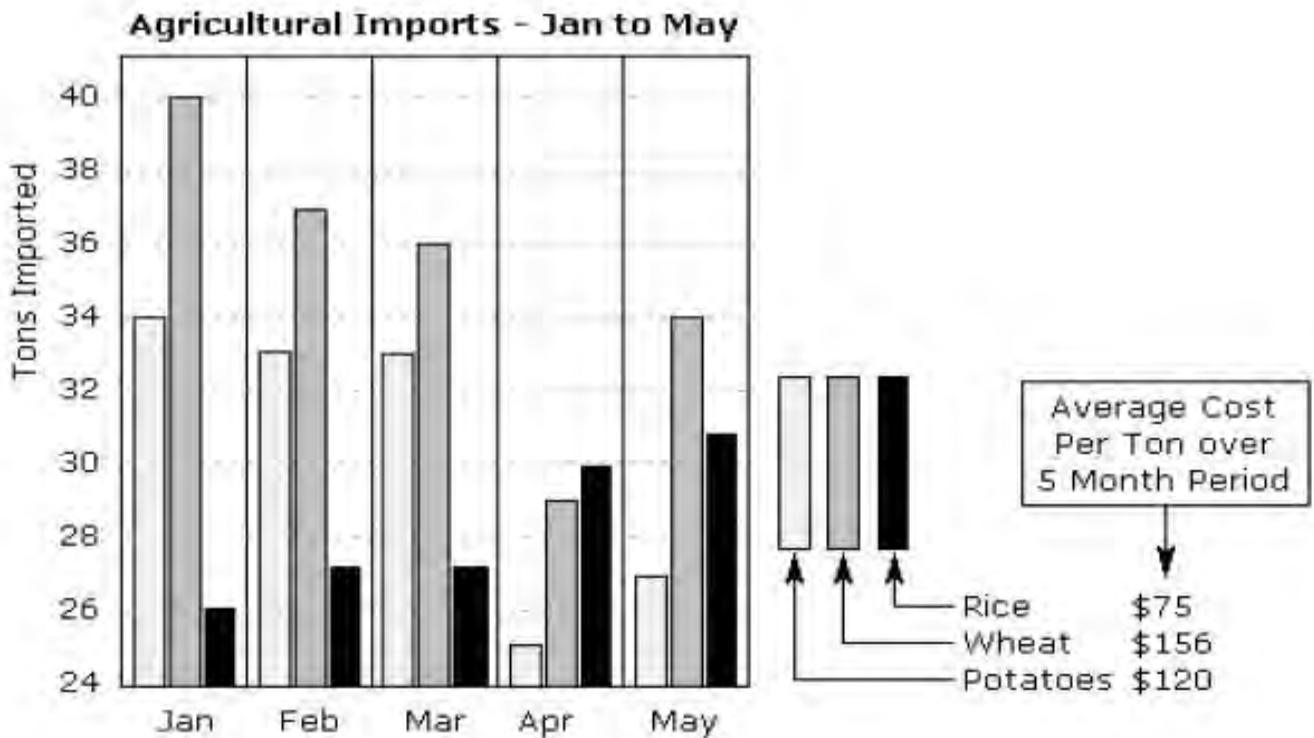
The table above shows agricultural imports for the island of South Cerney for a period of five months. Use this information to answer the following questions

40)   Approximately what fraction of the total tonnage of imports is rice?

A. 1/5
B. 1/4
C. 1/3
D. 2/5
E. 3/10

Answer: E

Explanation: Total tonnages imported over the 5 months are as follows:
Rice 141
Wheat 176
Potatoes 152
This means that the total tonnage of imports was 469 tons of which 141 tons were of
rice. Therefore (141/469 = 0.3) which is 3/10

41)   Identify the missing number at the end of the series.
100, 96, 91, 85, ?

A. 74
B. 75
C. 77
D. 78
E. 79

Answer: D

Explanation: The difference between the numbers in this series increases by 1 each time: -4, -5, - 6, etc.
This will produce a difference of -7 between 85 and the next number in the series, which is therefore 78.

42)   Identify the missing number at the end of the series.
11, 16, 26, 41, ?

A. 51
B. 56
C. 61
D. 66
E. 46

Answer: C
Explanation: The difference between the numbers in this series increases by 5 each time – 5, 10, 15, etc.
This will produce a difference of 25 between 41 and the next number in the series, which is therefore 66.

43)   Identify the missing number at the end of the series.
5, 12, 19, 26, ?

A. 31
B. 33
C. 35
D. 34
E. 37

Answer: B

Explanation: The numbers in this series increase by 7 each time. Therefore the next number is 33.

44)   Anna bought $4,000 of company stock. She sold 75% of it when the value doubled, and the remainder at four times the purchase price. What was her total profit?

