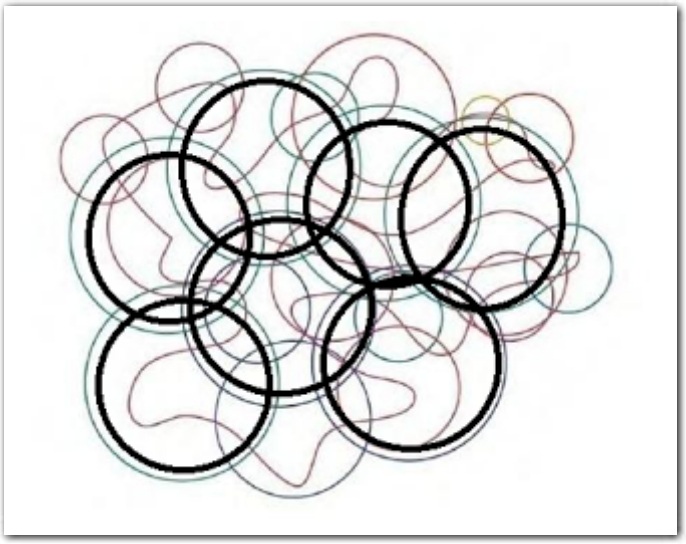
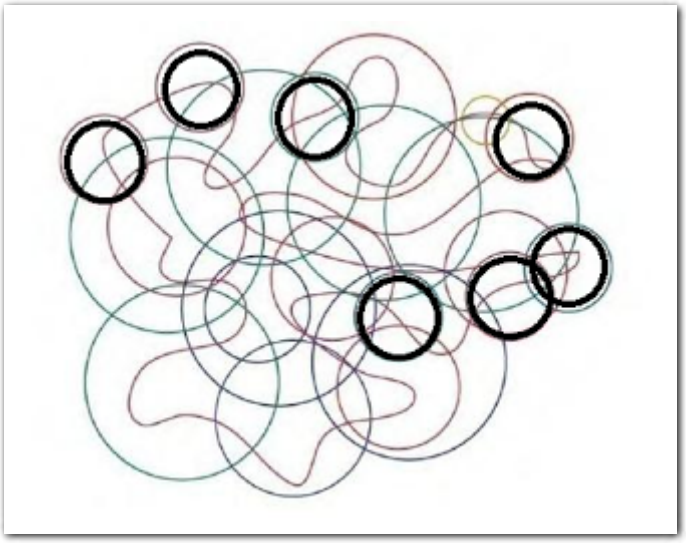
Q1) 22

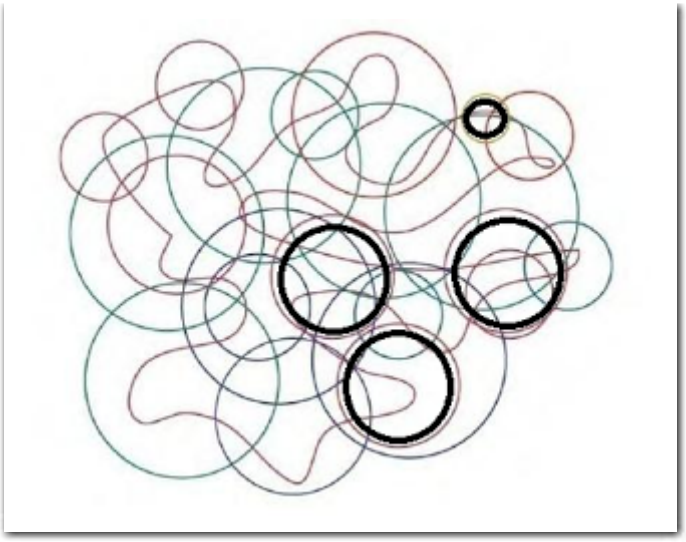
My way of solving:
1. Start with smallest circle size count those sized circles,
2. Next move to next higher size and cont again the circles .....
continue repeating the steps until all the sizes are counted

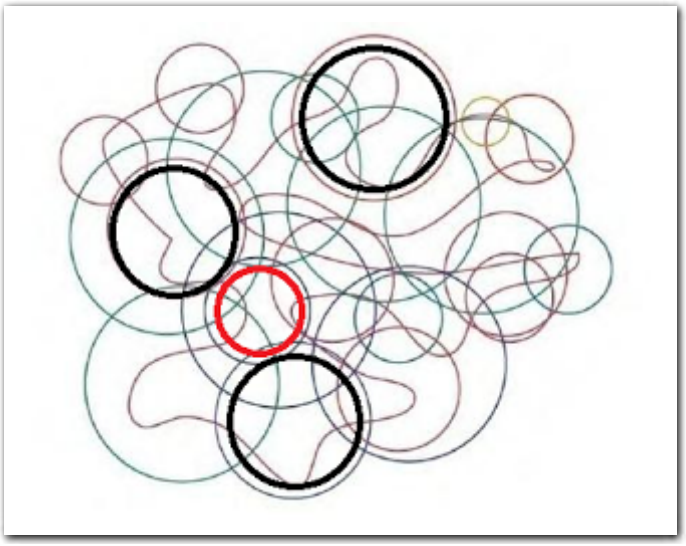
size 1 - 1
size 2 - 7
size 3 - 1
size 4 - 3
size 5 - 3
size 6 - 7

