KTSE (KVO Talent Search Examination) – 2008
(Nanji Monji Dedhia Charitable Trust)

Name: _____ ID No.: _____

Instructions

- The exam duration is **100 minutes (1 hour and 40 minutes)**
- The exam is of 100 marks

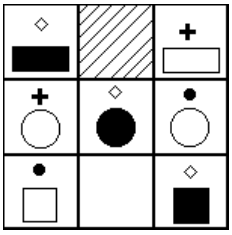
- There are **78 questions** in two sections for a total of 100 marks
  - SECTION 1: **1 marks** each (56 questions adding up to **56** marks)
  - SECTION 2: **2 marks** each (22 questions adding upto **44** marks)
  - There is NO negative marking

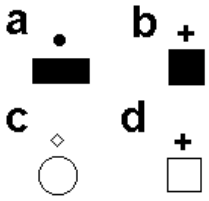
- The rough work should be done on separate paper provided.

- Most questions are multiple choice. **With a pen, fill the correct answer in the answer sheet separately provided.**

- Since some students might see visual questions for the first time, here is an example of a visual question

Example of Visual question:Fill in the white square with the figure that most logically fits in from the four figures (a,b,c,d)





Answer:
The correct answer is **(d)** since each row has a diamond, plus sign and dark circle on top of each figure. The blank square should have a plus sign on top of it. Also, each row has two white and one dark figures. The blank square should have a white figure. Hence the white square with the plus on top of it is the correct answer

ALL THE BEST !!

SECTION 1

ALL QUESTIONS IN THIS SECTION ARE OF 1 MARKS

Q1: (1 mark) Which of the following is less than 1/6

A: 0.1667 B: 3/18 C: 0.167 D: 0.1666 E: 8/47

Q2: (1 mark) The price of a chocolate increases from Rs. 5 to Rs. 15. How much is the percentage increase ?

A: 50 % B: 100% C: 150% D: 200% E: 10%

Q3: (1 mark) Mary was both the 13th highest and the 13th lowest in a spelling contest. How many people were there in the contest ?

A: 13 B: 25 C: 26 D: 27 E: 28

Q4: (1 mark) Which one of the five is least like the other four ?

A: Inch B: Mile C: Acre D: Yard E: Foot

Q5: (1 mark) A fish has a head that is 9 inch long. The tail is equal to the size of the head plus one half the size of the middle body. The middle body is the size of the head plus the tail. How long is the fish?

A: 27 inch B: 54 inch C: 63 inch D: 72 inch E: 81 inch

Q6: (1 mark) Which of the following fractions is closest in number to the decimal 0.31 ?

A: 5/16 B: 11/32 C: 1/4 D: 3/8 E: 7/16

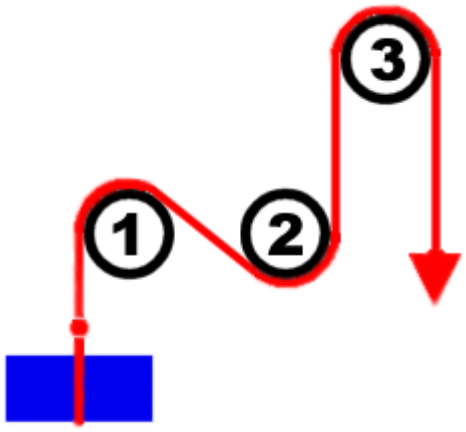
Q7: (1 mark) A ship floats with 3/5th of it's weight above water. What is the ratio of the ships submerged weight to it's exposed weight?

A: 3:8 B: 2:5 C: 3:5 D: 2:3 E: 5:2

Q8: (1 mark) Choose the word that does not belong ?

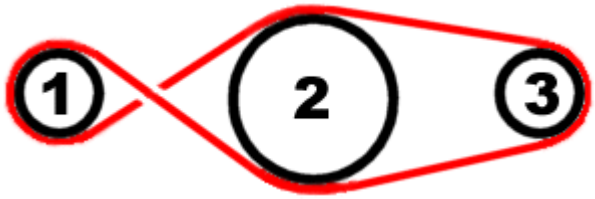
A: keys B: feet C: legs D: wires E: bench

Q9: (1 mark) If the rope is being pulled in the direction of the arrow, in which rotational direction will the pulleys 1, 2, and 3 be turning?