A.$4,000
B. $6,750
C. $6,000
D. $6,500
E. $5,000

Answer: C
Explanation: Anna sold 75% of her stock when it was worth $8000. So she took $6000 cash, leaving her with $2000 worth of stock, which she had purchased for $1000. When this stock increased in value to $4000 she sold it and added this to the first $6000 giving her $10,000 in cash. Subtracting the initial $4000 coat of the stock, Anna has made $6,000.

45)   A total of 1600 copies of a CD were sold. 30% were sold at 55% discount, 10% were sold at 30% discount and the remainder were sold at the full price of $7.95. What was the approximate total revenue in dollars?

A. 10,369
B. 10,569
C. 10,569
D. 10,234
E. 10,669

Answer: D
Explanation: Of the 1600 CDs sold:
60% or 960 were sold at $7.95 = $7632
10% or 160 were sold at $5.56 = $889
30% or 480 were sold at $3.57 = $1713
Therefore the total revenue was $10,234

46)   Anna and John both receive stock as part of their remuneration. Anna receives $400 worth plus a bonus of 12%. John receives $300 worth plus a bonus of 20%. What is the difference between the values of the two bonuses?

A. $12.00
B.$10.00
C. $20.00

D. $14.00
E. $11.50

Answer: A

Explanation: Anna receives a bonus of ($400 * 0.12 =) $48. John receives a bonus of ($300 * 0.20 =) $60. The difference between their bonuses is therefore $12.

47)   Components X,Y and Z are ordered in the ratio 1:5:4. How many Z components will be in an order for 8000 components?

A.3,200
B.1,600
C. 6,400
D. 4,600
E. 1,800

Answer: A

Explanation: The components are ordered in the ratio 1:5:4 and the total order is for 8,000.
To work out the numbers of each add 1+5+4 = 10.
Divide $8,000 by 10 = 800. You can then calculate that the number of Z components will be (800 * 4 =) 3,200.

48)   A bank offers 10% per annum interest which is calculated and added at the end of the year. Another bank offers 10% per annum which is calculated and added every six months. What is the difference on a deposit of $800 after one year?

A. $2.00
B. $2.60
C. $2.40
D. $2.20
E. $4.00

Answer: A

Explanation: At the bank paying 10% interest calculated each year, the amount will be $880 ($800 * 1.10) at the end of the first year. At the bank paying 10% per annum added every 6 months, the amount will be $840 ($800 * 1.05) at the end of the first six months and $882 ($840 * 1.05) at the end of the year. Therefore the difference will be $2.00.

49)   It costs a manufacturer X dollars per component to make the first 500 components.
All subsequent components cost X÷5 each. When X = $4.50 How much will it cost to manufacture 4,000 components?

A. $5,600
B. $4,600
C. $5,400
D. $5,200
E. $5,450

Answer: C

Explanation: The first 500 components are $4.50 each which gives $2,250. The 3500 subsequent components cost $0.90 each which gives $3,150. Therefore the run of 4000 components will cost $5,400

50)   Identify the missing number.

2	6	44	8	10
15	19	?	21	23

A. 72
B. 66
C. 73
D. 57
E. 55

Answer: D

Explanation: The numbers on the bottom row are 13 more than those on the top row. Therefore the missing number is 44 + 13 = 57..

English Language Past Questions And Answers

Which of the following words can be formed from the words in capital.

1)   FINGERPRINTING

A. Finger
B. Printings
C. Fern
D. Granite

Answer C

2)   MADELEINE

A. Deed
B. Date
C. Elder
D. Line

Answer D

3)   ENVANGELISM

A. manager
B. Glid
C. Slim
D. Ever

Answer C

4)   DICTATION

A. Icon
B. Tate
C. Ione
D. Data

Answer A

5) ECONOMICS

A. Economical
B. Come
C. Cooks
D. Song

Answer B

In law, trespass can be: the criminal act of going into somebody else's land or property without permission of the owner or lessee; it is also a civil law tort that may be a valid cause of action to seek judicial relief and possibly damages through a lawsuit. In some jurisdictions trespassing is an offence or misdemeanour covered by a criminal code. In other jurisdictions, it is not considered a crime or penal in nature, property is protected from trespass under civil law and privacy acts. In England and Wales, despite the prevalence of notices asserting that "trespassers will be prosecuted", unless the trespass is aggravated in some way, it will only be a civil wrong. Although criminal and civil trespass laws vary from jurisdiction to jurisdiction, most have the following facets in common: Property owners and their agents (for example, security guards) may only use reasonable force to protect their property. For example, setting booby traps on a property to hurt trespassers or shooting at trespassers are usually strictly forbidden except in extreme circumstances. Not all persons seeking access to property are trespassers. The law recognizes the rights of persons given express permission to be on the property ("licensees") and persons who have a legal right to be on the property ("invitees") not to be treated as trespassers. For example, a meter reader on the property to read the meter is an invitee, as would be a travelling salesperson, or a police officer seeking to execute a warrant.

