



Mega Naukri

A Career Platform for You

WWW.MEGANAUKRI.COM

Follow our Facebook Page- www.facebook.com/Meganaukri

Follow us on Telegram- http://telegram.me/offcampusjobs_freshers

Follow us on LinkedIn - <https://www.linkedin.com/in/meganaukri>

TCS Test Paper

Paper 1

Question 1

A person starts writing all 4 digits numbers.how many times had he written the digit 2? (2 Marks)

- A. 3700
- B. 32000
- C. 37000
- D. 3200

Explanation :

Number of 2's at units place(1000 to 9999)=900.

Number of 2's at tenths place(1000 to 9999)=900.

Number of 2's at hundreds place(1000 to 9999)=900.

Number of 2's at thousands place(1000 to 9999)=1000.

Therefore, total number of 2's =(900+900+900+1000)=3700.

Question 2

2 workers ,one old and one young, live together and work at the same office. the old man takes 30 mins where as the young man takes only 20 mins to reach the office. when will the young man catch up the old man , if the old man starts at 10.00am and the young man starts at 10.05am? (1 Marks)

- A. 10:25 AM
- B. 10:10 AM
- C. 10:05 AM
- D. 10:15 AM

Explanation :

Suppose the distance b/w the starting point to the office = 30 m.
so, in 15 min the old man covers 15 m because speed = $1\text{m}/\text{min}$.
and in 10 min the young man covers 15 m because speed = $1.5\text{m}/\text{min}$.
Thus 10:15 is the right answer.

Question 3

What are the next three numbers for the given series? 11 23 47 83 131 ___ ___ ___ ? (1 Marks)

- A. 181, 364, 478
- B. 191, 263, 347
- C. 171, 253, 214
- D. 201, 312, 247

Explanation :

11 23 47 83 131

Each digit is having addition of 12 multiple

$$11+12=23$$

$$23+2*12=47$$

$$47+3*12=83$$

$$83+4*12=131$$

$$131+5*12=191$$

$$191+6*12=263$$

$$263+7*12=347$$

Question 4

What is the chance that a leap year selected at random contains 53 Fridays? (1 Marks)

A. $1/7$

B. $2/7$

C. $3/7$

D. $4/7$

Explanation :

A leap year has 366 days, therefore 52 weeks(i.e. 52 fridays) and 2 days.

The remaining 2 days may be any of the following :

(i) Sunday and Monday

(ii) Monday and Tuesday

(iii) Tuesday and Wednesday

(iv) Wednesday and Thursday

(v) Thursday and Friday

(vi) Friday and Saturday

(vii) Saturday and Sunday

For having 53 fridays in a year, one of the remaining 2 days must be a friday.

$$n(S) = 7$$

$$n(E) = 2$$

$$P(E) = n(E) / n(S) = 2 / 7$$

Question 5

A two digit number is 18 less than the square of the sum of its digits. How many such numbers are there? (1 Marks)

- A. 1
- B. 2
- C. 3
- D. 4

Explanation :

Take 63 and 82.

$$xy+18=(x+y)^2.$$

$$63+18=(6+3)^2.$$

$$82+18=(8+2)^2.$$

Question 6

A boy is cycling such that the wheel of the cycle are making 420 revolutions per minute. If the diameter of the wheel is 50 cm, find the speed of the boy. (1 Marks)

- A. 39.6
- B. 38.6
- C. 37.6

D. 36.6

Explanation :

Diameter = 50 cm then radius(r) = $50/2$ cm.

As answer is given in (km) we have to convert (cm) in (km).

Now $r = 50/2 = 25$ cm then $(25/100)$ in meter then $(25/100 \times 1000)$ in km .

Circumference of cycle = $2 \times (22/7) \times r$.

Number of revolutions per minute = 420 .

we have to multiply 60 with circumference becoz it will be converted into hour as answer is given in hour only.

$$\begin{aligned} \text{speed} &= 2 \times (22/7) \times [25/(100 \times 1000)] \times 60 \times 420 \text{ km/hr} . \\ &= 396/10 \text{ km/hr} . \\ &= 39.6 \text{ km/hr} . \end{aligned}$$

Question 7

B moves by taking 3 steps forward and 1 step backward (each step in one second)

He walks up a stationary escalator in 118 sec.