Below images show how I selected the circles







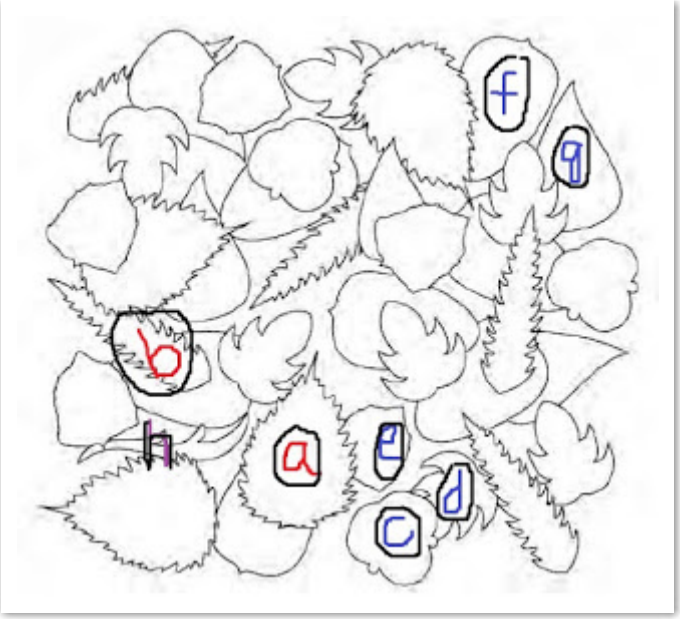


Q2) 8

I will again apply the procedure that I used in Q1. i.e start with smallest size leaf and then proceed. In this case, you can use additional factors like zig zag leaf Vs plain leaf too! for easy and fast counting

Zig-zaged leaves types - size 1 (thin), size 2 (fat)
plain leaves - 4 sizes
Three cut leaves - size 1
snake type leaf with two cuts - size 1

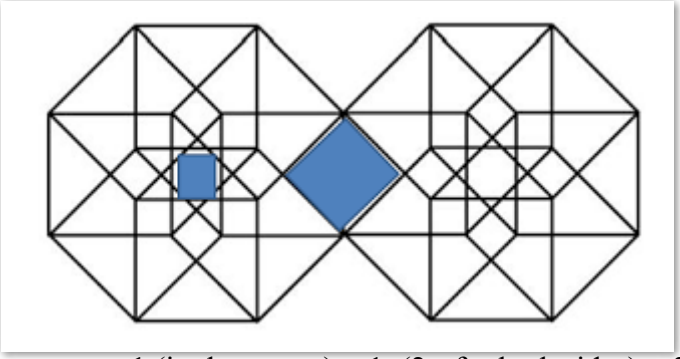
Below image demonstrates the different leaves denoted by alphabets (a to h)



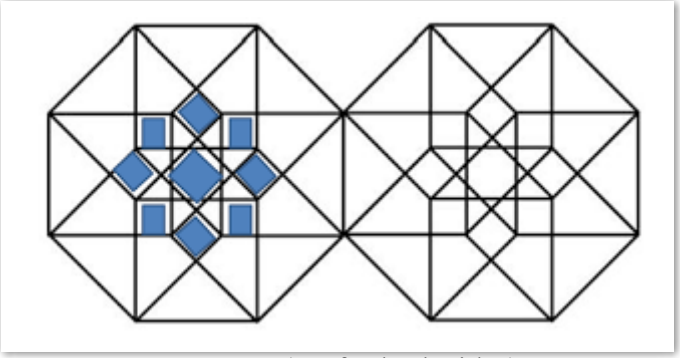
Q3) 37

Check the below images for better understanding, note the blue shapes fitted to indicate the square counted. Handle these type of questions as follows:

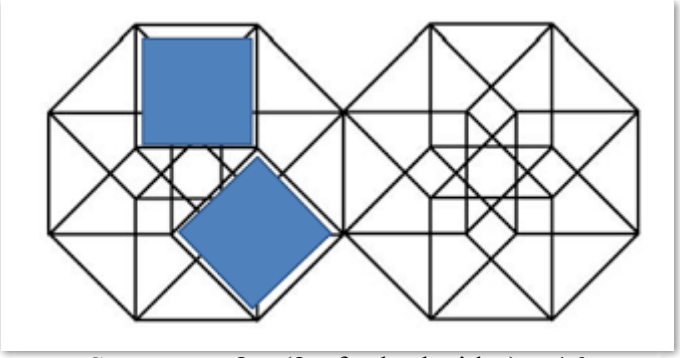
1. First count the big squares (or small squares), write it down for sure,
2. then count next lesser sized squares, write it down, and so on.
3. Don't stick to principles like 'Symmetry', even in symmetry images, there might be squares (or any required shape) derived from the two symmetry.