6) It is very difficult to successfully prosecute someone for trespass.

A. True
B. False
C. Can't say

Answer : C

7) Property is only ever protected from trespass under civil law and privacy acts.

A. True
B. False
C. Can't say

Answer :B

8)   In Texas it is legal to use deadly force against trespassers after dark.

A. True
B. False
C. Can't say

Answer : C

9)   Invitees are people who have been specifically invited onto the property by the owner.

A. True
B. False
C. Can't say

Answer : B

10)   Aggravated trespass is a civil wrong and offenders cannot be prosecuted

A. True
B. False
C. Can't say

Answer : B

Identify the relationship between the word pair in the question.
Select the answer where the word pair shown has the most similar relationship.

9)   deplete : decrease
A. shun : avoid
B. overlook : find
C. danger : evade
D. like : detest

Answer : A
Explanation : Deplete and decrease are synonyms. Shun and avoid are synonyms.

10)   anaesthetic : numb
A. vaccine : virus
B. disease : drug
C. sedative : drowsy
D. action : lunacy
Answer: C

Explanation : An anaesthetic makes something numb. A sedative makes something drowsy.

11)   corrode : acid

A. shoal : bird
B. ocean : wave
C. pack : cat
D. pod : dolphin

Answer : D

Explanation: Heard is the collective noun for cows. Pod is the collective noun for dolphins.

12)   evaporate : vapour

A. centrifuge : gas
B. petrify : stone
C. saturate : fluid
D. corrode : acid

Answer : B

Explanation : Vapour may be the result of evaporation. Stone may be the result of petrifaction.

13)   welt : blow

A. fall : height
B. strike : pain
C. stain : spill
D. throw : fly

Answer : C
Explanation : A welt is the result of a blow. A stain is the result of a spill.

14)   paltry is to substantial as acute is to -------

A. angle
B. redundant
C. obtuse
D. sharp

Answer: C

Explanation : Paltry and substantial are opposites. Acute and obtuse are opposites.

15)   chapter is to book as color is to -------

A. hue
B. artist
C. palette
D. spectrum

Answer : D

Explanation : A book is divided into chapters. A spectrum is divided into colors.

16)   liability is to asset as expenditure is to -------

A. income
B. payments
C. benefit
D.costs

Answer : A

Explanation : Liability and asset are opposites. Expenditure and income are opposites.

17)   sculptor is to marble as painter is to -------

A. easel
B. artist
C. canvas
D. brush

Answer : C

Explanation : A sculptor works with marble. A painter works with canvas.

18)   hold is to hatch as room is to -------

A. ship
B. window
C. space
D. door

Answer : D
Explanation : A hatch is the entrance to a hold. A door is the entrance to a room.

Instruction: Identify the relationship between the word group in the question. Select the answer which fits best with the group.

19)   nile, amazon, rhine

A. baltic
B. michigan
C. danube
D. victoria

Answer: C
Explanation: These are all rivers.

20)   snake, lizard, tortoise

A. frog
B. crocodile
C. newt
D. toad

Answer : B

Explanation: These are all reptiles.

21)   capricorn, aries, aquarius

A. gemini
B. zodiac
C. andromeda
D. astrology

Answer : B

Explanation: These are all signs of the zodiac.

22)   ash, beech, elm

A. pine
B. Cactus
C. ivy
D. Oak

Answer : D

Explanation: These are all deciduous trees.

22)   diamond, ruby, sapphire

A. gold
B. emerald
C. platinum
D. pearl

Answer : B

Explanation: These are all gemstones.

Identify the relationship between the word pair in the question.
Select the answer where the word pair shown has the most similar relationship.

23)   submerge : dip

A. avoid : evade
B. dismiss : ban
C. plead : ask
D. crave : covet

Answer : C

Explanation: To submerge is the extreme of to dip. To plead is the extreme of to ask

24)   bulky : streamlined

A. cluttered : neat
B. sleek : fast
C. bloated : sink
D. light : massive

Answer : A

Explanation: If something is bulky, it cannot be streamlined. If it is cluttered it cannot be neat.

25)   rook : chess

A. cricket : ball
B. chip : poker
C. football : goal
D. swing : golf

Answer : B

Explanation: A rook is used in a game of chess. A chip is used in a game of poker.

26)   satchel : bag

A. foot : shoe
B. cup : mug
C. hand : glove
D. top : hat

Answer : D

Explanation : A satchel is a type of bag. A top hat is a type of hat.

27)   cohesion : unity

A. belief : denial
B. dearth : scarcity
C. fear : unknown
D. death : famine

Answer : B

Explanation: Cohesion leads to unity. Dearth leads to scarcity.