A: 1-counterclockwise, 2-clockwise, 3-counterclockwise B: 1-clockwise, 2-counterclockwise, 3-clockwise C 1-clockwise, 2-clockwise, 3-counterclockwise D: 1-clockwise, 2-counterclockwise, 3-counterclockwise

Q10: (1 mark) If Pulley 1 is turning at 200rpm, and Pulley 3 is the same size as Pulley 1, how fast is Pulley 3 turning? Note that pulley 2 is twice the diameter of 1 and 3.



A: 125 rpm B: 250 rpm C: 400 rpm D: 500 rpm E: 200 rpm

Q11: (1 mark) Mary has a number of oranges. She gives a quarter of those oranges to Lisa. She then gives two thirds of what is left to Tom. Mary is left with 8 oranges. How many oranges did she start with?

A: 32 B: 40 C: 16 D: 48 E: 56

Q12: (1 mark) Lion is to Deer as Eagle is to?

A: Mouse B: Nest C: Wings D: Sparrow E: Horns

Q13: (1 mark) Underline the odd one out ?

A: House B: Igloo C: Bungalow D: Office E: Hut

Q14: (1 mark) Insert the missing letter

K N H
P T L
I N ?

A: M B: D C: O D: J E: A

Q15: (1 mark) Insert the missing number ?

10 14 18 __ 34 50 66

A: 26 B: 24 C: 22 D: 30 E: 28

Q16: (1 mark) I was supposed to meet my friend at noon every Sunday. The first time she came at 12:30 pm, next time at 1:20 pm, then 2:30 pm, then at 4 pm. When did she turn up the time after that ?

A: 5 pm B: 5:30 pm C: 6 pm D: 5:20 pm E: 5:50 pm

Q17: (1 mark) At a certain time of the day, a 25 foot telephone pole casts a 10 foot shadow. How high would a tree have to be in order to cast a 25 foot shadow?

A: 40 feet B: 42.5 feet C: 50 feet D: 62.5 feet E: It cannot cast such a long shadow

Q18: (1 mark) There are 7 players on a coed volleyball team. After an exhausting game, each girl drinks 4 cups of water. Each boy drinks 7 cups of water. The coach drinks 9 cups.
A total of 43 cups of water is consumed by everyone. How many boys and how many girls are there on the team ?

A: 6 boys, 1 girl B: 2 boys, 5 girls C: 4 boys, 3 girls D: 3 boys, 4 girls E: 1 boy, 6 girls

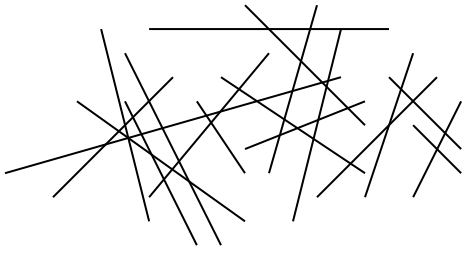
Q19: (1 mark) An ancient Greek was said to have lived one-fourth of his life as a boy, one-fifth as a youth, one third as a man, and spent the last 13 years as an elderly man. How old was he when we died ?

A: 65 years B: 55 years C: 70 years D: 80 years E: 60 years

Q20: (1 mark) The cost of hiring a bus was shared equally by everyone who went to the outing. The bus was a twenty seater and the bill came to Rs. 4927. Each persons bill was in rupees only (no paisa). How many empty seats were there?

A: 4 seats B: 5 seats C: 7 seats D: 1 seat E: Not possible to decide

Q21: (1 mark) How many lines are there in the figure below ?

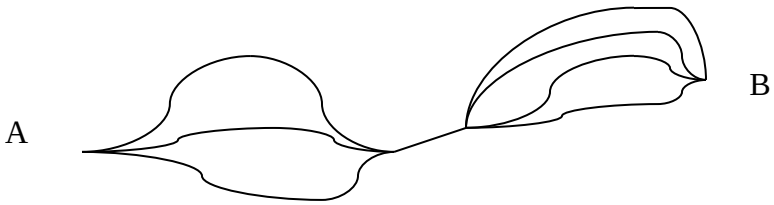


A: 17 B:18 C:19 D:20 E:21

Q22: (1 mark) What is the probability of picking an Ace from a pack of 52 cards ?