Squares -> 1 (in the center) + 1x(2 - for both sides) = 3



Squares -> 9 x (2 - for both sides) = 18

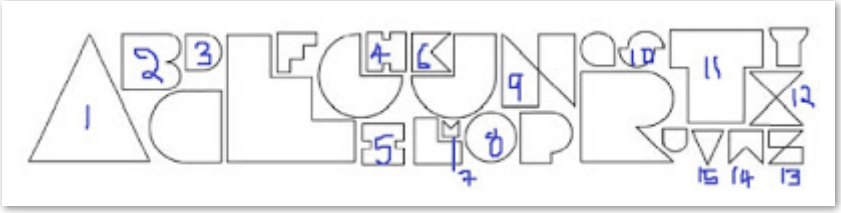


Squares -> 8 x (2 - for both sides) = 16

Total squares -> 3+18+16 = 37

Q4) 13

Below image shows the alphabets considered by me



There's some mistake in this image (My mistake!), The following numbered alphabets cannot be read as capital letters -> 9,10. Alphabet numbered 9 when flipped cannot form N again. Also 10, representing S cannot assume any capital letter after flipping. But alphabet numbered 13 can be assumed to form 'S'. So, I still consider that. Thanks to *Adamya Kaushik* for informing this to me.

Q5) 9

Frankly speaking, I'm not that good at fonts, but tried figuring these font categories, correct me if i'm wrong

Trick is identify font alphabets with tails and without tails, then take any alphabet (say a,t,i ...) and compare with other word alphabets of the same category.

- Font 1 = spectrum, operators, farmers
- Font 2 = auctions, performance, mango,
- Font 3 = display, total, sugar,
- Font 4 = holdings,
- Font 5 = maximum, allegations
- Font 6 = industry, programme, benchmark, natural, utilized, contributed, cartelisation, compensation
- Font 7 = reduction, withdrawn,
- Font 8 = emerged
- Font 9 = fiscal

Q6) Team-2, 286

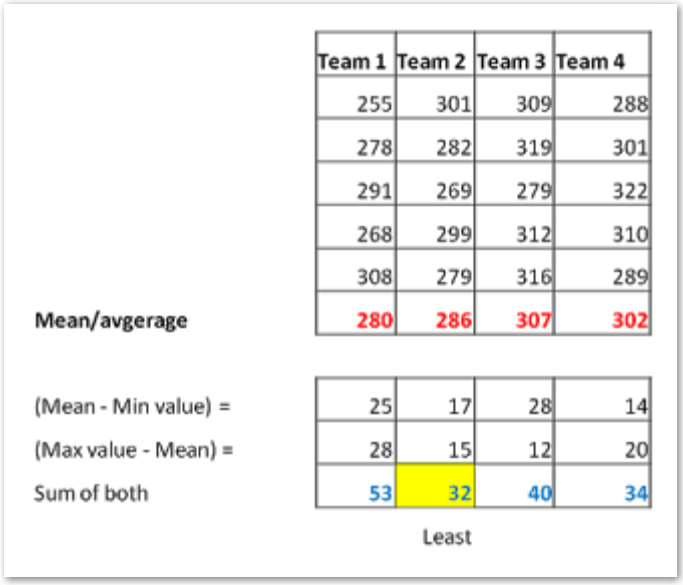
My Explanation to this question is given below. However idea given by **Vaishnav Hari** through

his comment below is very simple that I'm sharing here.

we can simply subtract max and min scores.....
(mean - min) + (max - mean) = max - min

My actual explanation

This is a statistical question, wonder how these questions are asked in UCEED exams. Anyway my explanations goes like this with the help of the below image.



	Team 1	Team 2	Team 3	Team 4
	255	301	309	288
	278	282	319	301
	291	269	279	322
	268	299	312	310
	308	279	316	289
Mean/avgerage	280	286	307	302
(Mean - Min value) =	25	17	28	14
(Max value - Mean) =	28	15	12	20
Sum of both	53	32	40	34
		Least		

The actual procedure is to find the standard deviations/variance of the given data set which requires calculator. But considering the fact that you are not given any calculator in exam, here is one more simple way.

Find the average of all the data for all teams, like for say team one, the average of given 5 data will be

mean 1 = (255+278+291+268+308)/5 = 280

Here denominator 5 represents the total no. of data considered. Likewise do that for rest teams too.

Now, find the difference between the identified mean and the maximum and minimum values of the given data for all teams. For ex, for team1,

(Mean - min value) = 280-255 = 25
(Max value - Mean) = 308-280 = 28
Sum them up which is 53.

Do this for the rest teams too, now choose the team which has the minimum sum, that is team 2

The idea is, spread or variance represents how far the data are spreaded from the mean value irrespective of the mean value. So, if the difference between the ends are less, it mean the data are less spreaded and hence less standard deviation or variance.

Hope you understood this.

