

Analytical Reasoning

Practice Set 1

Directions:

All questions are based on a passage or a set of conditions. While answering a few of the questions, you would find it useful to draw a rough diagram. To answer any question, choose the answer you think is most appropriate among the given options.

Questions 1-4

- (1) The microbe A causes the contagious disease A.
 - (2) The first symptoms appear after a period of two days since the microbe A enters the body.
 - (3) The microbe A is found in some flies and bees.
 - (4) A fly bit Jack on Monday, February 6.
 - (5) Nick worked with Jack the next day, Tuesday, February 7.
- There were no other possibilities of exposure to Disease A.

1. In case Jack showed symptoms of Disease A, which of the following statements would be true?

- I. Jack contracted the Disease A from Nick.
 - II. Jack first noticed symptoms of Disease A on February 8.
 - III. The fly that Jack was bitten by was not a carrier of the microbe A.
- (A) I only
(B) II only
(C) III only
(D) I and II only
(E) I and III only

Ans : B

2. In case Nick displayed symptoms of the disease A, which among the following would be true?

- (A) I only
(B) II only
(C) III only
(D) II and III only
(E) I, II and III

Ans : D

3. In case Jack displayed symptoms of Disease A, which would be true?

I. Jack was also bitten by a fly on February 5.

II. Jack was bitten by a mosquito which carried the microbe A.

III. Nick contracted Disease A from Jack.

(A) I only

(B) II only

(C) III only

(D) I and II only

(E) II and III only

Ans : D

4. In case Nick displayed the symptoms of Disease A which would be true?

I. Nick was bitten by a bee on February 6.

II. Nick ate food which contained the microbe A.

III. Nick also worked with Jack on February 6.

(A) I only

(B) II only

(C) III only

(D) I and II only

(E) I, II and III

Ans : A

Questions 5 - 6

The principal evil in today's society is selfishness. Everywhere we see people, who are concerned only with themselves. Personal advancement is the only motivating force in the world today. This does not mean that individuals are not willing to help one another; on the contrary, _____. But, these are only short-term occurrences which ultimately serve our long-term goal of personal gain.

5. To fill in the blank in the above passage, select one of the options from the below mentioned options:

(A) we are always trying to undermine others' endeavors.

(B) my uncle Jeremy used to help me with my homework.

(C) no one can be trusted, not even close friends.

(D) our yearning for power prevents us from understanding our existential purpose.

(E) there are many occasions when we graciously offer our assistance.

Ans : E

6. Which among the following options would most strongly contradict the author's attitude towards society?

- (A) The greatest strength of society is altruism.
- (B) The forces of good will ultimately triumph over evil.
- (C) Our short-term actions may ostensibly contradict our long-term goals.
- (D) We must all learn the art of selfishness.
- (E) Morality is the bedrock of a growing community.

Ans : A

7. It can be proved by an example that our words are devoid of meaning as they cannot be distinguished from their opposites. People think that they are aware of the difference between the meanings of 'bald' and 'having hair' Let us suppose that an average twenty-one year old has X strands of hair on his or her head. We say that such a person is not bald but has hair. But surely one hair less would make no difference, and a person with X - 1 hairs on his or her head would be said to have hair. Suppose we go on like this, decreasing one hair at a time, the result would be the same. Then what difference would there be between someone who has one hair and someone who has none? We call them both bald. Thus, we cannot make a distinction between the terms 'bald' and 'having hair.'

Among the following statements, which statement best counters the argument above?

- (A) The word 'bald' can be translated into other languages.
- (B) A word can have more than one meaning.
- (C) A word such as 'monkey' can be applied to several animals that differ in some respects.
- (D) Words can lack precision without being meaningless.
- (E) People cannot think clearly without using words.

Ans : D

8. Virus M helps in controlling the population of gnats; they manage to do this by killing the moth's larvae. Though the virus is always present in the larvae, it is only every six or seven years that the virus seriously decimates the numbers of larvae, greatly reducing the population of the gnats. Scientists are of the opinion that the gnats, usually latent, are activated only when the larvae experience biological stress.

In case the above mentioned scientists are correct, it can be inferred that the decimation of gnat populations by the virus M could be most probably activated by the following conditions?

- (A) A shift by the gnats from drought areas to a normal area occupied by them
- (B) The resultant stress from defoliation of trees attacked by the gnats for the second consecutive year.
- (C) Attacks on the larvae by all kinds by parasitic wasps and flies.

- (D) Starvation of the gnat larvae due to over population.
(E) Spraying of gnat infested areas with laboratory - raised Virus M.