A: 1/32 B: 1/13 C: 1/4 D: 1/52 E: 1

Q23: (1 mark) How many different ways can a traveler go from point A to point B (without going backwards ?



A: 12 B: 3 C: 4 D: 1

Q24: (1 mark) When viewed in a mirror, the clock showed a time of 10:35. What is the correct time?

A: 2:25 B: 1:25 C: 2:35 D: 1:35 E: 10:35

Q25: (1 mark) Rahul has four times as many as Nitin, and Nitin has three times as many as Siddharth. Altogether they have 192. How many does Siddharth have ?

A: 16 B: 112 C: 18 D: 64 E: 12

Q26: (1 mark) 10, 30, 32, 96, 98, 294, 296, ? ,?
What two numbers should replace the question marks

A: 298,300 B: 888, 890 C: 332,334 D: 302,304 E: 310,314

Q27: (1 mark) My watch was correct at noon (12 pm), after which it started to lose 17 minutes per hour. It now shows the time as 2:52 pm. What is the actual time now ?

A: 8:52 B: 4:40 C: 3:00 D: 4:00 E: 6:00

Q28: (1 mark) Jack is twice as old as Jill, but in five years time, he will only be one and a half times as old. How old are Jack and Jill now ?

A: 32, 16 B: 27,13 C: 10,5 D: 20,10 E: 30,15

Q29: (1 mark) A train traveling at a speed of 50 kph enters a tunnel that is 1.75 km long. The length of the train is 3/8 km. How long does it take for all the train to pass through the tunnel, from the moment the front just enters the tunnel to the moment the rear (back) fully comes out of the tunnel ?

A: 1 min B: 1 min 20 secs C: 2 min 33 secs D: 1 min 45 secs E: 3 min 10 secs

Q30: (1 mark) A statue is being carved by a sculptor. The original piece of marble weighed 250 kg. In the first week, 30 per cent is cut away. In the second week, 20% of the remainder is cut away. In the third week, the statue is completed when 25% of the remainder is cut away. What is the weight of the final statue. ?

A: 105 kg B: 112.5 kg C: 62.5 kg D: 150 kg E: 100 kg

Q31: (1 mark) Which of the following is least like the others ?
A: Poem B:Flower C: Statue D: Painting E: Novel

Q32: (1 mark)

Which of the figures shown below completes the sequence?

A: B: C: D:

Q33: (1 mark) Unscramble the following letters and choose the category in which it fits.
SATAALURI?

A: Planet B: Country C: Animal D: Language E: Satellite

Q34: (1 mark) A cross-section of a cylinder along it's length has the shape of a

A: Circle B: Oval C: Rectangle D: Triangle E: Ellipse

Q35: (1 mark) In a regular pentagon, how many lines are needed to connect each corner with every other corner

A: 3 B: 4 C: 25 D: 5 E:20

Q36: (1 mark) Tim's grandfather's son is Mike's dad. How is Mike related to Tim?

A: They are first cousins B: Mike is Tim's uncle C: Tim is Mike's uncle D. Time is Mike's father E: Mike is Tim's father

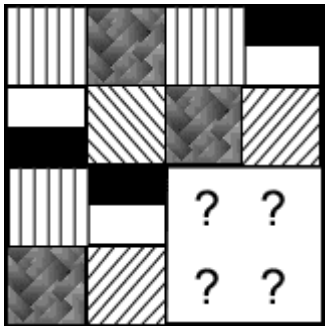
Q37: (1 mark) At a local club with 84 members, there are half as many women as there are men. The next month, 8 women join and the ratio of women to men is now 3 to 4. How many men joined or left?

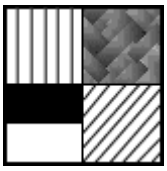
A: 20 joined B: No men joined or left C: 8 left D: 20 left E:Not possible to say

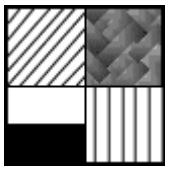
Q38: (1 mark) Rabbits are cuter than fish. Kittens are cuter than puppies. Puppies are cuter than rabbits. Which is cutest?