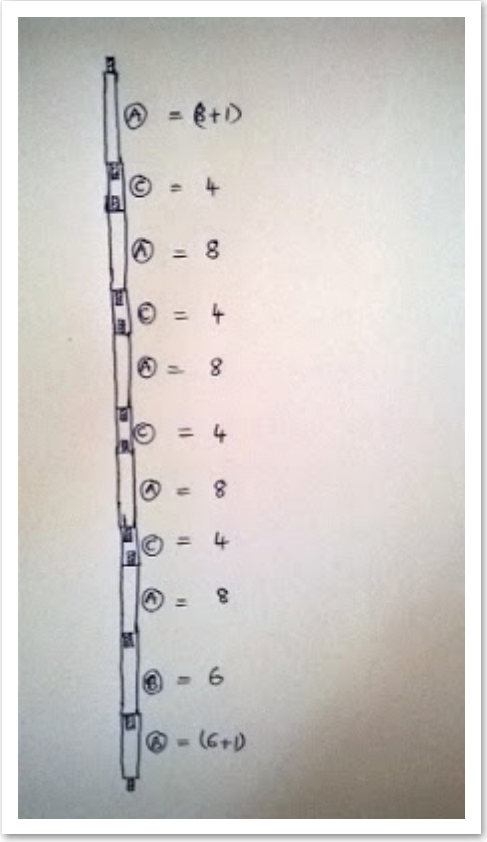
Q7) 8

I'm Just writing down the words with wrong spellings

thier (their), consceintious (conscientious), recieve (receive), come (came), bee (been), atitudes (attitudes), beginings (beginnings), comonplace (commonplace),

Q8) 70

Although six units of Part A is given, we can only use 5 of them and using rest four C parts, and two B parts, we will get a maximum length of 70, including the two male screws at both ends as clearly shown in the below sketch

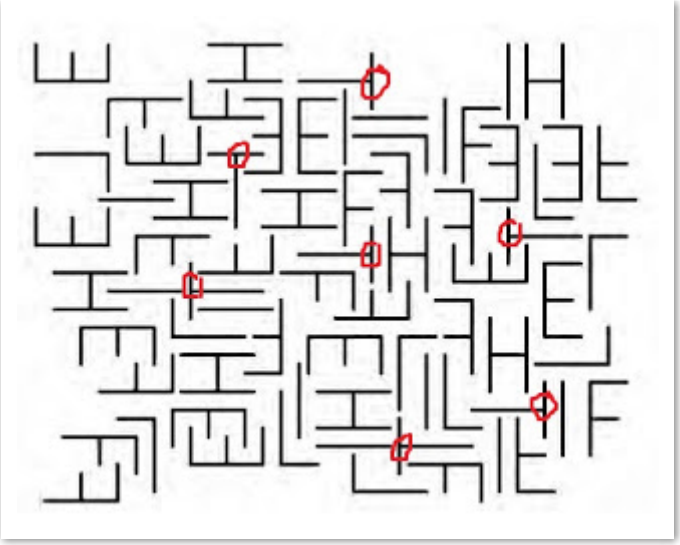


Hope this is clear

8*5 + 4*4 + 6*2 + 2 = 70

Q9) 7 T's

check the below image circled in red for your easy identification



Q10) 7 type-A pencil patterns

The below image with circled arrows might give you a clear idea.

Q11) 15

The below four images illustrates the formation of different parallelograms

image 1: 8 straight parallelograms

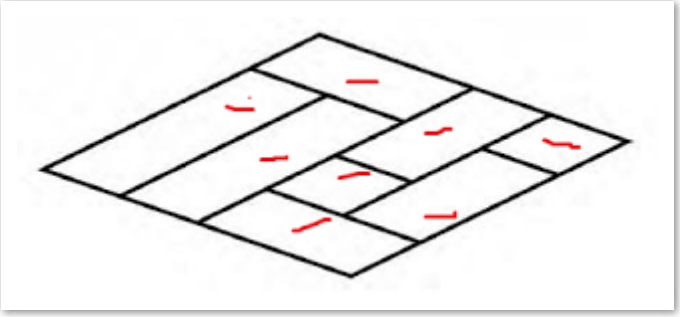


image 2: 2 parallelograms shown in red or green

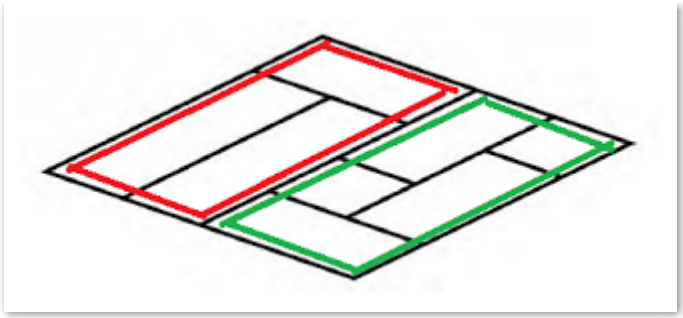


image 3: two more parallelograms in green and red, and one overall big sized shape shown in yellow

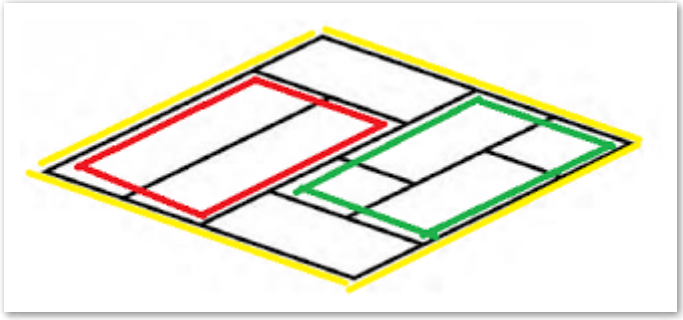
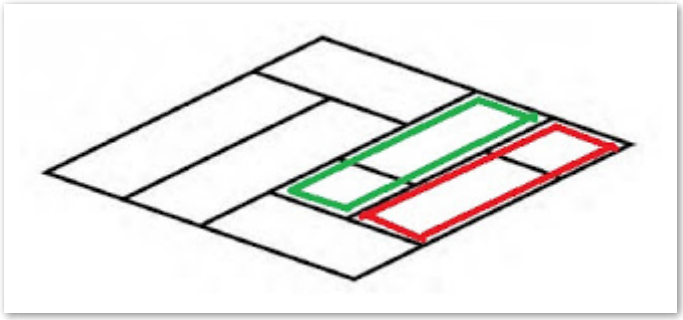


image 4: two shapes, both of which are formed using one small and medium sized parallelogram, shown in green and red