However on moving escalator he takes 40 sec to reach top . Find speed of escalator. (2 Marks)

- A.** 1 step/sec
- B.** 2 step/sec
- C.** 3 step/sec
- D.** 4 step/sec

Explanation :

Lets find the no. of steps for escalator.

Since first B moves 3 steps forward and then 1 step backward so in total 4 seconds he moves only 2 steps forward .

So in 116 seconds he moves 58 steps forward.

Now in next 2 seconds, he moves 2 steps so in 118 seconds he moves total 60 steps forward.

So no. of steps required to reach the top of the escalator is 60.

Now let the escalator moves a steps per second so in 4 seconds B moves 2 steps (3 steps forward and 1 step backward) in these 4 sec. escalator moves $4a$ step so in 4 sec. B moves a total of $2+4a$ step.

So in 40 second total move= $10*(2+4a)$.

so, $10*(2+4a)=60$.

Hence, $a=1$ step/sec.

Question 8

A and B completed a work together in 5 days. Had A worked at twice the speed and B at half the speed, it would have taken them four days to complete the job. How much time would it take for A alone to do the work? (1 Marks)

- A. 10 days
- B. 11 days
- C. 12 days
- D. 13 days

Explanation :

A and B's 1 day work together will be completed in $A + B = 1/5$ days. -----(i)

with twice the speed of A and $(1/2)$ of B completes work in 4 days,

So, $2A + B/2 = 1/4$. -----(ii)

On solving both the eq. we get $a=1/10$.

So, A will complete the whole work in 10 days.

Question 9

If given equation is $137+276=435$, how much is $731+672=...$ find the result. (2 Marks)

- A. 435

B. 537

C. 3261

D. 1623

Explanation :

1623 its simple addition in base 8

Question 10

A dealer buys a product at Rs.1920. he sells at a discount of 20% still he gets the profit of 20%. what is the selling price? (1 Marks)

A. 534

B. 2300

C. 2304

D. 2403

Explanation :

Cost price is 1920

Now discount part is to confuse you because the actual selling price will never depend on discount.

so 20% of 1920 is 384

and adding the profit to calculate selling price $1920+384=2304$.

Question 11

How many 3-digit numbers can be formed from the digits 2,3,5,6,7 and 9 which are divisible by 5 and none of the digit is repeated. (1 Marks)

- A. 5
- B. 10
- C. 15
- D. 20

Explanation :

The key word here is divisible by 5 hence in units place we have to fill 5 only which is divisible by 5. (1 way).

For tenth place, we have a choice to fill among 5 numbers(5 ways)..

and last in hundredth place, we have to choose among any four number (4 ways)

Hence, $(5*4*1)=20$.

Question 12

A die is rolled and a coin is tossed .find the probability that the die shows an odd number and the coin shows a head.

- A. $1/4$
- B. $1/2$
- C. $3/4$
- D. $2/3$

Explanation :

Probability that the die shows an odd number is (1,3,5) $3/6$ i.e $1/2$.

Probability that the coin shows a head is $1/2$.

Hence, the required probability is $(1/2)*(1/2) = 1/4$.

Question 13

Find last two digit of $(1021^{3921})+(3081^{3921})$? (2 Marks)

- A. 32
- B. 22
- C. 12
- D. 02

Explanation :

1021^{3921} =last 2 digit(21)

3081^{3921} =last 2 digit(81)

so, $21+81=102$

Means last two digit will be 02.

Question 14

$(40 \cdot 40 \cdot 40 - 31 \cdot 31 \cdot 31) / (40 \cdot 40 + 40 \cdot 31 + 31 \cdot 31) = ?$ (1 Marks)

- A. 8
- B. 71
- C. 9
- D. 51

Explanation :

Let $a=40$ & $b=31$.

Now, $(a^3-b^3)/(a^2+b^2+ab)$.

$\Rightarrow \{(a-b)(a^2+b^2+ab)\}/(a^2+b^2+ab)$.

$\Rightarrow (a-b)$.

$\Rightarrow 9$.

