

**SELF LEARNING MATERIAL****UNIT-6****Puzzles****6.0 OBJECTIVES:**

**After reading this unit, you will be able to:**

- Analytical Puzzles
- Puzzles Based on Conditioning, Grouping and Team Formation
- Puzzles Based on Sequential Order of Events

**6.1 INTRODUCTION:**

Puzzles are the raw information given for a sequence or an order of thing which needs to be arranged systematically, so that the sequence or order of thing is correctly depicted.

In puzzles the candidates are provided with the information in jumbled or haphazard format. It checks the candidate's ability (both mental and analytical) to decipher, sequence and analyse the given information into a meaningful and judgmental form, so as to come to the final decision or conclusion by following the systematic pattern of linking and interlinking one or several informations with each other.

This segment is considered to be the most difficult part of reasoning as there exists no set pattern or formulae to solve such problems. The only way to solve these problems is using your brain, logical ability and analytical power over the interlinked information or data provided in the questions. These problems are given in the form of puzzles. As there is no fixed rules to solve these problems, only practice can make you a master in cracking these types of problems.

## 6.2 Analytical Puzzles

Under this segment, the candidates are required to analyse and interpret the given information and present the given information or data in analytical way so that deducing the result becomes easy. In this test, the candidates are tested in the area of classification type questions, comparison type questions, sitting arrangement questions and many types of jumbled pattern. In some type of questions, instructions regarding belongingness or non-belongingness of some objects or persons with some other objects or persons is given and on the basis of analysis of these instructions, the questions have to be answered.

**Example 6.1:** Following examples will give you a better idea about the questions asked

Directions (Example Nos. 1 -3) Read the following information carefully and answer the questions given below. Five cities A, B, C, D and E are famous for their lovely garden, fancy jewellery, educational institute, blue pottery and scents but not in the same order.

- I. A and C are neither educational institutes nor have gardens.
- II. Band E are not famous for jewellery or pottery.
- III. Scents and jewellery have nothing to do with A.
- IV. D and E are not famous for garden and jewellery.
- V. D is not famous for educational institutes.

Ex 1 Which of the following city is famous for gardens?

(a) A (b) C (c) D (d) B

Ex 2 Blue pottery is available in which of the following cities?

(a) A (b) C (c) E (d) B

Ex 3 City E is famous for which of the following?

(a) Jewellery (b) Educational Institutes (c) Blue pottery (d) Scent

Solution: (Example Nos. 1-3) These questions can be solved easily with the help of a truth table. Truth table is an arrangement of the components given in a matrix form with one component in row and other component in column.

In the question, components given are city and the feature for which each city is famous. First arrange the components in matrix form with cities in column and features in row.

- From I, cross (X) the possibility of garden and education institute in front of cities A and C.
- Also, the possibility of jewellery and pottery is ruled out for cities B and E, from information II. Similarly, city A is crossed for scent and jewellery as given in information III.
- After using first three informations in the table, we see that only block uncrossed in front of city A is the one related with blue pottery. So, we know that city A is famous for blue pottery. In this block mark (/) and cross the row and column of this block because one city is famous only for one feature.

City	Carden	Jewellery	Educational Institutes	Pottery	Scent
A	X	X	X	/	X
B	/	X	X	X	X
C	X	/	X	X	X
D	X	X	X	X	/
E	X	X	/	X	X

- Using information IV in the table we find that city B is famous for garden and city C for jewellery. Cross row and column of each symbol (/) obtained each time. This helps to determine one to one matching.
- Last information helps us to know that city E is famous for educational institutes and city D for scent.

The final order of matching of cities and their features is as under

Cities	A	B	C	D	E
Features	Blue Pottery	Garden	Jewellery Scent		Educational Institutes

On the basis of the above table, all the questions can be answered.

- (d) City B is famous for garden.
- (a) Blue pottery is available in city A.
- (b) City E is famous for educational institute.

### **CHECK YOUR PROGRESS 6.1:**

Directions (Question Nos. 1-3) Read the following information carefully and answer the questions given below.

Four youngmen Raj, Sunder, Tarun and Upal are married to Rekha, Sunita, Tara and Uma and the couples live in Rampur, Sanchi, Tirupati and Udhampur.

