

PUZZLE - 2

Direction for ques. (1 – 4): Refer to the data below and answer the questions that follow.

Each A, B, C, D and E has a certain number of candies,. They together have 400 candies. None of them has less than 40 candies. No two among them have the same no. of candles. Also

- A has the same number of candies as B and C put together. i.
- C has 8 more candies than the square of an integer. ii.
- The number of candies with A is the square of an integer, and is more than the number of candies with D. iii
- iv. The number of candies with B is the square of an integer.
- The number of candies with D and E are in the ratio 4:3. v
- 1. How many candies does E have? b. 48 d. 44 a. 56 c. 64
- 2. How many candies does B and D together have? b. 60 a. 100 c. 164 d. 95
- 3. What is the difference in the number of candies with C and E? b. 10 a. 4 c. 8 d. 9
- The maximum difference in the number of candies between any two person is 4. a. 100 b. 95 c. 102 d. 54

Direction for gues. (5 – 8): Refer to the data below and answer the questions that follow.

d) H

Eight friends-A, B, C, D, E, F, G and H-are seated in an anticlockwise direction in that order around a circular table. with all of them facing inwards. They play a game called "Passing the Parcel" where, in every round, the parcel moves 10 positions in clockwise order. At the end of each round, the person who started the round and the person who receives the parcel last interchange their positions and the next round starts from the final position of the parcel in the previous round. It is known that H starts the game.

- 5. Who is sitting opposite Gat the end of the 56th round? a) B b) C
- 6. Who is sitting to the immediate tight of Eat the end of the 73rd round? a) H b) D c) F d) B

c) D

7. Who is sitting 3 places to the left of C at the end of the 125th round? a) G b) H c) F d) D

Which of the following statements is false?

- a) At the end of rounds 93 and 95. the position of G is the same.
- b) At the end of rounds93 and 95, the position of F is the same
- c) At the end of rounds93 and 95. the position of D is not the same.
- d) At the end of rounds93 and 95. the position of E is the same.

Direction for ques. (9 – 12): Refer to the data below and answer the questions that follow.

Anna, Benson, Chris, Dennis, Elena and Frank are the six employees of a company who work on three different projects, namely Project P, Project Q and Project R. Out of the six employees, Anna and Elena are women while remaining four, namely Benson, Chris, Dennis and Frank are men. Anna, Chris and Frank are managers while Benson, Dennis and Elena are associates. Each project must have one manager and one or more associates working for it. Each manager works on only one project while out of the three associates, one works on only one project, one other associate works on two projects while the third associate works on all the three projects.

The following information is known:

- Project Q has involvement of maximum number of employees. a.
- b. Both the women work together on one project. There is only one project on which only male employees work.
- c. Benson is a new joinee and is assigned to work on only one project.
- d. Dennis and Elena work together on exactly two projects.
- Number of employees working for project P is more than the number of employees working for project R. e.
- Anna works for project P. f.
- 9. Which of the following must be incorrect?
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- a) Chris works on project Q.
- b) Dennis and Anna work on project P.
- c) Benson works on the project on which only men work.
- d) Benson and Frank work together on one project.
- 10. C work on which project?
 - a) Project P
 - b) Project Q
 - c) Project R
 - d) CBD
- 11. Which of the following combinations must be correct?
 - a) Project Q Dennis, Elena, Benson, Chris
 - b) Project R Dennis, Frank
 - c) Project P Dennis, Elena, Anna
 - d) Project P Dennis, Benson, Anna
- 12. Which of the following can be correct?
 - a) Frank works on a project with two other men and one woman.
 - b) Chris works on a project with one man and one woman.
 - c) Elena works on two projects with two men.
 - d) Benson and Anna work together on a project.

Direction for ques. (13 – 17): Refer to the data below and answer the questions that follow.

Mathematicians are assigned a number called Erdös number, (named after the famous mathematician, Paul Erdös). Only Paul Erdös himself has an Erdös number of zero. Any mathematician who has written a research paper with Erdös has an Erdös number of 1. For other mathematicians, the calculation of his/her Erdös number is illustrated below: Suppose that a mathematician X has co-authored papers with several other mathematicians. From among them, mathematician Y has the smallest Erdös number. Let the Erdös number of Y be y. Then X has an Erdös number of y + 1. Hence any mathematician with no co-authorship chain connected to Erdös has an Erdös number of infinity.

In a seven day long mini-conference organized in memory of Paul Erdös, a close group of eight mathematicians, call them A, B, C, D, E, F, G and H, discussed some research problems. At the beginning of the conference, A was the only participant who had an infinite Erdös number. Nobody had an Erdös number less than that of F.

On the third day of the conference F co-authored a paper jointly with A and C. This reduced the average Erdös number of the group of eight mathematicians to 3. The Erdös numbers of B, D, E, G and H remained unchanged with the writing of this paper. Further, no other co-authorship among any three members would have reduced the average Erdös number of the group of eight to as low as 3.