28)   Choose the word most nearly opposite in meaning to - heed

A. ignore
B. express
C. converse
D. attend

Answer : A

30)   Choose the word most nearly opposite in meaning to - frustrate

A. mollify
B. pacify
C. encourage
D. irritate

Answer : C

31)   Choose the word most nearly opposite in meaning to - abandon

A. keep
B. discover
C. recover
D. locate

Answer : A

32)   Choose the word most nearly opposite in meaning to - mordant

A. serene
B. gentle
C. penetrating
D. acerbic

Answer : B

33)   Choose the word most nearly opposite in meaning to - dissonance

A. note
B. conformist
C. chord
D. harmony

Answer : D

34)   Choose the word most nearly opposite in meaning to - refute

A. believe
B. prove
C. allow
D. contradict

Answer : B

35)   Choose the word most nearly opposite in meaning to - sedentary

A. exciting
B. inanimate
C. wearisome
D. active
Answer : D

36)   Choose the word most nearly opposite in meaning to - compromise

A. confrontation
B. concession
C. indulgence
D. allowance

Answer : A

37)   Choose the word most nearly opposite in meaning to - opulence

A. magnanimity
B. abstinence
C. moderation
D. poverty

Answer : D

38)   Choose the word most nearly opposite in meaning to - deliberate

A. purposeful
B. conscious
C. accidental
D. intentional

Answer : C

39)   Choose the word most similar in meaning to - mesmerize

A. contradict
B. fascinate
C. attack
D. confuse

Answer : B

40)   Choose the word most similar in meaning to - quirky

A. appreciation
B. ungrateful
C. interruption
D. peculiar
Answer : D

41)   Choose the word most similar in meaning to - exonerate

A. deteriorate
B. convey
C. deliberate
D. absolve

Answer : D

42)   Choose the word most similar in meaning to - consecrate

A. dedicate
B. decay
C. appease
D. plead

Answer : A

43)   Choose the word most similar in meaning to - lament

A. mourn
B. impulse
C. peril
D. fraud

Answer : A

44)   Choose the word most similar in meaning to - manipulate

A. gerrymander
B. condescend
C. conciliate
D. deviate

Answer : A

45)   Choose the word most similar in meaning to - abstruse

A. simple
B. unadorned
C. painful
D. perplexing
Answer : D

46)   Choose the word most similar in meaning to - incorporeal

A. unbiased
B. insubstantial
C. deceptive
D. agricultural

Answer : B

47)   Choose the word most similar in meaning to - undermine

A. subvert
B. demand
C. depreciate
D. dishearten

Answer : A

48)   Choose the word most similar in meaning to - ignominious

A. thorough
B. senseless
C. discomfiting
D. vague

Answer : C

49)   Which word means - to waste away; to wither

A. atrophy
B. shrink
C. desiccate
D. contract

Answer : A

50)   Which word means - to understand; to figure out

A. dissemble
B. improvise
C. Cosset
D. fathom
Answer : D

General (Physics, Chemistry, ICT) Past questions & Answers

1)   Watt's law states the relationships of power to energy.

A.   True
B.   False

Answer: Option B

Explanation:

Watt's law gives relationship between power to current, voltage and resistance.

2)   Energy is equal to power multiplied by voltage.

A.   True
B.   False

Answer: Option B

Explanation:

Energy = Power*Time (not multiply by voltage).

P = VI.
P = (V^2)/R.
P = (I^2)*R.

3)   The capacity of a battery is measured in milliamperes.

A.   True
B.   False

Answer: Option B

Explanation:

Battery capacity is measured in ampere-hours (amp-hours)

4)   The power rating of a resistor determines the minimum power that it can handle safely

A.   True
B.   False

Answer: Option B

5)   The joule is a unit of energy.

A.   True
B.   False

Answer: Option A

6)   If you used 400 W of power for 30 h, you have used

A.   1.3 kWh
B.   13.3 kWh
C.   1.2 kWh
D.   12 kWh

Answer: Option D

Explanation:

The power is multiplied by time then the energy is:

E = P*T.

E = 400*30 = 12*10^3.

= 12KWH.

7)   At the end of a 14 day period, your utility bill shows that you have used 18 kWh. What is your average daily power?

A.   1.286 kWh
B.   12.85 kWh
C.   535 kWh
D.   252 kWh

Answer: Option A

Explanation:

18 kwh for 14 days.

For one day power consumption is = 18/14.

= 1.2857

8)   A 15 V source is connected across a 12 Ω resistor. How much energy is used in three minutes?

A.   938 Wh
B.   0.938 Wh
C.   56.25 Wh
D.   5.6 Wh

Answer: Option B

Explanation:

As per ohm's law,

R = V / I
I = V / R
= 15 / 12
= 1.25 A

And Power P = V * I
= 15*1.25
= 18.75 w

Given duration is 3 miniute i.e. 3 / 60 hour

Therefore, Watt-hour = 18.75 * (3 / 60) = 0.9375

9)   A given power supply is capable of providing 6 A for 3.5 h. Its ampere-hour rating is

A.   0.58 Ah
B.   2.1 Ah
C.   21 Ah
D.   58 Ah

Answer: Option C

Explanation:

The capacity of battery generally expressed in AH, so that in this case AH is 6A*3.5H=21AH

10)   A power supply produces a 0.6 W output with an input of 0.7 W. Its percentage of efficiency is

A.   8.57%
B.   42.85%
C.   4.28%
D.   85.7%

Answer: Option D

Explanation:

Efficiency=output/input

=. 6₩.7
=. 857

% efficiency =. 857*100
= 85.7%

11)   A certain appliance uses 350 W. If it is allowed to run continuously for 24 days, how many kilowatt-hours of energy does it consume?