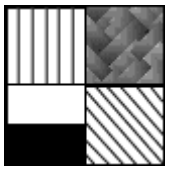
A: Rabbits B: Puppies C: Kittens D: Fish E:Not possible to say

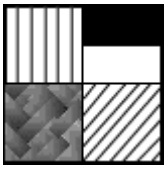
Q39: (1 mark) Which pattern logically completes the image below?

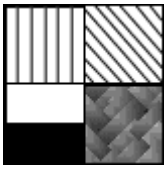


A: 

B: 

C: 

D: 

E: 

Q40: (1 mark)

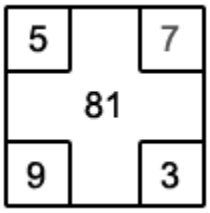
A:

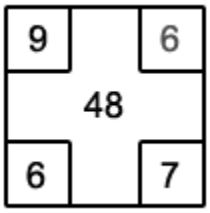
B:

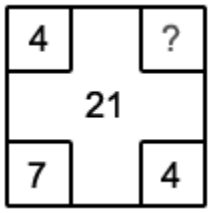
C:

D:

Q41: (1 mark) Following the logic of the first 2 images, what number should replace the question mark in the last image?







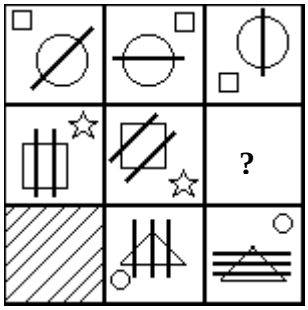
A: 3 B: 8 C: 7 D: 9 E: 8

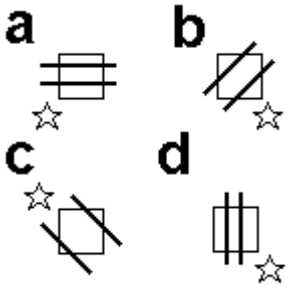
Q42: (1 mark) Three ships are berthed next to each other. A blue ship is to the right of a red ship and to the left of a green ship. If the blue ship and the green ship change places then ?

A: The red ship and the blue ship are next to each other B: The green ship is between the red ship and the blue ship C: The red ship is immediately to the left of the blue ship D: The red ship is in the middle
E: Cannot say

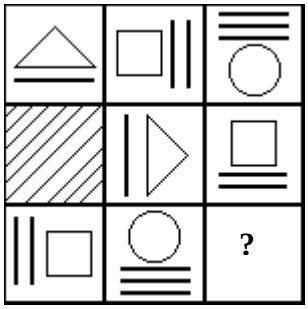
Q43: (1 mark) Five boys took part in a fitness test. Tony scored higher than Sam who didn't have the lowest score. Jack had the highest score and Gerry scored more than Paul but less than Tony. Who had the lowest score ?
A: Tony B: Sam C: Jerry D: Jack E: Paul

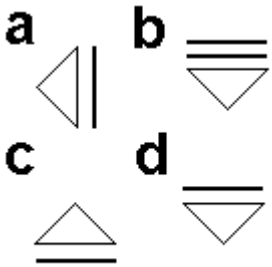
Q44: (1 mark) Which figure continues the series?



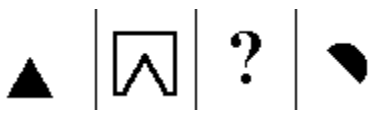


Q45: (1 mark) Which figure continues the series?





Q46: (1 marks) From the right side columns chose picture which logically fills the gap in the line of pictures on the left side.



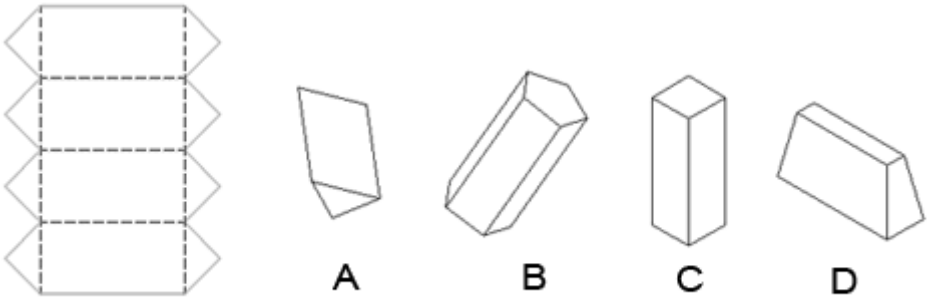
Q47: (1 mark) From the right side columns chose picture which logically fills the gap in the line of pictures on the left side.?

