PERCENTILE CLASSES

LOGICAL REASONONG Mixed

Answer Questions on the basis of the information given below:

K, L, M, N, P. Q, R, S, U and W are the only ten members in a department. There is a proposal to form a team from within the members of the department. Subject to the following conditions:

- A team must include exactly one among P. R, and S.
- A team must include either M or Q, but not both.
- If a team includes K. then it must also include L, and vice versa.
- If a team includes one among S. U. and W, then it must also include the other two.
- L and N cannot be members of the same team.
- L and U cannot be members of the same team.

The size of a term is defined as the number of members in the team.

1. What could be the size of a team that includes K?
a. 2 or 3 b. 2 or 4 c. 3 or 4 d. Only 2 e. Only 4

2. In how many ways a team can be constituted so that the team includes N?
a. 2 b. 3 c. 4 d. 5 e. 6

3. What would be the size of the largest possible team?
a. 8 b. 7 c. 6 d. 5 e. Can not determined

4. Who can be a member of a team of size 5?
a. K b. L c. M d. P e. R

5. Who cannot be a member of a team of size 3?
a. L b. M c. N d. P e. Q

Prof. Singh has been tracking the number of visitors to his homepage. His service provider has provided him with the following data on the country of origin of the visitors and the university they belong to:

Number of visitors

	DAY		
COUNTRY	1	2	3
Canada	2	0	0
Netherlands	1	1	0
India	1	2	0
UK	2	0	2
USA	1	0	1

Number of visitors

	DAY		
UNIVERSITY	1	2	3
University 1	1	0	0
University 2	2	0	0
University 3	0	1	0
University 4	0	0	2
University 5	1	0	0
University 6	1	0	1
University 7	2	0	0
University 8	0	2	0

6. To which country does University 5 belong?

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	DAY		
UNIVERSITY	1	2	3
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University 2	2	0	0
University 3	0	1	0
University 4	0	0	2
University 5	1	0	0
University 6	1	0	1
University 7	2	0	0
University 8	0	2	0

6. To which country does University 5 belong?

a. India or Netherlands but not USA b. India or USA but not Netherlands
c. Netherlands or USA but not India d. India or USA but not UK

7. University 1 can belong to

a. UK b. Canada c. Netherlands d. USA

8. Visitors from how many universities from UK visited Prof. Singh's homepage in the three days?

a. 1 b. 2 c. 3 d. 4

9. Which among the listed countries can possibly host three of the eight listed universities?

a. None b. Only UK c. Only India d. Both India and UK

A study was conducted to ascertain the relative importance lat employees in five different countries assigned to five different traits in their Chief Executive Officers. The traits were compassion (C), decisiveness (D), negotiation skills (N), public visibility (P), and vision (V). The level of dissimilarity between two countries is the maximum difference in the ranks allotted by the two countries to any of the five traits. The following table indicates the rank order of the five traits for each country.

COUNTRY					
Rank	***India***	***China***	***Japan***	***Malaysia***	***Thailand***
1	***C***	***N***	***D***	***V***	***V***
2	***P***	***C***	***N***	***D***	***C***
3	***N***	***P***	***C***	***P***	***N***
4	***V***	***D***	***V***	***C***	***P***
5	***D***	***V***	***P***	***N***	***D***

10. Which of the following countries is least dissimilar to India?

a. China b. Japan c. Malaysia d. Thailand

11. Which amongst the following countries is most dissimilar to India?

a. China b. Japan c. Malaysia d. Thailand

12. Which of the following pairs of countries are most dissimilar?

a. China & Japan b. India & China c. Malaysia & Japan d. Thailand & Japan

13. Three of the following four pairs of countries have identical levels of dissimilarity. Which pair is the odd one out?

a. Malaysia & China b. China & Thailand c. Thailand & Japan d. Japan & Malaysia

Twenty one participants from four continents (Africa, Americas, Australasia, and Europe) attended a United Nations conference. Each participant was an expert in one of four fields, labour, health, population studies, and refugee relocation. The following five facts about the participants are given.

