

Miscellaneous/Others

PRACTICE EXERCISE

Level - 1

Direction for questions 1 to 4: These questions are based on the following information.

"Kya-Kya" is an island in the South Pacific. The inhabitants of "Kya-Kya" always answer any question with two sentences, one of which is always true and the other is always false.

1. You are walking on a road and come to a fork. You ask the inhabitants Ram, Laxman and Lila, "Which road will take me to the village?"

Ram says, "I never speak to strangers. I am new to these parts".

Laxman says, "I am married to Lila. Take the left road".

Lila says, "I am married to Ram. He is not new to this place".

Which of the following is true ?

- (a) Left road takes you to the village.
 - (b) Right road takes you to the village.
 - (c) Lila is married to Laxman.
 - (d) Both (a) and (b)
 - (e) Both (b) and (c)
2. You find that your boat is stolen. You question three inhabitants of the island and they reply as follows:
- John says, "I didn't do it. Mathew didn't do it".
- Mathew says, "I didn't do it. Krishna didn't do it".
- Krishna says, "I didn't do it. I don't know who did it".
- Who stole your boat ?
- (a) John
 - (b) Mathew
 - (c) Krishna
 - (d) Either (a) or (c)
 - (e) Either (a) or (b)

3. You want to speak to the chief of the village. You question three inhabitants, Amar, Bobby and Charles. Only Bobby is wearing a red shirt.

Amar says, "I am not Bobby's son. The chief wears a red shirt".

Bobby says, "I am Amar's father. Charles is the chief".

Charles says, "The chief is one among us. I am the chief".

Who is the chief ?

- (a) Amar
- (b) Bobby
- (c) Charles
- (d) Either (a) or (c)
- (e) Either (a) or (b)

Level - 2

4. There is only one pilot on the island. You interview three men Kirk, Leena and Mirna. You also notice that Kirk is wearing a cap.

Mirna says, "Leena's father is the pilot. Leena is not the priest's daughter".

Kirk says, "I am the priest. On this island, only priests can wear caps".

Leena says, "I am the priest's daughter. Kirk is not the priest".

Which of the following is true ?

- (a) Leena is not Kirk's daughter.
- (b) Kirk is the pilot.
- (c) Mirna is the pilot.
- (d) Leena is the priest.
- (e) None of these

ANSWERS

1. (a) 2. (b) 3. (b) 4. (b)

SOLUTIONS

Level - 1

1. a Ram takes the initiative to talk to the stranger. Hence, his first statement is untrue.
2. b If Krishna knew who did it, then his first statement would be true. Thus, Mathew's first statement is wrong and he did it.

3. b Bobby's statement that he is Amar's father is confirmed by taking the opposite of Amar's statement I. Hence, his second statement is true, viz. the chief wears a red shirt. Hence, Bobby is the chief.

Level - 2

4. b Leena's second statement is correct. She is the pilot.

PREVIOUS YEARS QUESTIONS

Level - 1

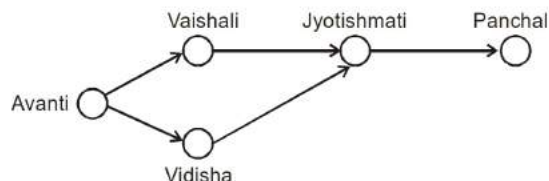
1998

1. P, Q, R and S are four statements. Relation between these statements is as follows.
 - I. If P is true, then Q must be true.
 - II. If Q is true, then R must be true.
 - III. If S is true, then either Q is false or R is false.
 Which of the following must be true?
 - (a) If P is true, then S is false
 - (b) If S is false, then Q must be true
 - (c) If Q is true, then P must be true
 - (d) If R is true, then Q must be true

2001

Directions for Questions 2 to 4: Answer the questions based on the pipeline diagram below.