Question 15

RAM GOES A TO B . IF HE TAKES $\frac{1}{4}$ TIME LESS THAN TO COVER THE SAME DISTANCE WHEN RUN AT NORMAL SPEED BY WHAT % HE HAS INCREASED HIS SPEED ? (1 Marks)

- A. 17.6
- B. 33.3
- C. 48.6
- D. 66.6

Explanation :

Let distance =x

and time=t

$$\Rightarrow s = x/t.$$

when he run at speed

$$\Rightarrow t' = t - \frac{1}{4}t$$

$$\Rightarrow t' = \frac{3}{4}t$$

Distance remain same

$$\Rightarrow s * t = s' * \frac{3}{4}t$$

$$\Rightarrow s' = \frac{4}{3}s$$

Hence, required %increase in speed=33.3%.

Question 16

What is the remainder of $(16937^{30})/31$? (1 Marks)

- A. 1
- B. 2
- C. 3

D. 4

Explanation :

$16937 = 16926 + 11$, now 16926 is completely divisible.. So what remains is $(11^{30})/31$.

Which is $(11^6)^5/31$

11^6 gives 4 as remainder.

So $4^5/31$ is remaining which gives 1 as remainder.

Question 17

If meeting O is on Saturday, then meeting K must take place on ? (1 Marks)

- A. Thursday
- B. Wednesday
- C. Tuesday
- D. Monday

Explanation :

IJKLMNOP if O is Saturday then "I" will be Sunday and "K" will be Tuesday.

- 1987
- 1449
- 538
- 72.92 %
- 4.7

- 37.23

- 0.0

Question 18

3 15 _ 51 53 159 161 (1 Marks)

- A. 18
- B. 17
- C. 30
- D. 33

Explanation :

$$15 + 2 = 17 * 3 = 51.$$

$$51 + 2 = 53 * 3 = 159.$$

$$159 + 2 = 161.$$

Question 19

55th word of SHUVANK in dictionary?? (1 Marks)

- A. AHSNKUV
- B. AHNKSVU
- C. AHNKUSV
- D. AHNKUVS

Explanation :

dictionary order 55th word will be AHSNKUV

Question 20

Mani sells vegetables and he marks up the prices at 5% above his cost price. Also the weighing stones used by him weigh only 90% of the correct weight. Find his effective percentage of mark-up.

- A. 15%
- B. $50/3$ %
- C. $49/2$ %
- D. 20 %

Explanation :

let the cost price be 100 of 1 kg.

Now he will sell 1 kg in 105 but due to error in weighing stones he will sell only 900 gram in 105 but he has paid $900 \times (100/1000) = 90$ rs for 900 grams.

Net profit = $105 - 90 = 15$ Rs.

Hence, required percentage = $100 \times (15/90) = 50/3$ % .

Question 21

Car A leaves city C at 5 pm and drives at a speed of 40 kmph. 2 hours later another car B leaves city C and drives in the same direction as car A. In how much time will car B be 9 km ahead of car A. Speed of car B is 60 kmph. (1 Marks)

- A. 4.15hrs
- B. 4.25 hrs
- C. 4.35 hrs
- D. 4.45 hrs

Explanation :

First we will calculate the distance travel by car A in two hours i.e. 80 km. now their relative speed is 20 kmph and distance will be 89 km.

So car B will be ahead of car A in $(89/20) = 4.45$ hrs.

Question 22

n is a natural number and n^3 has 16 factors then how many max factors can n^4 have? (2 Marks)

- A. 21
- B. 24
- C. 25
- D. 27

Explanation :

suppose $n^3 = a^3 * b^3$.

Therefore by using formula to know total factors $(3+1)*(3+1)=4*4=16$ as it was given in question only.

Now by using above concept we can write.

$$\Rightarrow n^4 = c^4 * d^4 .$$

So, we will get $(4+1)*(4+1) = 25$.