(1) The number of labour experts in the camp was exactly half the number of experts in each of the three other categories

(2) Africa did not send any labour expert. Otherwise, every continent, including Africa, sent at least one expert for each category.

(3) None of the continents sent more than three experts in any category.

(4) If there had been one less Australasian expert, then the Americas would have had twice as many experts as each of the other continents.

(5) Mike and Alfanso are leading experts of population studies who attended the conference. They are from Australasia.

14. Alex, an American expert in refugee relocation, was the first keynote speaker in the conference. What can be inferred about the number of American experts in refugee relocation in the conference, excluding Alex?

A. At least one B. At most two

a. Only A and not B b. Only B and not A

c. Both A and B d. Neither A nor B

15. Which of the following numbers cannot be determined from the information given?

a. Number of labour experts from the Americas

b. Number of health experts from Europe.

c. Number of health experts from Australasia

d. Number of experts in refugee relocation from Africa

16. Which of the following combinations is NOT possible?

a. 2 experts in population studies from the Americas and 2 health experts from Africa attended the conference.
b. 2 experts in population studies from the Americas and 1 health expert from Africa attended the conference.
c. 3 experts in refugee relocation from the Americas and I health expert from Africa attended the conference.
d. Africa and America each had 1 expert in population studies attending the conference.

17. If Ramos is the lone American expert in population studies, which of the following is NOT true about the numbers of experts in the conference from the four continents?
a. There is one expert in health from Africa.
b. There is one expert in refugee relocation from Africa.
c. There are two experts in health from the Americas.
d. There are three experts in refugee relocation from the Americas.

The year was 2012. All six teams in Pool A of World Cup hockey play each other exactly once. Each win earns a team three points, a draw earns one point and a loss earns zero points. The two teams with the highest points qualify for the semifinals. In case of a tie, the team with the highest goal difference (Goals For – Goals Against) qualifies.

In the opening match, Spain lost to Germany. After the second round (after each team played two matches), the pool table looked as shown below.

Pool- A

Teams	Games Played	Won	Drawn	Lost	Goals For	Goals Against	Points
Germany	2	2	0	0	3	1	6
Argentina	2	2	0	0	2	0	6
Spain	2	1	0	1	5	2	3
Pakistan	2	1	0	1	2	1	3
New Zealand	2	0	0	2	1	6	0
South Africa	2	0	0	2	1	4	0

In the third round, Spain played Pakistan, Argentina played Germany, and New Zealand played South Africa. All the third round matches were drawn.
The following are some results from the fourth and fifth round matches
(a) Spain won both the fourth and fifth round matches.
(b) Both Argentina and Germany won their fifth round matches by 3 goals to 0.
(c) Pakistan won both the fourth and fifth round matches by 1 goal to 0.

18. Which one of the following statements is true about matches played in the first two rounds?
a. Germany beat New Zealand by 1 goal to 0.
b. Spain beat New Zealand by 4 goals to 0.
c. Spain beat South Africa by 2 goals to 0.
d. Germany beat South Africa by 2 goals to 1

19. Which one of the following statements is true about matches played in the first two rounds?
a. Pakistan beat South Africa by 2 goals to 1
b. Argentina beat Pakistan by I goal to 0.
c. Germany beat Pakistan by 2 goals to 1
d. Germany beat Spain by 2 goals to 1.

20. Which team finished at the top of the pool after five rounds of matches?
a. Argentina b. Germany
c. Spain d. Cannot be determined from the data.

21. If Pakistan qualified as one of the two teams from Pool A, which was the other team that qualified?
a. Argentina b. Germany
c. Spain d. Cannot be determined from the data.

Four families decided to attend the marriage ceremony of one of their colleagues. One family has no kids, while the others have at least one kid each. Each family with kids has at least one kid attending the marriage. Given below is some information about the families, and who reached when to attend the marriage.
- The family with 2 kids came just before the family with no kids.
- Shanthi who does not have any kids reached just before Sridevi's family.

- Sunil and his wife reached last with their only kid.
- Anil is not the husband of Joya.
- Anil and Raj are fathers.
- Sridevi's and Anita's daughters go to the same school.
- Joya came before Shanthi and met Anita when she reached the venue.
- Raman stays the farthest from the venue.
- Raj said his son could not come because of his exams.