Total: 15

Q12)

The below image shows the extruded view (3D) of the alphabets

No. of surfaces formed by extruding
(In my usual order front, right, back, left, top, back)

Letter 'L' = 1+2+2+1+1+1 = 8
Letter 'O' = 2(two curved surfaces - inside and outside of oval 'O') +1 (top)+1(bottom) = 4
Letter 'V' = 1+2+2+2+1+1 = 9

Letter 'E' = 3+5+3+1+1+1 = 14

Total = 8+4+9+14 = 35

Check the link - how to count no. of surfaces on complex solids
Also see - working wit geometric shapes

I'm planning to make a detailed explanation of how to manipulate or observe solids in order to answer images/solid type questions with very good explanations and supporting images very soon for your benefit:)

Q13) 7

By observation

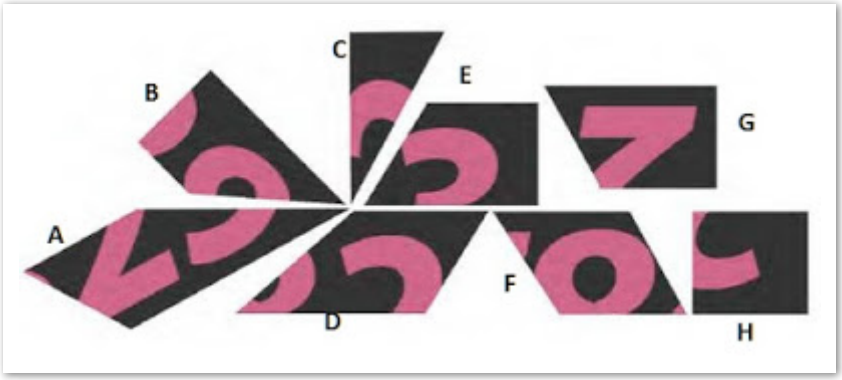
Q14) f/4

check this page for more details about - photography guide

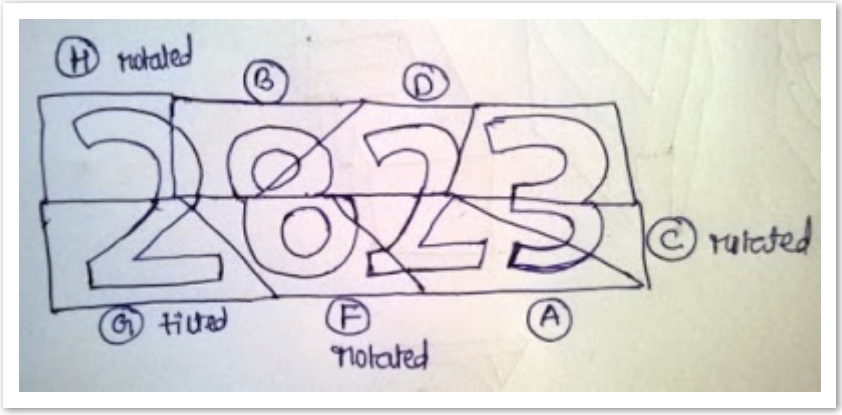
Q15) 2823

How to solve this kind of broken puzzles ?

Well, it's some what tough, took some time for me to figure out the pattern. I have marked alphabets for the individual broken peices as shown in the below image



The below image shows the arranged form of the pieces with the alphabets mentioned for your better understanding. Hope this is clear.



How to solve such puzzles ?

Simple thing is identify the four pieces of the puzzles, which represent the corners. Like for

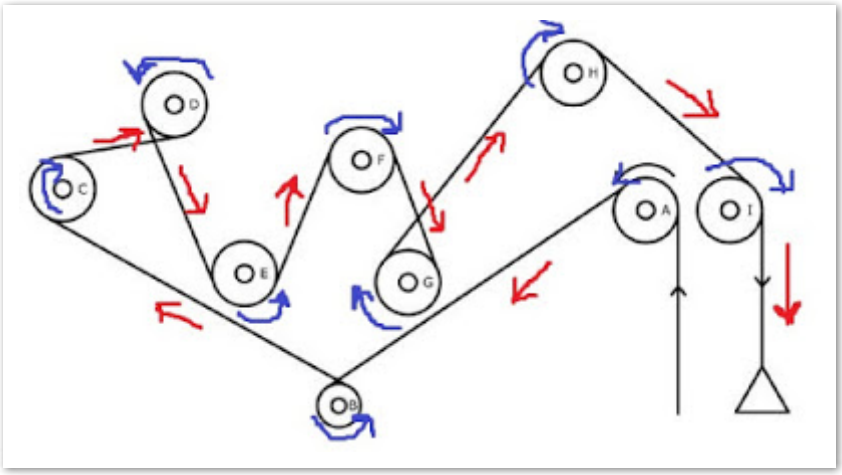
example, the top right corner of the piece should have two perpendicular edges at 90 degree each to the top, right ?, similary, the bottom right corner should have a piece which has two corners 90 degree to each other. Similar logic applies to the other right extreme corners. Once you keep these four pieces in their place, it's easy to identify the pattern. You can cross check what I explained in the above image, n understand how extreme corners are alligned. I always start with the corners, It works for me! give it a try.