Q48: (1 mark) Choose the conclusion that validly follows from the argument below.

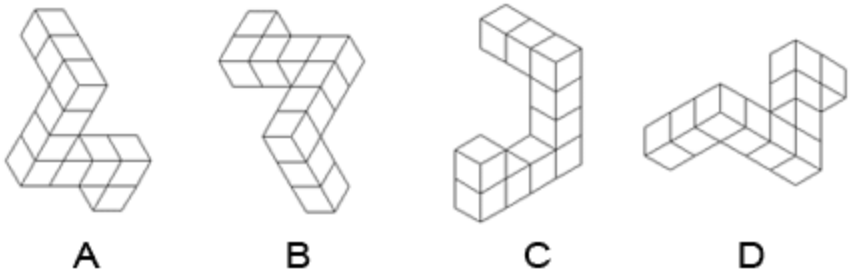
All kittens are playful
Some pets are kittens
Therefore?

A: All kittens are pets B: Some kittens are pets C: All pets are playful
D: Some pets are playful E: I don't know

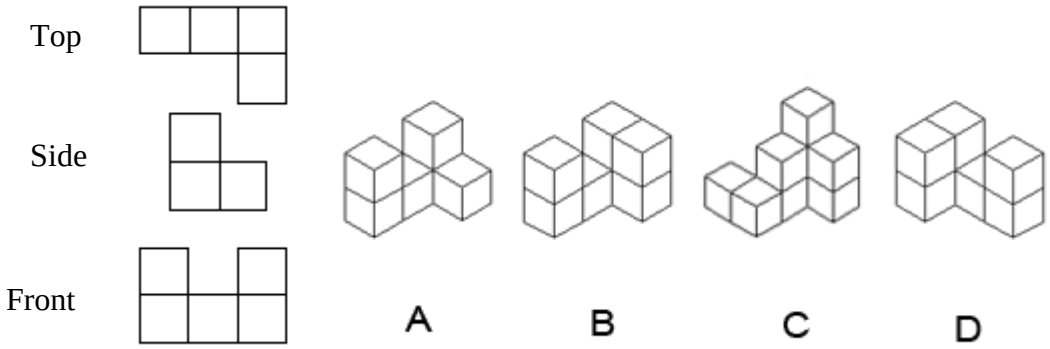
Q49: (1 mark) When the shape on the left is folded at the dotted lines which shape does it produce?



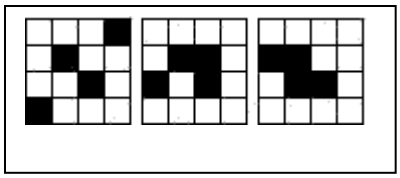
Q50: (1 mark) Which is the odd one out?

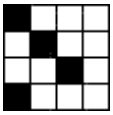
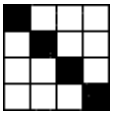
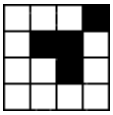


Q51: (1 mark) Which of the shapes is represented by the three views (top, side, front) on the left?



Q52: (1 mark) Which of the patterns completes the series?



A:  B:  C:  D :Cant say

Q53: (1 mark) If the day before yesterday is two days after Monday then what day is it today ?

A : Monday B : Tuesday C : Thursday D : Wednesday
E : Cant say

Q54: (1 mark) Which letter comes next in this series of letters?

B A C B D C E D F ?

A : C B : D C : E D : F E : G

Q55: (1 mark) Star is to Universe as city is to

A: Universe B: Country C: Sea D: Street E: Building

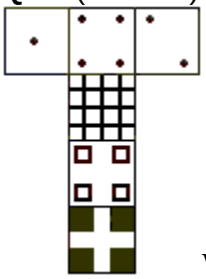
Q56: (1 mark) A cross-section of a cylinder along it's length has the shape of a

A: Rectangle B: Oval C: Circle D: Triangle E: Ellipse

SECTION 2

ALL QUESTIONS IN THIS SECTION ARE OF 2 MARKS

Q57: (2 marks)



Which of the following cubes is similar to the unfolded cube on the left ?