- The 1st letter of names of men, their wives and cities is not the same.
- Sunita is not Raj's wife.
- Sunder does not live in Rampur or Udhampur and is not Rekha's husband.
- Upal and Tara do not live in Sanchi.

1. Which pair given below is the right combination of wife and city for Tarun?

(a) Sunita, Tirupati (b) Tara, Sanchi (c) Uma, Rampur (d) Rekha, Sanchi

2. Who among the following is the wife of Upal?

(a) Rekha (b) Sunita (c) Tara (d) Uma

3. Which of the following is the correct pair of husband and wife?

(a) Upal, Sunita (b) Raj, Tara (c) Sunder, Uma (d) All of these

***## Answers are given at the end of the document.***

**Example 6.2:** Directions (Example Nos. 1-3) Read the following information carefully to answer these questions.

A, B, C, D, E, F and G are the names of two rivers, three canals and two valleys. B, G and D are not canals. E and F are not rivers. C is a canal but A is a valley. B, F and G are not valleys.

Ex 1 Which are the two rivers?

(a) A and D (b) B and D (c) B and G (d) A and G

Ex 2 Which are the three canals?

(a) A, C and E (b) C, E and F (c) A, C and F (d) E, F and G

Ex 3 Which are the two valleys?

(a) A and D (b) D and E (c) D and G (d) A and B

Solutions:

(Example Nos. 1-3) Given statements

- B, G, D are not canals.
- E, F are not rivers.
- C is a canal.
- A is a valley
- B, F, G are not valleys.

If B is neither a valley nor a canal, then it is a river.

If F is neither a river nor a valley, then it is a canal.

If G is neither canal nor a valley, then it is a river.

Canal	River	Valley
C	B	A
F	G	D
E		

1. (c) B and G are two rivers.
2. (b) C, E and F are three canals.
3. (a) A and D are two valleys.

### **SUMMARY:**

- Analytical Puzzles is explained
- Puzzles Based on Conditioning, Grouping and Team Formation is explained
- Puzzles Based on Sequential Order of Events is explained.

### **6.3 Glossary:**

Analytical : relating to or using analysis or logical reasoning.

### **6.4 Suggested Readings:**

- Quantitative Aptitude for Competitive Examinations by R.S.Agarwal.  
Published by S. CHAND
- Study material for CAT, SAT, GRE, GMAT by TIME, CareerLauncher and IMS etc.
- Quantitative Aptitude by Pearson Publications

### **6.5 Practice exercise:**

Directions (Q. Nos. 1 -3) Read the following information carefully and answer the questions given below.

Rajneesh, Kavita, Suresh, Gambhir and Mahesh are friends and good players. Rajneesh and Kavita are good in hockey and volleyball. Suresh and Rajneesh are good in hockey and tennis. Gambhir and Kavita are good in cricket and volleyball. Suresh, Gambhir and Mahesh are good in football and tennis.

1. Who is good in hockey, volleyball and cricket?

(a) Rajneesh (b) Suresh (c) Kavita (d) Gambhir

2. Who is good in tennis, cricket, volleyball and football?

(a) Suresh (b) Kavita (c) Rajneesh (d) Gambhir

3. Who is good in tennis, volleyball and hockey?

(a) Gambhir (b) Kavita (c) Suresh (d) Rajneesh

Directions (Q. Nos. 4-6) Read the following information carefully and answer the questions given below.

Ravish and Kamlesh like hockey and volleyball. Suresh and Ravish like hockey and badminton. Giri and Kamlesh like chess and volleyball. Suresh, Giri and Mukesh like football and badminton.

4. Who likes chess, hockey and volleyball?

(a) Suresh (b) Kamlesh (c) Ravish (d) Giri

5. Who likes badminton, chess, football and volleyball?

(a) Suresh (b) Kamlesh (c) Giri (d) Ravish

6. Who likes hockey, volleyball and badminton?

(a) Suresh (b) Kamlesh (c) Ravish (d) Giri

Direction (Q. No. 7) Read the following information carefully and answer the question that follows. Three persons A, B and C wore shirts of black, blue and orange colours (not necessarily in that order) and pants of green yellow and orange colours (not necessarily in that order). No person wore shirt and pants of the same colour. Further, it is given that

I. A did not wear shirt of black colour.

- II. B did not wear shirt of blue colour.
- III. C did not wear shirt of orange colour.
- IV. A did not wear pant of green colour.
- V. B wore pants of orange colour.