A.   20.16 kWh
B.   201.6 kWh
C.   2.01 kWh
D.   8.4 kWh

Answer: Option B

Explanation:

Kwh = (350*24*24)/1000
= 201.6kWh

12)   In 0.025 W, there are

A.   25 kW
B.   0.00025 mW
C.   2,500 µW
D.   25 mW

Answer: Option D

Explanation:

0.025w=25*10^-3=25mw

13)   When the pointer of an analog ohmmeter reads close to zero, the resistor being measured is

A.   overheated
B.   shorted
C.   open
D.   reversed

Answer: Option B

Explanation:

r=0 when short circuited
r=infinity(high) when open circuited.

14)   A 33 Ω half-watt resistor and a 330Ω half-watt resistor are connected across a 12 V source. Which one(s) will overheat?

A.   33
B.   330
C.   both resistors
D.   neither resistor

Answer: Option D

Explanation:

15)   The current in a given circuit is not to exceed 24 A. Which value of fuse is best?

A.   a fuse is not necessary
B.   10 A
C.   24 A
D.   20 A

Answer: Option C

Explanation:

Yes, answer is 24A. If current flow exceeds 24A then fuse works and breaks up the circuit, till then circuit is safe

16)   An ohmmeter is an instrument for measuring

A.   current
B.   voltage
C.   resistance
D.   wattage

Answer: Option C

17)   An ammeter is an electrical instrument used to measure

A.   current
B.   voltage
C.   resistance
D.   none of the above

Answer: Option A

18)   A circuit breaker is a

A.   fuse
B.   switch
C.   resettable protective device
D.   resistor

Answer: Option C

Explanation:

Circuit breaker break the circuit when it sense any abnormal condition in the circuit using relay. Relay is a very important component in a circuit breaker.

19)   A neutral atom with an atomic number of five has how many electrons?

A.   1
B.   5
C.   none
D.   depends on the type of atom

Answer: Option B

Explanation:

1 st orbit = 2 electrons
2 nd orbit = 3 electron
atomic no = no.of protons in nucleus
there fore 2+3=5

20)   A wiper is the sliding contact in a

A.   switch
B.   photoconductive cell
C.   thermistor
D.   potentiometer

Answer: Option D

Explanation:

Wiper is connected on metal rod of potentiometer, we can vary it.

21) If there is 6 A of current through the filament of a lamp, how many coulombs of charge move through the filament in 1.75 s?

A.   10.5 C
B.   105 C
C.   3.4 C
D.   34 C

Answer: Option A

Explanation:

Charge(Q) = current/time(sec)=i/t
so i = Q/t
Q = i*t=(6*1.75)
Q = 10.5

22)   A multimeter measures

A.   current
B.   voltage
C.   resistance
D.   current, voltage, and resistance

Answer: Option D

23)   A material that does not allow current under normal conditions is a(n)

A.   insulator
B.   conductor
C.   semiconductor
D.   valence

Answer: Option A

24)   The colored bands for a 4,700 ohm resistor with a ten percent tolerance are

A.   yellow, violet, red, gold
B.   yellow, violet, orange, gold
C.   yellow, violet, red, silver
D.   orange, violet, red, silver
 View answer Discuss in forum
Answer: Option C

E

xplanation:

BLACK-0
BROWN-1
RED -2
ORANGE-3
YELLOW-4
GREEN-5
BLUE -6
VIOLET-7
GREY -8
WHITE-9

The first band gives the first digit.
The second band gives the second digit.
The third band indicates the number of zeros.
The fourth band is used to shows the tolerance (precision) of the resistor

4700 means,

4 =yellow
7 =violet
00 =red(10^2)
Ten percent tollerance =silver
So, =4700.