At the end of the third day, five members of this group had identical Erdös numbers while the other three had Erdös numbers distinct from each other.

On the fifth day, E co-authored a paper with F which reduced the group's average Erdös number by 0.5. The Erdös numbers of the remaining six were unchanged with the writing of this paper.

No other paper was written during the conference.

- 13. The person having the largest Erdös number at the end of the conference must have had Erdös number (at that time):
 - a) 5 b) 7 c) 9 d) 14 d) 15
- 14. How many participants in the conference did not change their Erdös number during the conference? a) 2 b) 3 c) 4 d) 5 d) Cannot be determined
- 15. The Erdös number of C at the end of the conference was: a) 1 b) 2 c) 3 d) 4 e) 5
- 16. The Erdös number of E at the beginning of the conference was:a) 2b) 5c) 6d) 7d) 8
- 17. How many participants had the same Erdös number at the beginning of the conference? a) 2 b) 3 c) 4 d) 5 d) Cannot be determined



Direction for ques. (18 - 21): Refer to the data below and answer the questions that follow:

In a training center four professors – Anand, Kashyap, Murugan and Samara – are available to take reaming classes. The classes will run throughout the year on all seven days of the week and in to slots, mooing and evening everyday. The faculty for any slot on any day must be the same throughout the year i.e., for example the professor on Monday morning slot must be same throughout the year No professor can take classes on three consecutive days and no professor can take the class n the same slot (morning or evening) for two consecutive days No professor can take classes in both the slots in a single day.

The following information is known:

- i. Classes on Tuesday morning and Wednesday evening are taken by Mr. Murugan.
- ii. Anand and Kashyap take the same number of classes every week.
- iii. The number of morning slots allotted to each professor is the same as the number of evening slots allotted to him and no professor was allotted more than four classes a week.
- iv. Wednesday morning slot and Friday evening slots are allotted to Samnath and Sunday evening and Monday Morning slots are allotted to Kashyap.
- v. Each slot has just one class.
- 18. Who takes class In the Monday evening slot?a) Somnathb) Kashyapc) Murugand) Anand
- 19. Who takes class in the Sunday morning slot?a) KaShyap b) Somnath c) Anand d) Murugan
- 20. Who takes class in the Friday morning slot?a) Anandb) Kashyapc) Somnathd) Murugan
- 21. On a Sunday, Kashyap realized that he is not available for the Thursday evening class as scheduled, then to which day, and to which slot must he reschedule the class in the same week such that in the process it violates only one condition from (i) to (v)?
 - a) Tuesday morning b) Wednesday evening
 - c) Friday evening d) Saturday morning

Direction for ques. (22 - 26): Refer to the data below and answer the questions that follow.

Five students – Ragan, Ramdas, Ravi, Mukhtar and Seshu appeared for three examinations- Biology, Zoology and Chemistry. No two persons passed with the same number of marks in any of the subjects and were given 5 different ranks 1st rank for the person with the highest marks in any subject and 5th rank for the person with the lowest marks in any subject) Only one person has the same rank in exactly two subjects and no other students has the same rank in two more subjects. Ranjan got the 1st rank and 2nd rank in two subjects and Ramdas got the 1st and 2nd rank in two subjects. Seshu was neither 1st nor 5th. The person who was the first in Zoology was third in Chemistry. Mukhtar was 3rd in Biology. Seshu got a better rank than Ravi in each subject. Mukhtar and Ravi are 1st and 4th respectively in Chemistry. Ramdas was 3rd in a subject but not in the one in which Ranjan was first Mukhtar was not the last in any exam.

- 22. Who among the following did not always get a better rank Ravi?a) Ranjan b) Ramdas c) Mukhtar d) Seshu
- 23. Who among the following was never 5th in any subject?
 - I. Ranjan
 - II. Ramdas
 - III. Ravi
 - IV. Mukhtar

a) I and III only b) I, II and IV only

- c) II, III and IV only d) II and IV only
- 24. Which of the following pairs of persons do not have consecutive ranks in any subject?
 - a) Ranjan and Ravi b) Ranjan and Mukhtar
 - c) Mukhtar and Seshu d) Ravi and Seshu
- 25. Who among the following was 1st in Biology?
 - a) Ranjan b) Ramdas
 - c) Mukhtar d) Seshu



26. Who among the following was 1 st in Biology? a) Ranjan b) Ramdas c) Mukhtar

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d) Seshu

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Answer Key									
1. B	2. C	3. A	4. A	5. B	6. A	7. D	8. B	9. C	10. D
11. D	12. A	13. B	14. D	15. B	16. C	17. B	18. A	19. C	20. B
21. B	22. A	23. D	24. B	25. A	26. B				