The following sketch shows the pipelines carrying material from one location to another. Each location has a demand for material. The demand at Vaishali is 400, at Jyotishmati is 400, at Panchal is 700, and at Vidisha is 200. Each arrow indicates the direction of material flow through the pipeline. The flow from Vaishali to Jyotishmati is 300. The quantity of material flow is such that the demands at all these locations are exactly met. The capacity of each pipeline is 1,000.



2. The quantity moved from Avanti to Vidisha is
 - (a) 200
 - (b) 800
 - (c) 700
 - (d) 1,000

3. The free capacity available at the Avanti-Vaishali pipeline is

- (a) 0
- (b) 100
- (c) 200
- (d) 300

4. What is the free capacity available in the Avanti-Vidisha pipeline?

- (a) 300
- (b) 200
- (c) 100
- (d) 0

Level - 2

1993

Directions for Questions 5 to 8: Read the text and the numbered statements carefully and answer the questions given at the end.

"Kya – Kya" is an island in the South Pacific. The inhabitants of "Kya – Kya" always answer any question with two sentences, one of which is always true and the other always false.

5. You find that your boat is stolen. You question three inhabitants of the island and they reply as follows:

John says, "I didn't do it. Mathew didn't do it."

Mathew says, "I didn't do it. Krishna didn't do it."

Krishna says, "I didn't do it. I don't know who did it."

Who stole your boat?

- (a) John
- (b) Mathew
- (c) Krishna
- (d) None of them

6. There is only one pilot on the island. You interview three men, Koik, Lony and Mirna. You also notice that Koik is wearing a cap.

Mirna says, "Lony's father is the pilot. Lony is not the priest's son."

Koik says, "I am the priest. On this island, only priests can wear caps."

Lony says, "I am the priest's son. Koik is not the priest."

Which of the following is true?

- (a) Lony is not Koik's son.
- (b) Koik is the pilot.
- (c) Mirna is the pilot.
- (d) Lony is the priest.

7. You are walking on the road and come to a fork. You ask the inhabitants Ram, Laxman and Lila. "Which road will take me to the village?"

Ram says, "I never speak to strangers. I am new to these parts."

Laxman says, "I am married to Lila. Take the left road."

Lila says, "I am married to Ram. He is not new to this place."

Which of the following is true?

- (a) Left road takes you to the village.
- (b) Right road takes you to the village.
- (c) Lila is married to Laxman.
- (d) None of these.

8. You want to speak to the chief of the village. You question three inhabitants. Amar, Bobby and Charles. Only Bobby is wearing a red shirt."

Amar says, "I am not Bobby's son. The chief wears a red shirt."

Bobby says, "I am Amar's father. Charles is the chief."

Charles says, "The chief is one among us. I am the chief."

Who is the chief?

- (a) Amar
- (b) Bobby
- (c) Charles
- (d) None of them

2001

9. While Balbir had his back turned, a dog ran into his butcher shop, snatched a piece of meat off the counter and ran out. Balbir was mad when he realised what had happened. He asked three other shopkeepers, who had seen the dog, to describe it. The shopkeepers really did not want to help Balbir. So each of them made a statement which contained one truth and one lie.

- Shopkeeper number 1 said: "The dog had black hair and a long tail."

- Shopkeeper number 2 said: "The dog had a short tail and wore a collar."
- Shopkeeper number 3 said: "The dog had white hair and no collar."

Based on the above statements, which of the following could be a correct description?

- (a) The dog had white hair, short tail and no collar
- (b) The dog had white hair, long tail and a collar
- (c) The dog had black hair, long tail and a collar
- (d) The dog had black hair, long tail and no collar

MEMORY BASED QUESTIONS

2014

10. Read the following arguments and answer the questions that follow.

A study of the effect of language on memory was performed by Loftus and Loftus, in 1975. They showed subjects a film of a traffic accident to two groups, and then asked them questions about what they had seen. After a week, the subjects were asked about the film again. One group of subjects was asked, immediately after seeing the film, "How fast were the cars going when they hit each other?" The other group of subjects was asked, "How fast were the cars going when they smashed into each other?" When they were tested later, the subjects were asked if they had seen any broken glass in the film. (There hadn't been any.) Those subjects who had heard the word "smashed" remembered seeing broken glass scattered around after the accident.