25)   Eight-tenths coulomb passes a point in 4 s. The current in amperes is

A.   1.6 A
B.   16 A
C.   2 A
D.   0.2 A

Answer: Option D

Explanation:

$Q = 8/10$ given;
$t = 4$ s

Now current $i = Q / t$ $i = (8/10)/4$
$i = 2/10$;
$i = 0.2$ A

26) The tool material, for faster machining, should have

A. wear resistance

 B. red hardness

 C. toughness

 D. all of the above

Answer D

27) Dielectric is used in

A. electro-chemical machining

 B. ultra-sonic machining

 C. electro-discharge machining

 D. laser machining

Answer C

28) In a single point tool, the angle between the surface of the flank immediately below the point and a line drawn from the point perpendicular to the base, is known as

A. side relief angle

 B. end relief angle

 C. back rake angle

 D. side rake angle

Answer B

29) The type of reamer used for reaming operation in a blind hole, is

A. straight fluted reamer

 B. left hand spiral fluted reamer

 C. right hand spiral fluted reamer

 D. any one of the above

Answer C

30)   In centreless grinders, the maximum angular adjustment of the regulating wheel is

A. 5º

 B. 10º

 C. 15º

 D. 20º

Answer B

31)   The lathe spindles are usually made hollow and provided with

A. internal taper

 B. external taper

 C. internal and external taper

 D. no taper

Answer A

32)   Which of the following parameters influence the axial feed rate in centreless grinding?

A. Regulating wheel diameter

 B. Speed of the regulating wheel

 C. Angle between the axes of grinding and regulating wheels

 D. all of the above

Answer D

33)   The example of snag grinding is

A. trimming the surface left by sprues and risers on castings

 B. grinding the parting line left on castings

 C. removing flash on forgings

 D. all of the above

Answer D

34)   internal gears can be made by

A. hobbing

 B. shaping with pinion cutter

 C. shaping with rack cutter

Answer B

35)   If the diameter of the hole is subject to considerable variation, then for locating in jigs and fixtures, the pressure type of locator used is

A. conical locator

 B. cylindrical locator

 C. diamond pin lovator

 D. vee locator

Answer A

36)   Segmental chips are formed during machining

A. mild steel

 B. cast iron

 C. high speed steel

 D. high carbon steel

Answer B

37)   The leakage in a refrigeration system using ammonia is detected by

A. halide torch

 B. sulphur sticks

 C. soap and water

 D. all of the above

Answer B

38)   The process, generally used in summer air conditioning to cool and dehumidify the air, is called

A. humidification

 B. dehumidification

 C. heating and humidification

 D. cooling and dehumidification

Answer D

39)   The heat transfer from a hot body to a cold body is directly proportional to the surface area and difference of temperatures between the two bodies. This statement is called

A. First law of thermodynamics

 B. Newton's law of cooling

 C. Newton's law of heating

 D. Stefan's law

Answer B

40)   The rate of heat flow through a body is . The term x/kA is known as

A. thermal coefficient

 B. thermal resistance

 C. thermal conductivity

 D. none of the above

Answer B

41)   In counter-current flow heat exchangers

A. both the fluids at inlet are in their hottest state

 B. both the fluids at inlet are in their coldest state

 C. both the fluids at exit are in their hottest state

 D. one fluid is coldest and the other is hottest at inlet

Answer A

42) The most commonly used method for the design of duct size is the

A. velocity reduction method

B. equal friction method

C. static regain method

D. dual or double method

Answer C

43) In a shell and tube heat exchanger, baffles are provided on the shell side to

A. improve heat transfer

B. provide support for tubes

C. prevent stagnation of shell side fluid

D. all of the above

Answer D

44) A refrigerant with the highest critical pressure is

A. R-11

B. R-12

C. R-22

D. Ammonia

45) A condenser of refrigeration system rejects heat at the rate of 120 kW, while its compressor consumes a power of 30 kW. The coefficient of performance of the system will be

A. 1/4

B. 1/3

C. 3

D. 4

Answer D

46) If the energy radiated per second per sq. cm. of the surface for wave lengths lying between λ, and λ + dλ is represented by (eλ.dλ), then eλ is called

A. absorptive power

 B. emissive power

 C. emissivity

 D. none of the above

Answer B

47) The temperature of air recorded by a thermometer, when its bulb is surrounded by a wet cloth exposed to the air, is called

A. wet bulb temperature

 B. dry bulb temperature

 C. dew point temperature

 D. none of the above

Answer A

48) R-12 is generally preferred over R-22 in deep freezers since

A. it has low operating pressures

 B. it gives higher coefficient of performance

 C. it is miscible with oil over large range of temperatures

 D. all of the above

Answer C

49) The evaporator used in house-hold refrigerators is

A. frosting evaporator

 B. non-frosting evaporator

 C. defrosting evaporator

 D. none of the above

Answer A

50)   The pressure at the outlet of a refrigerant compressor is called

A. suction pressure

 B. discharge pressure

 C. critical pressure

 D. back pressure

Answer B

51)   The dry bulb temperature lines, on the psychrometric chart are

A. vertical and uniformly spaced

 B. horizontal and uniformly spaced

 C. horizontal and non-uniformly spaced

 D. curved lines

Answer A

52)   In electrolux refrigerator

A. ammonia is absorbed in hydrogen

 B. ammonia is absorbed in water

 C. ammonia evaporates in hydrogen

 D. hydrogen evaporates in ammonia

Answer C

53)   Which of the following statement is correct?

