Set 1

At a benefit dinner, a community theater's seven sponsors – K, L, M, P Q, V and Z – will be seated at three tables – 1, 2 and 3. Of the sponsors, only K, L and M will receive honors, and only M, P and Q will give a speech. The sponsors' seating assignments must conform to the following conditions:

I. Each table has at least two sponsors seated at it, and each sponsor is seated at exactly one table.

II. Any sponsor receiving honors is seated at table 1 or table 2.

III. L is seated at the same table as v.

1. Which one of the following is an acceptable assignment of sponsors to tables?

(1) Table 1: K, P; Table 2: M, Q; Table 3: L, V, Z

(2) Table 1: K, Q, Z; Table 2: L, V; Table 3: M, P

(3) Table 1: L, P; Table 2: K, M; Table 3: Q, V, Z

(4) Table 1: L, Q, V; Table 2: K, M; Table 3: P, Z

2. Which one of the following is a list of all and only those sponsors who could be among the sponsors assigned to table 3?

(1) P, Q

(2) Q, Z

(3) P, Q, Z

(4) Q, V, Z

3. If K is assigned to a different table M, which one of the following must be true?

(1) K is seated at the same table as L.

(2) L is seated at the same table as Q.

(3) Exactly 2 sponsors are seated at table 1.

(4) Exactly 2 sponsors are seated at table 3.

4. If Q is assigned to table 1 along with two other sponsors, which one of the following could be true of the seating assignment?

(1) K is seated at the same table as L.

(2) K is seated at the same table as Q.

(3) M is seated at same table as V.

(4) M is seated at the same table as Z.

5. If the sponsors assigned to table 3 include exactly one of the sponsors who will give a speech, then the sponsors assigned to table 1 could include any of the following EXCEPT:

(1) K

(2) M

(3) P

(4) Z

6. If three sponsors, exactly two of whom are receiving honors, are assigned to table 2, which one of the following could be the list of sponsors assigned to table 1?

(1) K, M

(2) K, Z

(3) P, V

(4) P, Z

Set 2

A university library budget committee must reduce exactly five of eight areas of expenditure – G, L, M, N, P, R, S, and W – in accordance with the following conditions:

I. If both G and S are reduced, W is also reduced.

II. If N is reduced, neither R nor S is reduced.

III. If P is reduced. L is not reduced.

IV. Of the three areas L, M and R, exactly two are reduced.

7. Which one of the following could be a complete and accurate list of the areas of expenditure reduced by the committee?

(1) G, L, M, N, W

(2) G, L, M, P, W

(3) G, M, N, R, W

(4) G, M, P, R, S

8. If W is reduced, which one of the following could be a complete and accurate list of the four other areas of expenditure to be reduced?

(1) G, M, P, S

(2) L, M, N, R

(3) L, M, P, S

(4) M, P, R, S

9. If P is reduced, which one of the following is a pair of areas of expenditure both of which must be reduced?

(1) G, M

(2) M, R

(3) N, R

(4) R, S

10. If both L and S are reduced, which one of the following could be a pair of areas of expenditure both of which are reduced?

(1) G, M

(2) G, P

(3) N, R

(4) N, W

11. If R is not reduced, which one of the following must be true?

(1) G is reduced

(2) N is not reduced

(3) P is reduced

(4) S is reduced

12. If both M and R are reduced, which one of the following is a pair of areas of expenditure, neither of which could be reduced?

(1) G, L

(2) G, N

(3) L, N

(4) L, P

13. Which one of the following areas must be reduced?

(1) G

(2) L

(3) P

(4) W

Set 3

Every morning 5 commuters M, N, O, P, Q go to one railroad station and board a train that stops at exactly 6 subsequent stations numbered 1-6. The train stops at station 1 and proceeds in mathematical order to station 6

M always gets off either at station 1 or 2

O always gets off one station before or one station after Q

P always gets off at station 3

Q always gets off a station 4, 5 or 6

No one reboards the morning train after getting off.

14. In morning when no one gets off at station 5 or 6 which of the following must be true?

(1) M gets off at station 2   .

(2) N gets off at station 2

(3) O gets off at station 4

(4) O and P must get off at the same station

15. Stations at which it is possible for N and O to be the only commuters getting off the morning train include which of the following?

I. station 3   II. Station 4   III Station 5

(1) I only

(2) III only

(3) I and II only

(4) II and III only

16. In morning when no gets off at station 1 and each of the five commuters get off at a different station, which of the following cannot be true?

(1) N gets of one station before Q

(2) P gets off one station before O

(3) M gets off at station 2

(4) N gets off at station 5

Set 4

A leading socialite decides to organize a dinner and invited a few of her friends. Only the host and the hostess were sitting at the opposite ends at the rectangular table, with 3 persons along each of the other two sides. The prerequisite for the seating arrangement was that each person must be seated such that at least on one side he or she has a person of opposite sex. Maqbool is opposite of Shobha, who is not the hostess. Ratan has a woman on his right and is sitting opposite of a woman. Monisha is sitting to the hostess' right, next to Dhirubhai. One person is seated between Madhuri and Urmila, who is not the hostess. The men were Maqbool, Ratan, Dhirubhai and Jackie, while the woman were Madhuri, Urmila, Shobha, Monisha.

17. 8th person present, Jackie must be

I. the host

II. seated to Shobha's right

III. seated opposite of Urmila

(1) I only

(2) III only

(3) I and II only

(4) II and III only

18. Which f the following person is definitely not seated next to a person of same sex?

(1) Maqbool

(2) Madhuri

(3) Jackie

(4) Shobha

19. If Ratan would have exchanged seats with a person 4 places to his left, which of the following would have been true?

I. no one was seated between 2 persons of opposite sex

II. one side of the table consisted entirely of persons of the same sex

III. either the host or the hostess changed their seats

(1) I only

(2) III only

(3) I and II only

(4) None of these

20. If each person is placed directly opposite of her spouse, which of the following pairs must be married?

(1) Ratan & Monisha

(2) Madhuri & Dhirubhai

(3) Urmila & Jackie

(4) Ratan & Madhuri

Six workers are to work in shifts, two at a time, no person being repeated on a given day. The number of shifts per day is as many as possible provided the above conditions are satisfied.

No worker can be paired with the same worker more than once till all combinations of different pairings are exhausted. This paring of all possible pairs is called a rotation of pairs.

Janak is paired with Manu for the first day and Omkar for the second day

Kumar is paired with Nandu for the first day and Laxman for the third day.

Laxman is paired with Omkar for the first day

21. What is number of shifts per day?

(1) 6

(2) 4

(3) 3

(4) 5

22. Which of the following represents the pairs on the third day?

(1) Omkar and kumar; Janak and Nandu; Manu and Laxman

(2) Janak and Kumar; Laxman and Omkar; Manu and Nandu

(3) Manu and Omkar; Kumar and Nandu; Janak and Laxman

(4) Janak and Nandu; Omkar and Manu; Laxman and Kumar

23. Which of the following person does Kumar pair up with on the second day?

(1) Laxman

(2) Manu

(3) Nandu

(4) Omkar

24. A given rotation of pairs lasts for cycles of how many days?

(1) 5

(2) 6

(3) 3

(4) 15