7. What were the colours of the pant and shirt worn by C, respectively?

- (a) Orange and black (b) Green and blue (c) Yellow and blue (d) Yellow and black

Directions (Q. Nos. 8-10) Read the following information carefully and answer the questions given below.

Four youngmen namely Rajesh, Pran, Vinod and Arun are in love with four girls namely Shobhita, Kamla, Vimla and Promila. Shobhita and Vimla are good friends. Vinod's girlfriend does not like Shobhita and Vimla. Kamla does not care for Vinod. Pran's girlfriend is friendly with Shobhita. Shobhita does not like Rajesh.

8. Who is Rajesh's girlfriend?

- (a) Shobhita (b) Kamla (c) Vimla (d) Promila

9. Who is Promila's boyfriend?

- (a) Arun (b) Pran (c) Vinod (d) Rajesh

10. Who is Arun's girlfriend?

- (a) Promila (b) Vimla (c) Shobhita (d) Kamla

Directions (Q. Nos. 11-13) Examine carefully the following statements and answer the three items that follow.

Out of four friends A, B, C and D

- I. A and B play football and cricket



- II. B and C play cricket and hockey.
- III. A and D play basketball and football.
- IV. C and D play hockey and basketball.

11. Who does not play hockey?

(a)D (b)C (c)B (d)A

12. Who plays football, basketball and hockey?

(a)D (b)C (c)B (d) A

13. Which game do B, C and D play?

(a) Basketball (b) Hockey (c) Cricket (d) Football

Directions (Q. Nos. 14-17) Read the following information carefully and answer the questions given below.

Four youngmen Anil, Mukesh, Piyush and Yogesh are lovingly called Munna, Babboo, Prince and Pappoo by everyone. They are married to Madhu, Sunanda, Jyoti and Arti.

- I. Arti and Madhu are neither married to Piyush or Anil nor their husband is called Babboo.
- II. Babboo is not married to Sunanda and his name is not Piyush.
- III. Sunanda is not married to Munna.
- IV. Mukesh is neither Munna nor Prince and is not married to Madhu.

14. Which of the following pair of husband-wife is not correct?

(a) Munna, Madhu (b) Babboo, Jyoti (c) Pappoo, Jyoti (d) None of these

15. What is the nick name of Mukesh?

(a) Babboo (b) Pappoo (c) Munna (d) Prince

16. Who is the husband of Sunanda?

(a) Anil (b) Mukesh (c) Piyush (d) Yogesh

17. Yogesh is married to whom?

(a) Sunanda (b) Arti (c) Madhu (d) Jyoti

Directions (Q. Nos. 18-20) Answer the following questions based on the statements given below.

- I. There are 3 poles on each side of the road.
- II. These six poles are labelled A, B, C, D, E and F.
- III. The poles are of different colours namely golden, silver, metallic, black, bronze and white.
- IV. The poles are of different heights.
- V. E, the tallest pole, is exactly opposite to the golden coloured pole.
- VI. The shortest pole is exactly opposite to the metallic coloured pole.
- VII. F, the black coloured pole, is located between A and D.
- VIII. C, the bronze coloured pole, is exactly opposite to A.
- IX. B, the metallic coloured pole, is exactly opposite to F.
- X. A, the white coloured pole, is taller than C but shorter than D and B.

18. What is the colour of the pole diagonally opposite to the

(a) White (b) Silver (c) Metallic (d) Golden

19. which is the second tallest pole? bronze coloured pole?

(a) A (b) D (c) B (d) None of these

20. Which is the colour of the tallest pole?

(a) Golden (b) Silver (c) Bronze (d) None of these

**ANSWERS:**

**CHECK YOUR PROGRESS 6.1**

1. d
2. b
3. d

**Practice exercise 6.5**

1. c
2. d
3. d
4. b
5. c
6. c
7. b
8. b
9. c
10. c
11. d
12. a
13. b
14. c
15. b
16. c
17. c
18. d
19. d
20. b