A. The constant enthalpy lines are also constant wet bulb temperature lines.

 B. The wet bulb and dry bulb temperature are equal at saturation condition.

 C. The wet bulb temperature is a measure of enthalpy of moist air.

 D. all of the above

Answer D

54)   Which of the following refrigerant has the maximum ozone depletion potential in the stratophere?

A. Ammonia

 B. Carbon dioxide

 C. Sulphur dioxide

 D. Flourine

Answer D

55)   A heat pump working on a reversed Carnot cycle has a C.O.P. of 5. It works as a refrigerator taking 1 kW of work input. The refrigerating effect will be

A. 1 kW

 B. 2 kW

 C. 3 kW

 D. 4 kW

Answer D

56)   The automobile radiator is a heat exchanger of

A. parallel flow type

 B. counter flow type

 C. cross flow type

 D. regenerator type

Answer C

57)   The centrifugal compressors are generally used for refrigerants that require

A. small displacements and low condensing pressures

 B. large displacements and high condensing pressures

 C. small displacements and high condensing pressures

 D. large displacements and low condensing pressures

Answer D

58)   The humidity ratio or specific humidity is the mass of water vapour present in

A. 1 m³ of wet air

 B. 1 m³ of dry air

 C. 1 kg of wet air

 D. 1 kg of dry air

Answer D

59)   In free convection heat transfer transition from laminar to turbulent flow is governed by the critical value of the

A. Reynold's number

 B. Grashoff's number

 C. Reynold's number, Grashoff's number

 D. Prandtl number, Grashoff's number

Answer D

60)   Which of the following statements is wrong?

A. The heat transfer in liquid and gases takes place according to convection

 B. The amount of heat flow through a body is dependent upon the material of the body

 C. The thermal conductivity of solid metals increases with rise in temperature

 D. Logarithmic mean temperature difference is not equal to the arithmetic mean temperature difference.

Answer C

61)   Which one of the following is the effect of blade shape on performance of a centrifugal compressor ?

A. Backward curved blades has poor efficiency

 B. Backward curved blades lead to stable performance

 C. Forward curved blades has higher efficiency

 D. Forward curved blades produce lower pressure ratio

Answer D

62)   In a series RLC circuit, the larger reactance determines the net reactance of the circuit.

A.   True
B.   False

Answer: Option A

Explanation:

In a series RLC circuit, the net reactance= inductive reactance Xl-capacitive reactance Xc. therefore if any one reactances is large enough then other can be neglected and that primarily determines almost the net reactance of the circuit....

63)   Resonance is a condition in a series RLC circuit in which the capacitive and inductive reactances are equal in magnitude.

A.   True
B.   False

Answer: Option A

Explanation:

Because at resonance XL=XC.

64)   A certain series resonant circuit has a bandwidth of 2 kHz. If the existing coil is replaced with one having a higher value of Q, the bandwidth will

A. increase

 B. remain the same

 C. decrease

 D. be less selective

Answer: Option C

Explanation:

We know,

Bw = F/Q.

When Q increase, the bandwidth decreases.

65)   In a certain series resonant circuit, VC = 125 V, VL = 125 V, and VR = 40 V. The value of the source voltage is

A.   125 V
B.   250 V
C.   290 V
D.   40 V

Answer: Option D

Explanation:

Vs ^2 = (Vr^2 + (Vl-Vc)^2),

For resonance , Vl = Vc ,

So , Vs = Vr.

66)   To tune a parallel resonant circuit to a higher frequency, the capacitance should be

A.   increased
B.   decreased
C.   left alone
D.   replaced with inductance

Answer: Option B

Explanation:

Because fr =1/(2*pi*root(LC)).

67)   A 24 Ω resistor, an inductor with a reactance of 120 Ω, and a capacitor with a reactance of 120 Ω are in series across a 60 V source. The circuit is at resonance. The voltage across the inductor is

A.   60 V
B.   660 V
C.   30 V
D.   300 V

Answer: Option D

Explanation:

As in resonace impedance equal to resistance
Current = 60/24 = 2.5
Vtg across inductor = 120*2.5 = 300V

68)   If the value of C in a series RLC circuit is decreased, the resonant frequency

A.   is not affected
B.   increases
C.   is reduced to zero
D.   decreases

Answer: Option B

Explanation:

69)   A resonant circuit has a lower critical frequency of 7 kHz and an upper critical frequency of 13 kHz. The bandwidth of the circuit is

A.   7 kHz
B.   13 kHz
C.   20 kHz
D.   6 kHz

Answer: Option D

Explanation:

B.W = f2-f1.
B.W = 13-7 = 6.