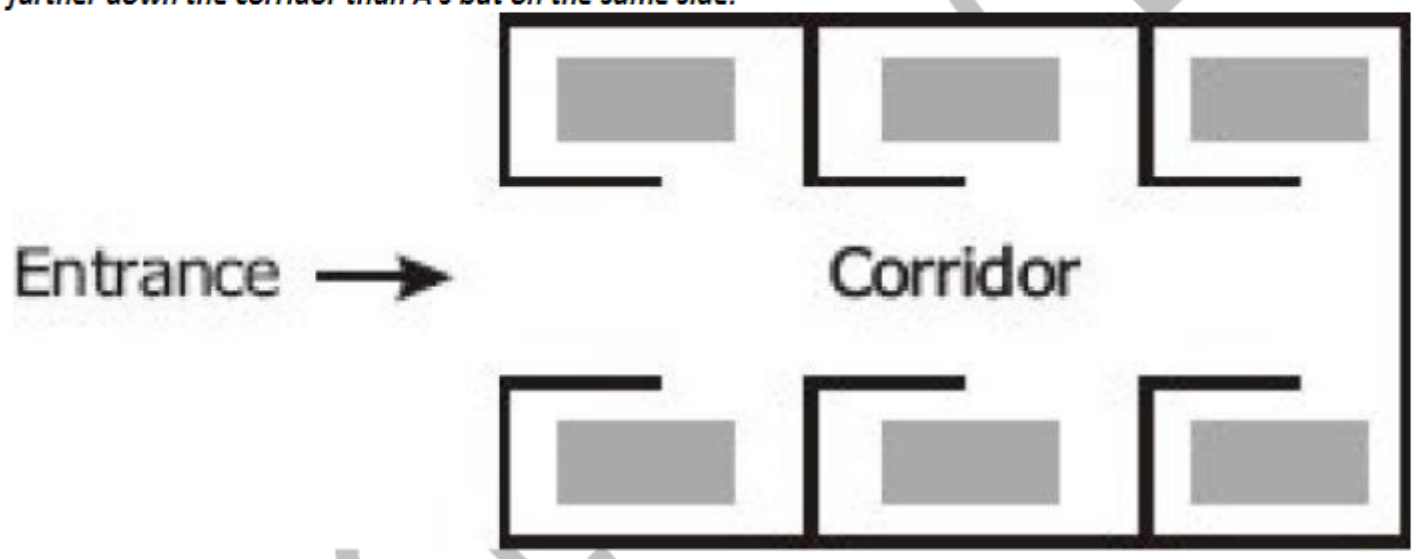
22. Which women arrived third?
a. Shanthi b. Sridevi c. Anita d. Joya

23. Name the correct pair of husband and wife?
a. Raj and Shanthi b. Sunil and Sridevi c. Anil and Sridevi d. Raj and Anita

24. Of the following pairs, whose daughters go to the same school?
a. Anil and Raman b. Sunil and Raman c. Sunil and Anil d. Raj and Anil

25. Whose family is known to have more than one kid for certain?
a. Raman's b. Raj's c. Anil's d. Sunil's

The plan above shows an office block for six officers, A, B, C, D, E, and F. Both Band C occupy officers to the right of the corridor (as one enters the officer block) and A occupies an officer to the left of the corridor. E and F occupy offices on opposite sides of the corridor but their office do not face each other. The offices of C and D face each other. E does not have a corner office. F's office is further down the corridor than A's but on the same side.



26. If E sits in his office and faces the corridor, whose office is to his left?
a. A b. B c. C d. D

27. Whose office faces A's office?
a. B b. C c. D d. E

28. Who is/ are F's neighbours (s)?
a. A only b. A and D c. C only d. B and C

29. D was heard telling someone to go further down the corridor to the last office on the right. To whose room was he trying to direct that person?
a. A b. B c. C d. F

Seven faculty members at a management institute frequent a lounge for strong coffee and stimulating conversation. On being asked about their visit to the lounge last Friday we got the following responses.
JC: I came in first, and the next two persons to enter were SS and SM. When I left the lounge,
JP and VR were present in the lounge. DG left with me.
JP: When I entered the lounge with VR, JC was sitting there. There was someone else, but I cannot remember who it was.
SM: I went to the lounge for a short while, and met JC, SS, and DG in the lounge that day.

