TEAM FORMATION

SELECTIONS & GROUPINGS

Among 5 students of group - I - P, Q, R, S and T and five students of group - II - J, K, L, M, and N, a team of five students consisting of exactly three students from group - II is to be selected. It is also known that:

- (i) T and K cannot be selected together.
- (ii) If S is selected, neither M nor N will be selected.
- (iii) Among P, Q, R and L, Exactly two persons are to be selected.
- (iv) If P or R is selected, then none among K, L and M is to be selected.

Q1. Who among the members of group - I will be selected?

a. Q

b. R

c. S d. T

Q2. If K is selected, who among the following will be selected?

a. T

b. J

c. M

d. N

Q3. In how many ways can the team be selected?

SET-1

A travel company is offering two package tours involving eight places A, B, C, D, E, F, G and H. Half of the group wishes to go on tour1 to visit five of the cities, the other half wishes to go on tour-2 to visit the other three places. The selection must abide the following restrictions.

- 1. A cannot be in the same tour as B.
- 2. C must be in the same tour as D.
- 3. If Tour-1 includes E, it must also include F.
- 4. If Tour-2 includes G, it cannot include A.

Q1. If tour-2 includes D, which of the following cannot be true?

1. F is in tour-1

2. B is in tour-1

3. H is in tour-1

4. G is in tour-2

Q2. If tour-2 includes E, which of the following must be true?

1. F is in tour-1

2. C is in tour-1

3. F is in tour-2

4. B is in tour-2

Q3. If tour 1 includes E and tour 2 includes A, which of the following must be included in tour 2?

1. F

2. B

3. H

4. None of these

SET-2

A group of three or four has to be selected from seven persons. Among the seven are two women Anna and Maria, and five men Roger, Rafa, Novak, Andy and Gales. Roger would not like to be in the group if Rafa is selected. Rafa and Gales want to be selected together in the group. Maria would like to be in the group only if Novak is also there. Novak, if selected, would not like Andy in the group. Roger would like to be in the group only if Andy is also there. Novak insists that Anna be selected in case he is selected.

- Q1. Which of the following is a feasible group of three?
- a. Novak, Roger, Gales b. Andy, Rafa, Gales
- c. Maria, Novak, Rafa d. Anna, Novak, Roger
- Q2. Which of the following statements is true?
- a. Maria and Roger can be part of a group of four
- b. A group of four can have two women
- c. A group of four can have all four men
- d. None of the above
- Q3. Which of the following is a feasible group of four?
- a. Roger, Andy, Anna, Gales
- b. Rafa, Gales, Maria, Novak
- c. Rafa, Gales, Anna, Novak
- d. Anna, Novak, Roger, Andy

SET-3

Amit, Bhushan, Chetan, Dinesh, Emran and Farah meet at a startup fair. The organizers of the fair decide to form a team of 5 members from this group by allocating to each member one of the five responsibilities - Marketing, Technology, Content Development, Public Relations and Human Resources. The team formed must satisfy the following conditions:

- A) Chetan and Dinesh do not get along and cannot be in the team together
- B) If Emran is there in the team then Amit and Farah must also be in the team
- C) If Bhushan gets either Marketing or Public relations then Chetan must get the other responsibility and vice versa
- D) Amit can either take the responsibility for Content development or Human Resources
- E) Dinesh can take the role of either Technology or Content Development
- F) Farah can do either of Technology, Marketing or Public Relations role
- Q1. If Dinesh takes the Technology role and Emran is responsible for Public relations, which of the following cannot be a possible person-role combination?

A Amit - Content Development

B Amit - Human resources D Farah – Marketing

c Bhushan – Marketing

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Q2. If Emran is responsible for Human Resources and Bhushan for marketing, which of the following options represent the other role allocations?

A Amit - Content Development, Farah - Technology, Chelan - Public Relations

B Amit - Content Development, Dinesh - Technology, Farah - Public Relations

c Amit - Technology, Chelan - Public Relations, Farah - Content Development

D Both A and C

Q3. If Amit is responsible for HR and Chelan is responsible for Public Relations, who is responsible for Content Development?

A Bhuvan B Dinesh c Emran D Farah

SET-4

A cricket team of 11 players is to be formed from a group of 15 players - A, B, C, D, E, F, G, H, I, J, K, L, M, N and O. Among the players A, D,

K, L, M, N and O are batsmen; B, C, E, F, G and H are bowlers; I and J are wicket keepers. It is also known that:

I. The team must have at least 5 batsmen and exactly 1 wicketkeeper.

II. H can be selected only if B is selected.

III. F can be selected only if both G and N are selected.

IV. If I is selected, then F is also selected.

V. K and M cannot be selected together for the team. The same is true for B and G.

Q1. In how many ways can the team be formed?

a. 3 b. 4

c. 5 d. 6

Q2. If G is one of the bowlers in the team, then who will be the wicketkeeper?

a. J

c. Either a or b d. No such team is possible

b. I

Q3. If H is selected, then who among the following cannot be selected in the team?

a. O b. N

c. G d. J

SET-5

A team must be selected from ten probable – A, B, C, D, E, F, G, H, I and J. Of these, A C, E and J are forwards. B, G and H are point guards and D, F and I are defenders.

Further, the following conditions need to be observed:

- The team must have at least one forward, one point guard and one defender.
- If the team includes J, it must also include F.
- The team must include E or B, but not both.
- If the team includes G, it must also include F.
- The team must include exactly one among C, G and I.
- C and F cannot be members of the same team.
- D and H cannot be members of the same team
- The team must include both A and D or neither of them.

There is no restriction on the number of members in the team.

O1. What could be the size of the team that includes G?

(1) 4 (2) 5

(3) 6 (4) More than one of the above

Q:2. What would be the size of the largest possible team?

(1) 4 (2) 5

(3) 6 (4) 7

O3. Who cannot be included in a team of size 6?

(1) A (2) H

(3) J (4) E

O4. What can be the size of the team that includes C?

(1) 3 (2) 4

(3) 5 (4) More than one of the above

SET-6