70)   A 90 Ω resistor, a coil with 30 Ω of reactance, and a capacitor with 50 Ω of reactance are in series across a 12 V ac source. The current through the resistor is

A.   9 mA
B.   90 mA
C.   13 mA
D.   130 mA

Answer: Option D

Explanation:

V=IR
I=V/R
So.. R is nothing but Z (R=Z)
Z=sqrrt(R^2+(xl-xc)) OR (R^2+(xc-xl))
z=sqrrt_(90^2+(50-30^2)
Z=SQRRT(8100+400)
z=92.195
I=V/Z=12/92.195=0.13015=130mA.

71) _____ controls the way in which the computer system functions and provides a means by which users can interact with the computer.

A.   The operating system

B.   The motherboard

C.   The platform

D.   Application software

Answer: A

72) The difference between people with access to computers and the Internet and those without this access is known as the:

A.   digital divide.

B.   Internet divide.

C.   Web divide.

D.   cyberway divide.

Answer: A

73) Servers are computers that provide resources to other computers connected to a:

A.   mainframe

B.   supercomputer

C.   network

D.   client

Answer: C

74) Word processing, spreadsheet, and photo-editing are examples of:

A.   application software.

B.   system software.

C.   operating system software.

D.   platform software.

Answer: A

75) A _____ is approximately one billion bytes.

A.   bit

B.   kilobyte

C.   gigabyte

D.   megabyte

Answer: C

76) All of the following are examples of input devices EXCEPT a:

A.   scanner

B.   mouse

C.   printer

D.   keyboard

Answer: C

77) Computers use the _____ language to process data.

A.   relational

B.   megabyte

C.   binary

D.   processing

Answer: C

78) In the binary language each letter of the alphabet, each number and each special character is made up of a unique combination of:

A.   eight bytes.

B.   eight characters.

C.   eight bits.

D.   eight kilobytes.

Answer: C

79) _____ is data that has been organized or presented in a meaningful way.

A.   A process

B.   Information

C.   Software

D.   Storage

Answer: B

80) All of the following are examples of real security and privacy risks EXCEPT:

A.   Viruses

B.   Identity theft.

C.   Hackers

D.   Spam

Answer: D

81) Which of the following is an input device?

A.   Mouse

B.   Keyboard
C.   Scanner

D.   All the above

Answer: D

82) The set of instructions that tells the computer what to do is

A.   Softcopy

B.   Software

C.   Hardware

D.   Hardcopy

Answer: B

83) Which of the following stores more data?

A.   DVD

B.   CD ROM

C.   Floppy Disk

D.   CD RW

Answer: A

84) —- is the heart of the computer and this is where all the computing is done.

A.   Keyboard

B.   Monitor

C.   Central Processing Unit

D.   Printer

Answer: C

85) One byte is equivalent to

A.   8 bit

B.   16 bit

C.   32 bit

D.   64 bit

Answer: A

86) To move forward through the tabs

A.   CTRL+TAB

B.   CTRL+SHIFT+TAB

C.   SHIFT+TAB

D.   None of these

Answer: A

87) Personal computers can be connected together to form a

A.   server

B.   network

C.   supercomputer

D.   Enterprise

Answer: B

88) Choose the smallest memory size

A.   kilobyte

B.   megabyte

C.   gigabyte

D.   terabyte

Answer: A

89) The steps and tasks needed to process data, such as responses to questions or clicking an icon, are called:

A.   instructions

B.   operating system

C.   application software

D.   system unit

Answer: A

90) The operating system is the most common type of _____ software.

A.   system

B.   communication

C.   application

D.   word-processing

Answer: A

91) The ability to recover and read deleted or damaged files from a criminals computer is an example of a law enforcement specialty called:

A.   simulation
B.   animation
C.   robotics
D.   computer forensics.

Answer: D

92) The base of the hexadecimal number system is

A.   2
B.   8
C.   10
D.   16

Answer: D

93) Computer software includes

A.   Packaged programs
B.   Application programs
C.   Operating system programs
D.   All of these

Answer: D

94) The Operating System Manages

A.   Processes
B.   Memory
C.   Disks and I/O devices
D.   All of the above

Answer: D

95) Allocation of a resources in a time dependent manner to several program simultaneously called

A.   multi user
B.   multi tasking
C.   time sharing
D.   None of these.

Answer: C

96) Data that are accumulated and processed in group called

A.   Group processing
B.   Batch Processing
C.   Time sharing
D.   None of these.

Answer: B

97) Multiprocessing supports more then one.................at the same time

A.   User

B.   Process

C.   Hardware

D.   None of these.

Answer: B

98) Which of the following are true about firewalls?

A.   Follows a set of rules

B.   Can be either a hardware or software device

C.   Filters network traffic

D.   All the above

Answer: D

99) What are the four things needed to connect to the Internet?

A.   Monitor, keyboard, mouse, modem
B.   Telephone line, PDA, modem and computer
C.   Telephone line, modem, computer, and an ISP
D.   Modem, computer, PDA and ISP

Answer: C

100) 1024 bytes equals:

A.   1 KB
B.   1 MB
C.   1 GB
D.   1 TB

Answer: A