The findings of the study have significant relevance for

- (a) A move subscribing severe penalties for rash drivers who cause accidents amounting to culpable homicide.
- (b) A memory-improvement course for students who score below the national average in IQ tests.
- (c) People who are concerned about 'leading questions' in court, or in the police questioning of witnesses.
- (d) None of the above

ANSWERS

1. (a) 2. (d) 3. (d) 4. (d) 5. (b) 6. (b) 7. (a) 8. (b) 9. (b) 10. (c)

SOLUTIONS

Level - 1

1. a If P is true, then both Q and R have to be true. For S to be true, either Q or R must be false. Hence, if P is true, S cannot be true.
2. d We can see that the flow from Vaishali to Jyotishmati is 300 whereas demand is 400, so the deficit 100 will be met by flow from Vidisha. Again, the demand of 700 in Panchal is to be met by flow from Jyotishmati which can get it from Vidisha.
Thus, the quantity moved from Avanti to Vidisha $200 + 100 + 700 = 1000$
3. d Free capacity at Avanti-Vaishali pipeline is 300, since capacity of each pipeline is 1000 and demand at Vidisha is 400 and 300 flows to Jyotishmati.
Thus, free capacity = $\{1000 - (400 + 300)\} = 300$
4. d Free capacity in Avanti-Vidisha is zero. Explanation is similar as in previous answer.

Level - 2

For questions 13 to 16: The best way to solve these kinds of questions is to assume that one of the statements is either true or false and thus figure out whether there is consistency in what everyone is saying.

5. b Let us assume that John's first statement is true. So his second statement must be false. This implies that Mathew did it. This makes Mathew's first statement false. So the second statement has to be true. This implies that Krishna didn't do it. So Krishna's first statement is true and his second statement is false. Since all the statements are consistent with each other, the assumption made by us should be the correct one. So it is Mathew who stole the boat.
6. b The key here are the statements made by Koik. Since we know that he is wearing a cap, if his first statement is false, then his second statement cannot be true. So his first statement is true and his second statement is false. This implies that Koik is the priest. This makes Lony's second statement false and so his first statement is true. So Lony is Koik's son. This makes Mirna's second statement false and so his first statement is true. So Lony's father is a pilot. Thus, Koik is the pilot. (Note: Koik is also the priest).

7. a The first statement of Ram is obviously false, as he is saying that he never speaks to a stranger, when he actually is. So he must be new to those parts. This makes the second statement of Lila false. So she should be married to Ram. This makes the first statement of Ram false. So the left road should take you to the village.
8. b If you observe Charles's statement carefully, you will figure out that his first statement is true and second statement is false. For instance, if his first statement is false, then his second statement cannot be true. There would be inconsistency in what he is talking. So Charles is not the chief. This makes Bobby's second statement false and first statement true. So Bobby is Amar's father and hence, Amar's first statement is false. So his second statement must be true. This implies that the chief is wearing the red shirt. So Bobby is the chief.
9. b We start making one true and other false.

Case I

	T	F
Shopkeeper 1: Black hair		Long tail
	T	F
Shopkeeper 2: Short tail		Wore a collar
	T	F
Shopkeeper 3: White hair		No collar

Case II

	T	F
Shop keeper 1: Black hair		Long tail
	T	F
Shop keeper 2: Short tail		Wore a collar
	T	F
Shop keeper 3: White hair		No collar

Both the cases are correct, and hence, we see only option (b) is correct.

10. c Options (a) and (b) are irrelevant. Loftus and Loftus found that the way in which questions were asked had a significant impact on what the subjects recalled. The implication of this is that when someone is asked to recall something, the phrasing/wording of the question may distort their recollections. Hence, option (c) is the correct answer.