Question 23

6, 24, 60, 120, 210, ___ ? (1 Marks)

- A. 420
- B. 240
- C. 363
- D. 336

Explanation :

$$2^3 - 2 = 6$$

$$3^3 - 3 = 24$$

$$4^3 - 4 = 60$$

$$5^3 - 5 = 120$$

$$6^3 - 6 = 210,$$

$$\text{so, } 7^3 - 7 = 336.$$

Question 24

In how many ways can we distribute 10 identical looking pencils to 4 students so that each student gets at least one pencil? (1 Marks)

- A. 48
- B. 84
- C. 68
- D. 86

Explanation :

Firstly give 1 pencil each to the 4, now we can distribute the remaining 6 pencils any way we like. using the "stars and bars" formula, ${}^{(6+4-1)}C_{(4-1)} = {}^9C_3 = 84$.

Question 25

Sum of three digit number is 17. sum of squared of digits of the given num is 109. If we subtract 495 from that num we will get a number written in square order. find the num ? (2 Marks)

- A. 296
- B. 863
- C. 980
- D. 179

Explanation :

Sum of the three digit is 17..hence $a+b+c=17$ ----(1)

Sum of squared of digits is 109 ..hence $a^2+b^2+c^2=109$ ----(2)

Also, $100a + 10b + c - 495 = 100c + 10b + a$.

$$\Rightarrow 99(a-c)=495 .$$

$$\Rightarrow a-c=5.$$

The possible combinations are (6,1)(7,2)(8,3),(9,4)

out of these combinations 8,3 only satisfies both (1) and (2).

$$\Rightarrow 8+b+3=17.$$

$$\Rightarrow b=6.$$

Hence, $8+6+3=17$.

$$\Rightarrow 8^2+6^2+3^2=64+36+9=109 .$$

so,863 is ans.

Question 26

The least number that must be subtracted from 63520 to make the result a perfect square, is: (1 Marks)

- A. 16
- B. 20
- C. 24
- D. 30

Explanation :

option b & d is not possible.

option c also not possible.

option a is correct

because

$63520-16 = 63504$ which is divisible by 16.

$63504/16 = 3969$ which is the square root of 63.

So, option (a) is correct.

Question 27

Find the missing numbers in the series: 0,2,5,?,17,28,?, (1 Marks)

- A. 11,31
- B. 31,51

C. 10,41

D. 21,40

Explanation :

The difference between the numbers are prime. So $5+5=10$, $28+13=41$.

Question 28

A motor boat covers a certain distance downstream in 30 minutes, while it comes back in 45 minutes. If the speed of the stream is 5 kmph what is the speed of the boat in still water? (1 Marks)

A. 10 kmph

B. 15 kmph

C. 20 kmph

D. 25kmph

Explanation :

Let speed of boat is x in still water .

Then, $(x+5)*30=(x-5)*45$.

$\Rightarrow 2x+10=3x-15$.

$\Rightarrow x=25$ kmph.

Question 29

20 passengers are to traveled by a doubled decked bus which can accommodate 13 in the upper deck and 7 in the lower deck. The number of ways that they can be distributed if 5 refuse to sit in the upper deck and 8 refuse to sit in the lower deck is: (1 Marks)

A. 25

B. 21

C. 18

D. 15

Explanation :

Refused to sit on upper deck --->5

Refused to sit on lower deck --->8

total people remaining to arrange is = $20 - 13 = 7$.

remaining place in upper deck = 5

therefore, no. of ways possible = ${}^7C_5 = 21$

remaining place in lower deck = 2

therefore, no. of ways possible = ${}^7C_2 = 21$, also

No. of ways possible is 21.

Question 30

Two merchants sell an article each for Rs.1000. one of them computes profit as a % of cost price, while the second calculates it incorrectly as a % of selling price. If both of them claim to have made a profit of 10%, who made more profit and by what amount? (1 Marks)

- A. second and 9 rs
- B. second and 10 rs
- C. first and 9 rs
- D. first and 10 rs

Explanation :

First merchant get profit of 10% from cp

$$\Rightarrow (cp * 110/100) = 1000$$

$$\Rightarrow cp = \text{Rs.}909.$$

so first merchant get profit of Rs.91.

second merchant get profit of 10% from sp

$$\Rightarrow \text{profit} = 1000 * 10/100 = \text{Rs.}100.$$

so the profit of second merchant is high and it is more than first merchant by 9Rs.