SS: I left immediately after SM left.
DG: I met JC, SS, SM, JP, and VR during my first visit to the lounge. I went back to my office with JC. When 1 went to the lounge the second time, JP and VR were there.
PK: I had some urgent work, so I did not sit in the lounge that day, but just collected my coffee and left, JP and DG were the only people in the lounge while I was there.
VR: No comments.

30. Based on the responses, which of the two, JP or DG, entered the lounge first?
a. JP b. DG c. Both entered together. d. Cannot be deduced.

31. Who was sitting with JC when JP entered the lounge?
a. SS b. SM c. DG d. PK

32. How many of the seven members did VR meet on Friday in the lounge?
a. 2 b. 3 c. 4 d. 5

33. Who were the last two faculty members to leave the lounge?
a. JC and DG b. PK and DG c. JP and PK d. JP and DG

DIRECTIONS for Questions 34 to 37:
Each question is followed by two statements, A and ft. Answer each question using the following instructions:
a. If the question can be answered by using statement A alone but not by using B alone.
b. If the question can be answered by using statement B alone but not by using A alone.
c. If the question can be answered by using either statement alone.
d. If the question can be answered by using both the statements together but not by either statement alone.

34. In a cricket match, the 'man of the match' award is given to the player scoring the highest number of runs. In case of a tie, the player (out of those locked in the tie) who has taken the higher number of catches is chosen. Even thereafter if there is a tie, the player (out of those locked in the tie) who has dropped fewer catches is selected. Aakash, Biplab, and Chirag who were contenders for the award dropped at least one catch each. Biplab dropped 2 catches more than Aakash did, scored so, and took 2 catches. Chirag got two chances to catch and dropped both. Who was the 'man of the match'?
A. Chirag made 15 runs less than both Aakash and Biplab.
B. The catches dropped by Biplab are 1 more than the catches taken by Aakash.

35. Four friends, A, B, C, and D got the top four ranks in a competitive examination, but A did not get the first, B did not get the second, C did not get the third, and D did not get the fourth rank. Who secured which rank?
A. Neither A nor D were among the first 2
B. Neither B nor C was third or fourth.

36. The members of a local club contributed equally to pay Rs. 600 towards a donation. How much did each one pay?
A. If there had been five fewer members, each one would have paid an additional Rs. 10.
B. There were at least 20 members in the club, and each one paid no more than Rs. 30.

37. A family has only one kid. The father says "after 'n' years, my age will be 4 times the age of my kid." The mother says "after 'n' years, my age will be 3 times that of my kid." What will be the combined ages of the parents after 'n' years?
A. The age difference between the parents is 10 years.
B. After 'n' years the kid is going to be twice as old as she is now.

Recently, the answers of a test held nationwide were leaked to a group of unscrupulous people. The investigative agency has arrested the mastermind and nine other people A, B, C, D, E, F, G, H, and I in this matter. Interrogating them, the following facts have been obtained regarding their operation. Initially the mastermind obtains the correct answer-key. All the others create their answer-keys in the following manner. They obtain the answer key from one or two people who already possess the same. These people are called his/her "sources". If the person has two sources, then he/she compares the answer keys obtained from both sources. If the key to a question from both sources is identical, it is copied, otherwise it is left blank. If the person has only one source, he/she copies the source's answers into his/her copy. Finally, each person compulsorily replaces one of the answers (not a blank one) with a wrong answer in his/her answer key.

The paper contained 200 questions; so the investigative agency has ruled out the possibility of two or more of them introducing wrong answers to the same question. The investigative agency has a copy of the correct answer key and has tabulated the following data. These data represent question numbers.