Q16) skipped - (Answer is 3 from key)

If you want explanation, I can think about giving here but later.

Q17) 5

Below image shows the image that I prepared for better understanding. Red arrow shows direction of rope travel based on the arrow shown at A. Blue arrow shows the direction of rotation of the pulleys depending on rope travel. Now, count the blue arrows rotating in clockwise direction which turns out to be 5.



Q18) 18

Front - 4
right - 6
back (as shown in the second view) - 2
left - 2
top - 2
bottom - 2

Q19)

Given cube is 6x6x6 sized. So, each row will have 6x6 = 36 cubes.

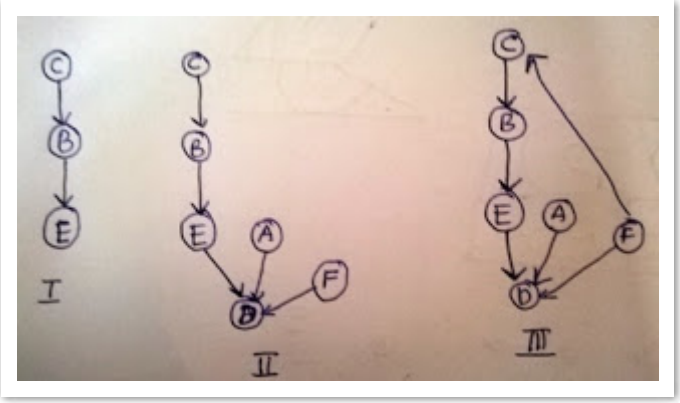
We will count the missing cubes from bottom to top.

Bottom (1st) row - nill
2nd row = 1
3rd row = 7
4th row = 9
5th row = 16
6th (top) row = (36-11) = 25

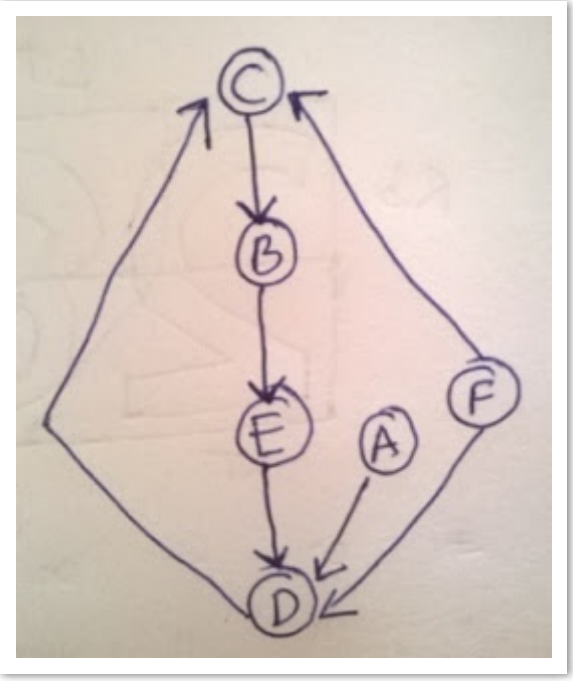
So, number of cubes = 6*6*6 - (1+7+9+16+25) = 158

Q20)

Below image shows the process for the first three statements. B can contact E and can be contacted by C shown in I
Next two statements sre also shown in II and III.



Below image shows the complete cycle of the rules indicated in question.



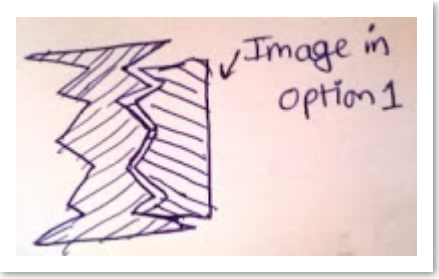
Now the minimum no. of Robots between A and B, to send messages is 2 (D and C)
i.e either A -> D -> C -> B

Q21) A,B,D

'Being and Nothingness' is a book written by 'Jean-Paul Sartre'. Michel Fouucault was a French philosopher.

Q22) A,B,C

Basically what the question asks is among the given option if they are placed next to the given shape, whether they fit into the impressions or not.



All the options match given image directly or either by rotation.