A: B: C: D:

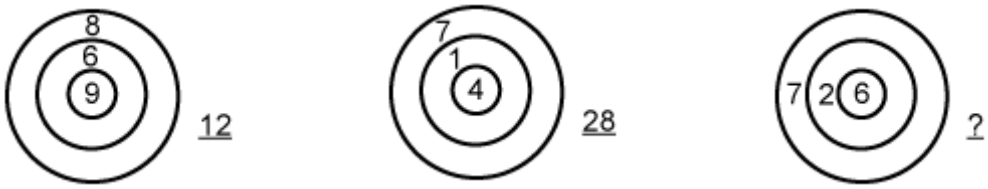
Q58: (2 mark) You have 59 cubic blocks. What is the minimum number that needs to be taken away in order to construct a solid cube with none left over?

A: 32 B: 22 C: 16 D: 0 E: 44

Q59: (2 mark) A cube is made of a white material, but the exterior is painted black. If the cube is cut into 125 smaller cubes of exactly the same size, how many of the cubes will have exactly 2 of their sides painted black?

A : 24 B : 36 C : 44 D : 62
E : 125

Q60: (2 mark) Following the logic of the first 2 images, what number should replace the question mark in the last image?



A: 42 B: 12 C: 21 D: 18 E: 24

Q61: (2 mark) The following numbers are based on a certain rule. What is the missing number that follows that rule ?

January	15
May	5
June	10
November	15
August	?

A: 10 B:20 C: 15 D: 30 E: 5

Q62: (2 mark) In the following addition , numbers are replaced by alphabets

```
   A D
+  D G
--------
D  G  D
```

A represents which number ?

A: 4 B: 9 C: 1 D: 3 E: 7

Q63: (2 mark) A man digs a hole in 6 hours. Another man can dig the same size hole in 3 hours, a third man takes 4 hours and another takes 5 hours. If they all worked together at their respective speeds, and didn't get in each others way, how long would it take to dig that hole ?

A: 18 hours B: C: 2 1/2 hours D: 4 ½ hours E: 60/57 hours

Q64: (2 mark) A frog jumps into a well that is 18 feet deep. Every day, the frog jumps up a total distance of 6 feet. At night, as the frog grips the slippery well walls, it slips back by 2 feet. At this rate, how many days will it take for the frog to jump to the rim of the well ?

A: 3 days B: 4 days C: 5 days D: 2 days E: It can never get out

Q65: (2 mark) Thirty-two cricket teams enter a competition. The teams are paired randomly in each round. The winning team advances to the next round. Losers are eliminated. How many matches must be played in order to crown one winner?

A: 32 matches B: 64 matches C: 65 matches D: 31 matches E: 63 matches

Q66: (2 mark) An ordinary cyclist travels up and down a hill. Going up, she maintains a constant speed of 10 kph. It takes her 1 hour to get to the top. Assuming the hill is symmetric, what speed must she maintain on the way going down if she wishes to average 20 kph ?

A: 10 kph B: 30 kph C: 20 kph D: 25 kph E: It is not possible to average 20 kph

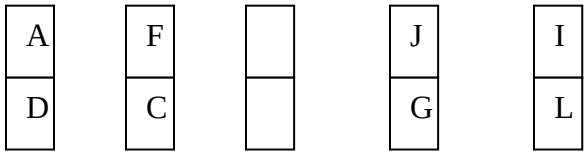
Q67: (2 mark) In the Bombay Bay, the tides can vary in height by almost 6 feet. A boat is anchored in the middle of the bay. A ladder hangs down from the deck of the boat and just touches the flat sea surface. The steps of the ladder are 1 foot apart?
At low tide, 10 steps of the ladder are seen. At high tide, the water level rises by 6 feet. How many steps will remain exposed now?

A: 8 steps B: 4 steps C: 6 steps D: 5 steps E: 10 steps

Q68: (2 mark) A medium sized jet has a wingspan of 120 feet. An albatross is a bird that a wingspan of about 12 feet. What altitude would each object have to fly in order to cast shadows of equal size?