Name	Wrong Answer(s)	Blank Answer(s)
A	46	---
B	96	46, 90, 25
C	27, 56	17, 46, 90
D	17	---
E	46, 90	---
F	14, 46	92, 90
G	25	---
H	46, 92	---
I	27	17, 26, 90

38. Which one among the following must have two sources?
a. A b. B c. C d. D

39. How many people (excluding the mastermind) needed to make answer-keys before C could make his answer-key?
a. 2 b. 3 c. 4 d. 5

40. Both G and H were sources to
a. F b. B c. A d. None of the nine

41. Which of the following statements is true?
a. C introduced the wrong answer to question 27.
b. E introduced the wrong answer to question 46.
c. F introduced the wrong answer to question 14.
d. H introduced the wrong answer to question 46.

42. Which of the following two groups of people had identical sources?
A. A, D and G B. E and H
a. Only (A) b. Only (B) c. Neither (A) nor (B) d. Both (A) and (B)

A string of three English letters is formed as per the following rules
1. The first letter is any vowel.
2. The second letter is m, n or p.
3. If the second letter is m, then the third letter is any vowel which is different from the first letter.
4. If the second letter is n, then the third letter is e or u.
5. If the second letter is p, then the third letter is the same as the first letter.

43. How many strings of letters can possibly be formed using the above rules?
a. 40 b. 45 c. 30 d. 35

44. How many strings of letters can possibly be formed using the above rules such that the third letter of the string is e?
a. 8 b. 9 c. 10 d. 11

45. There are 12 towns grouped into four zones with three towns per zone. It is intended to connect the towns with telephone lines such that every two towns are connected with three lines if they belong to the same zone and with only one direct line otherwise. How many direct telephone lines are required?
a. 72 b. 90 c. 96 d. 144

The seven basis symbols in a certain numeral system and their respective values are as follows

I =1, V =5, X =10, L =50, C =100, D =500 and M =1000

In general, the symbols in the numeral system are read from left to right, starting representing the largest value: the same symbol cannot occur continuously more than three times: the value of the numeral is the sum of the values of the symbols. For example, XXVII = 10 + 10 + 5 + 1 + 1 = 27. An exception to the left – to – right reading occurs when a symbol is followed immediately by a symbol of greater value: then, the smaller value is subtracted from the large. For example, XLVI =(50-10) + 5 + 1 = 46.

46. The value of the numeral MDCCLXXXVII is
a. 1687 b. 1787 c. 1887 d. 1987

47. The value of the numerals MCMXCIX is
a. 1999 b. 1899 c. 1989 d. 1889

48. Which of the following can represent the numeral for 1995?
i. MCMLXXV ii. MCMXCV iii. MVD iv. MVM
a. Only I and ii b. Only iii and iv c. Only ii and iv d. Only iv

DIRECTIONS for questions from 49 and 50:
Each item is followed by two statements, A and B. Answer each questions using the following instructions.
Choose a if the question can be answered by one of the statements alone but not by the other.
Choose b if the question can be answered by using either statement alone.
Choose c if the question can be answered by using both the statements together, but cannot be answered by us either statement alone.
Choose d if the question cannot be answered by either of the statements.

49. In a hockey match, the Indian team was behind by 2 goals with 5 minutes remaining. Did they win the match?
A. Deepak Thakur, the Indian striker, scored 3 goals in the last five minutes of the match.
B. Korea scored a total of 3 goals in the match.

50. Four students were added to a dance class. Would the teacher be able to divide her students evenly into a dance team (or teams) of 8?
A. If 12 students were added, the teacher could put everyone in teams of 8 without any leftovers.
B. The number of students in the class is currently not divisible by 8.

ANSWERS

1	E	6	A	11	B	16	D	21	C	26	C	31	C	36	A	41	C	46	B
2	E	7	C	12	D	17	C	22	A	27	D	32	B	37	A	42	D	47	A
3	D	8	B	13	D	18	D	23	B	28	A	33	D	38	B	43	D	48	C
4	C	9	A	14	C	19	B	24	C	29	B	34	D	39	C	44	C	49	C
5	A	10	A	15	D	20	C	25	B	30	B	35	C	40	D	45	B	50	A