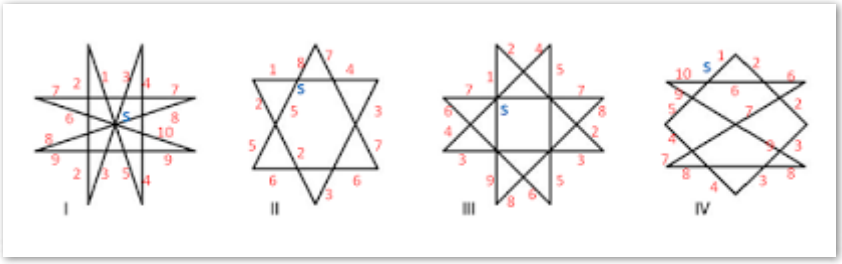
Q23) A,D

Elephanta caves cannot only contain Hindu Vaishavaite. Similarly Ellora caves also contain many sculpture including Shaivaite and vaishnavaite.

Q24) A,B,C,D

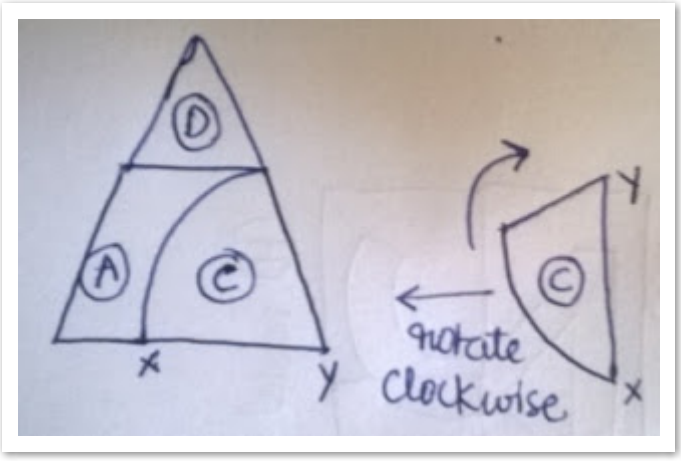
All the given pattern can be drawn without lifting the pen or retracing any line.

Below image shows the explanation. The starting point is marked as S in blue, and from there the steps that I took is indicated successively by numbers. Follow the numbering system so that you can be able to trace the path that I assumed. Note that there are many ways we can draw those shapes if we pick any intersection point! The procedure that I showed is only one possible way



Q25) A, C, D

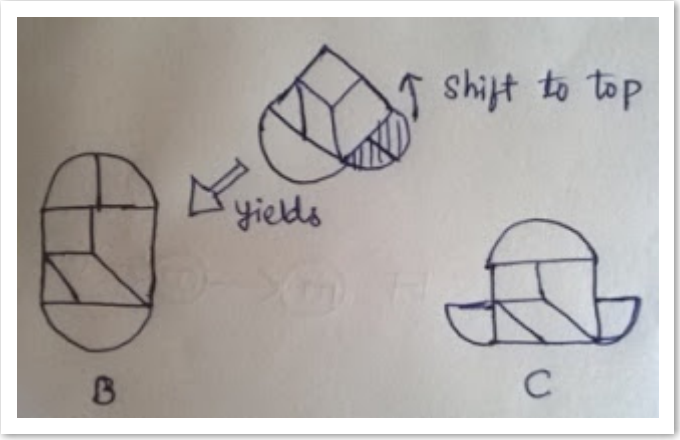
Below image shows the explanation. Note that pattern C is rotated 90 degrees clockwise.



Q26) B,C

B,C can be formed form the shapes, but A and D patterns are not possible.

Below image explains the situations



27) A,B,C

Even I referred internet for this :P

Q28) A,B,C

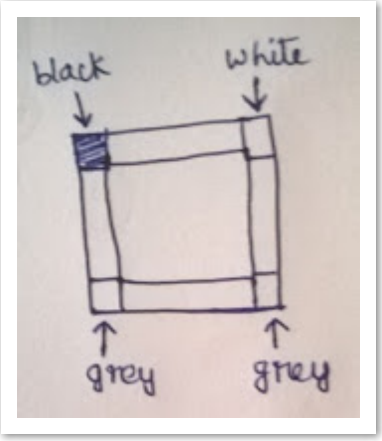
By careful observation D cannot fit the condition. You can check this. Rest three shapes can hold all the four symbols.

29) C,D

Explanation:
The Lion Capital of Ashoka is a sculpture of four Indian lions standing back to back ... The capital is carved out of a single block of polished sandstone,
Ellora caves are carved in living rock

Q30) D

Just note the four corner patterns of the given image as shown in the given image



Now in the rotated images of the options shown, check if the four corner squares (if rotated) are matching or not.

Option C - anticlockwise rotation of image
Option D - anticlockwise rotation (twice) of the image

Now to check if the two options are correct or not, extend the four corners to four edges, I mean now check the rest small suare pattern on the edges.

Option B has a slight mismatch and D doesn't have any mismatch.

Q31) A,B,D

Referred to internet :P

Q32) A,B,D

Cartography is the study and practice of making maps. While the rest are related to printmaking.

Check more about printmaking here

Q33) A,B

Anandavardhana was the author of 'Dhvanyaloka'
Mammata Bhatta was a Sanskrit rhetorician noted for his text on poetics, the kavya-prakasha (light on poetics).
Anandavardhana is credited with creating the dhvani theory. He wrote of dhvani (meaning sound, or resonance) in regard to the "soul of poetry."