A: 10 feet B: 100 feet C: 1000 feet D: 10000 feet E: Their shadows can never be the same

Q69: (2 mark) Insert the missing letters



A: D, K **B:** E,H **C:** B,E **D:** E,K

Q70: (2 mark) Suppose a cheese cube is sliced by four perfectly straight (i.e., planar) knife strokes, the pieces thereby formed never moving from their initial positions. What is the maximum number of pieces that can thereby be formed?

A: 32 B: 12 C: 8 D: 16 E: 27

Q71: (2 mark) In a certain bank, the positions of cashier, manager, and teller are held by Bhushan, Jigar, and Sohail (though not necessarily in this order)

The teller, who was an only child, earns the least

Sohail, who married, Bhushan's sister, earns more than the manager

What is the position that each man fills?

A: Cashier=Sohail, Manager=Bhushan, Teller=Jigar B: Cashier=Jigar, Manager=Sohail, Teller=Bhushan C: Cashier=Sohail, Manager=Jigar, Teller=Bhushan D: Cashier=, Manager=Jigar, Bhushan, Teller= Sohail E: Impossible to say

Q72: (2 mark) Four black cows and three brown cows give as much milk in five days as three black cows and five brown cows give in four days

If you compare milk output per day, which of the following is true?

A: Black cow gives more milk than Brown cow B: Black cow gives less milk than Brown cow C: Black cow gives same milk as a Brown cow D: It is impossible to decide

Q73: (2 mark) Ashish, Deven, Jitin, Tushar were counting how much paper money they had after a game of Vyapar

Tushar had won more than Jitin
Between them, Ashish and Deven had just as much money as Jitin and Tushar
Ashish and Tushar did not have as many as Deven and Jitin

What was the order of who had won the highest, second highest, third highest and the least?

A: Deven had the same as Ashish
B:
C: Deven had less than Ashish
D: It is not possible to decide

Q74: (2 mark**)** Anand, Ganesh, Hemant, and Mayur were discussing their ages at a Table Tennis tournament where they were playing doubles against each other (they were in teams of two each).

Mayur is younger than Ganesh
Hemant is older than either of his opponents on the other side
Mayur is older than his partner
Anand and Ganesh are together older than Hemant and Mayur

Who is the eldest in the group?

A: Ganesh B: Mayur C: Hemant D: Ashish E: It is not possible to decide

Q75: (2 mark) One family had many children, but they were fussy about food

Seven would not eat spinach
Six would not eat carrots
Five would not eat beans
Four would eat neither spinach nor carrots
Three would eat neither spinach nor beans
Two would touch neither carrots or beans
One of the children wouldn't eat spinach, carrots, or beans
And no one would eat all the vegetables

How many children were there in the family?

A: 6 B: 7 C: 8 D: 9 E: 10

Q76: (2 mark) A group of men were discussing their membership to clubs.

Each man belonged to exactly two clubs
Each club had exactly 3 people from the group
Every possible pair of clubs had exactly one member of the group in common between them

How many men were there in the group, and how many clubs?

A: 4 people, 3 clubs B: 3 people, 3 clubs C: 6 people, 4 clubs D: 3 people, 3 clubs E: 6 people, 6 clubs

Q77: (2 mark) There were four people called by police who were investigating a certain crime. They made the following statements

Anish: Dipen did it
Dipen: Tarun did it
Girish: I did not do it
Tarun: Dipen lied when he said that I did it

If only one of the above statements is true (and the others are false), who was the guilty man

A: Anish B: Dipen C: Girish D: Tarun E: It is impossible to decide

Q78: (2 mark) It takes time "2T" for a passenger train to pass a goods train (both going in same direction) after it first overtakes it. It takes the two trains time "T" to cross each other completely when going in opposite directions

Note that overtaking in same direction means starting from the point when the front of the passenger train crosses the back of the goods train and ending at the point when the back of the passenger train crosses the front of the goods train. Crossing in opposite direction is complete crossing time from the time the front of the two trains just cross each other.

How many times faster is the passenger train as compared to the goods train

A: Same speed B: four times as fast C: Nine times as fast D: 10 times as fast E: Three times as fast

Rough Work