Ans : D

9. In a particular code, the digits from 0 to 9 inclusive are each represented by a different letter of the alphabet, the letter always representing the same digit. In case the following sum

B O P B

+ S K B

C V B Q

holds true when it is expressed in digits, which of the following cannot be properly inferred:

- (A) B cannot be 0.
(B) B must be less than 5.
(C) Q must be even.
(D) O + S must be greater than 8.
(E) C must be greater than B by 1.

Ans : B

Practice Set 2

Directions:

All questions are based on a passage or a set of conditions. While answering a few of the questions, you would find it useful to draw a rough diagram. To answer any question, choose the answer you think is most appropriate among the given options.

Questions 1- 7

The only people to attend a conference were four ship captains and the first mates of three of those captains. The captains were L, M, N and O; the first mates were A, D and G. Each person in turn delivered a report to the assembly as follows:

Each of the first mates delivered their report exactly after his or her captain.
The first captain to speak was M, and captain N spoke after him.

1. Among the following which is not an appropriate order of delivered reports?

- (A) M, A, N, G, O, L, D
- (B) M, D, N, G, L, O, A
- (C) M, N, A, L, D, O, G
- (D) M, N, A, O, D, L, G
- (E) M, N, G, D, O, L, A

Ans : E

2. In case L speaks after A, and A is the third of the first mates to speak, then among the following statements which would be untrue?

- (A) O spoke immediately after G.
- (B) The order of the first four speakers was M, G, N, D.
- (C) O's first mate was present.
- (D) A was the fourth speaker after M.
- (E) The captains spoke in the order M, N, O, L.

Ans : D

3. Among the following statements which statement must be true?

- (A) In case the second speaker was a captain, the seventh speaker was a first mate.
- (B) In case the second speaker was a first mate, the seventh speaker was a captain.
- (C) In case the third speaker was a first mate, the seventh speaker was a captain.
- (D) In case the third speaker was a captain, the seventh speaker was a first mate.
- (E) In case the seventh speaker was a first mate, the first and third speakers were captains.

Ans : A

4. In case A spoke immediately after L and immediately before O, and O was not the last speaker, L spoke

- (A) second
- (B) third
- (C) fourth
- (D) fifth
- (E) sixth

Ans : C

5. In case G is M's first mate, D could be the person who spoke immediately

- (A) prior to T
- (B) prior to L
- (C) prior to V
- (D) after T
- (E) after V

Ans : D

6.. In case A is the third of the first mates to speak, and L is the captain whose first mate is not present, which among the following statements must be true?

- (A) A spoke sometime before L.
- (B) D spoke sometime before O.
- (C) L spoke sometime before O.
- (D) O spoke sometime before L.
- (E) O spoke sometime before N.

Ans : B

7. Among the following statements, which would make M, D, N, G, L, O, A the only possible sequence of speakers?

- (A) D is M's first mate; G is N's first mate; A is O's first mate.
- (B) D is M's first mate; G is N's first mate; A was the second to speak after L.
- (C) The order of the first four speakers was M, D, N, G.
- (D) The order of the last three speakers was L, O, A.
- (E) The order in which the captains spoke was M, N, L, O.

Ans : B

Practice Set 3

Directions:

All questions are based on a passage or a set of conditions. While answering a few of the questions, you would find it useful to draw a rough diagram. To answer any question, choose the answer you think is most appropriate among the given options.

Questions 1- 6

Nine individuals - Z, Y, X, W, V, U, T, S and R - are the only candidates, who can serve on three committees- A, B and C, and each candidate should serve on exactly one of the committees. Committee A should consist of exactly one member more than committee B.

It is possible that there are no members of committee C.

Among Z, Y and X none can serve on committee A.

Among W, V and U none can serve on committee G.

Among T, S and R none can serve on committee C.

1. In case T and Z are the individuals serving on committee B, how many of the nine individuals should serve on committee C?

- (A) 3
- (B) 4
- (C) 5
- (D) 6
- (E) 7

Ans : B

2. Of the nine individuals, the largest number that can serve together on committee C is

- (A) 9
- (B) 8
- (C) 7
- (D) 6
- (E) 5

Ans : D

3. In case R is the only individual serving on committee B, which among the following should serve on committee A?

- (A) W and S
- (B) V and U
- (C) V and T
- (D) U and S
- (E) T and S

Ans : E

4. In case any of the nine individuals serves on committee C, which among the following should be the candidate to serve on committee A?

- (A) Z
- (B) Y

- (C) W
- (D) T
- (E) S

Ans : C

5. In case T, S and X are the only individuals serving on committee B, the total membership of committee C should be:

- (A) Z and Y
- (B) Z and W
- (C) Y and V
- (D) Y and U
- (E) X and V

Ans : A

6. Among the following combinations which could constitute the membership of committee C?

- (A) Y and T
- (B) X and U
- (C) Y, X and W
- (D) W, V and U
- (E) Z, X, U and R

Ans : B

Questions 7- 9

(M, N, O and P are all different individuals)

- I. M is the daughter of N.
- II. N is the son of O
- III. O is the father of P.