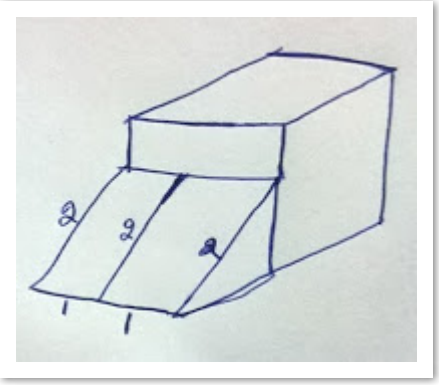
Study more about him

More related info will be shared about writers very soon.

Q34) A,B,C,D

Since the solids can be merged to form one more solid, option C can also be considered, otherwise option C cannot fit.

Below picture shows an option. How option D is formed. I hope you can imagine the rest options, else let me know!



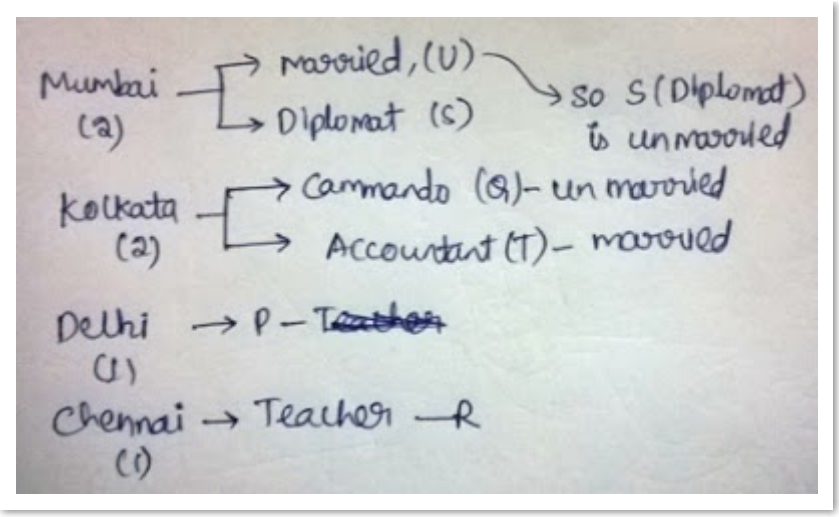
Q35) B,D

By observation

Q36) A,B,D

Q37) B,C

Below image shows my observation. According to the list,



R, the teacher belong to Chennai
Q, the cammando is unmarried.

Rest two conditions are not sure, they may or may not be right. So, we choose B,C as option

Questions 38 to 41,
I'm skipping here, but just as a note for you, I'm coopying the answers from UCEED official answer key

Q38) A,D

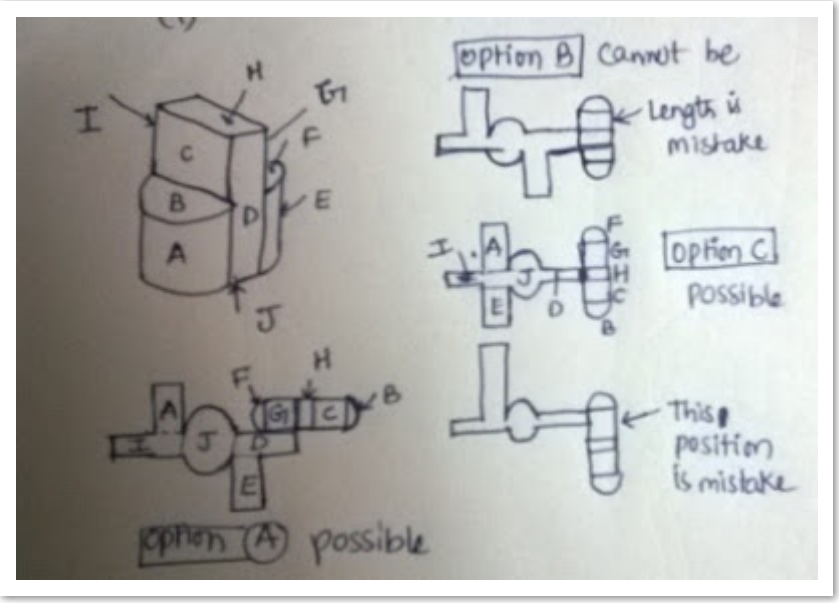
Q39) A,C

Q40) A,B,D

Q41) A,C

Q42) A,C

Check the below image for better explanation



Q43)

For this kind of question, assume yourself that you give a small push to any of the links other

than the bottom ones (if any) It's usual to consider the bottom link as fixed. All the mechanisms other than D can move with some displacement. D is a static structure.

Q44) C,D

Whenever the material is in stretching condition, consider them to be under tension, when they are such that they undergo kind of pushing on both sides, then consider then under compression. Only material B of the stool is in compression, rest are in tension. Now check the options which suits our findings.

Q45) B,D

(I'm not pretty sure, just got this answer from key)

Q46)

Very simple, just turn the pairs horizontally, and try to pass them through the cutouts. Since the width of all the pairs are within the width/depth of cutouts, all the pairs can pass through all cutouts.
Simple isn't it?

Q47) B,D

Q48) B,D

Q49) C
Only C is possible.

Q50) B

Since the umbrella is three fold, the mechanism should have many joints especially sliding type.