7. Among the following statements, which is true ?

- (A) O is the uncle of M.
- (B) P and N are brothers
- (C) M is the daughter of P.
- (D) If B is the daughter of N, then M and B are sisters.
- (E) If C is the granddaughter of O, then C and M are sisters.

Ans : D

8. Which among the following statements is contradictory to the above premises?

- (A) P is the father of M.
- (B) O has three children.
- (C) M has one brother.
- (D) M is the granddaughter of O.
- (E) Another party C, could be the mother of M.

Ans : A

9. If B is the son of N and B has one brother, D, then

- I. M is the sister of D.
 - II. D and N are brothers.
 - III. O is the grandfather of D.
- (A) I only
 - (B) II only
 - (C) III only
 - (D) I and III only
 - (E) I and II only

Ans : D

Practice Set 4

Solve the following and check with the answers given at the end.

1-4: John is undecided which of the four novels to buy. He is considering a spy thriller, a Murder mystery, a Gothic romance and a science fiction novel. The books are written by Rothko, Gorky, Burchfield and Hopper, not necessary in that order, and published by Heron, Pigeon, Blueja and sparrow, not necessary in that order.

- (1) The book by Rothko is published by Sparrow.
- (2) The Spy thriller is published by Heron.
- (3) The science fiction novel is by Burchfield and is not published by Blueja.
- (4)The Gothic romance is by Hopper.

1. Pigeon publishes _____.

2. The novel by Gorky _____.

3. John purchases books by the authors whose names come first and third in alphabetical order. He does not buy the books _____.

4. On the basis of the first paragraph and statement (2), (3) and (4) only, it is possible to deduce that

1. Rothko wrote the murder mystery or the spy thriller
 2. Sparrow published the murder mystery or the spy thriller
 3. The book by Burchfield is published by Sparrow.
-

5: A tennis marker is trying to put together a team of four players for a tennis tournament out of seven available. males - a, b and c; females – m, n, o and p. All players are of equal ability and there must be at least two males in the team. For a team of four, all players must be able to play with each other under the following restrictions:

b should not play with m,
c should not play with p, and
a should not play with o.

Which of the following statements must be false?

1. b and p cannot be selected together
 2. c and o cannot be selected together
 3. c and n cannot be selected together.
-

6: What can you conclude from the statement : All green are blue, all blue are red. ?

- (i) some blue are green
 - (ii) some red are green
 - (iii) some green are not red
 - (iv) all red are blue
- (a) i or ii but not both
 - (b) i & ii only
 - (c) iii or iv but not both
 - (d) iii & iv
-

Questions 7 and 8 are based on the following :

Five executives of European Corporation hold a Conference in Rome

Mr. A converses in Spanish & Italian

Mr. B, a Spaniard, knows English also

Mr. C knows English and belongs to Italy

Mr. D converses in French and Spanish

Mr. E , a native of Italy knows French

7. Which of the following can act as interpreter if Mr. C & Mr. D wish to converse

- a) only Mr. A b) Only Mr. B c) Mr. A & Mr. B d) Any of the other three

8. If a 6th executive is brought in, to be understood by maximum number of original five he should be fluent in

- a) English & French b) Italian & Spanish c) English & French d) French & Italian

9 - 13.

1. Ashland is north of East Liverpool and west of Coshocton.
 2. Bowling green is north of Ashland and west of Fredericktown.
 3. Dover is south and east of Ashland.
 4. East Liverpool is north of Fredericktown and east of Dover.
 5. Fredericktown is north of Dover and west of Ashland.
 6. Coshocton is south of Fredericktown and west of Dover.
9. Which of the towns mentioned is furthest of the north – west
(a) Ashland (b) Bowling green (c) Coshocton (d) East Liverpool (e) Fredericktown
10. Which of the following must be both north and east of Fredericktown?
(a) Ashland (b) Coshocton (c) East Liverpool
I a only II b only III c only IV a & b V a & c
11. Which of the following towns must be situated both south and west of at least one other town?
A. Ashland only
B. Ashland and Fredericktown
C. Dover and Fredericktown
D. Dover, Coshocton and Fredericktown
E. Coshocton, Dover and East Liverpool.
12. Which of the following statements, if true, would make the information in the numbered statements more specific?
(a) Coshocton is north of Dover.
(b) East Liverpool is north of Dover
(c) Ashland is east of Bowling green.
(d) Coshocton is east of Fredericktown
(e) Bowling green is north of Fredericktown
13. Which of the numbered statements gives information that can be deduced from one or more of the other statements?
(A) 1 (B) 2 (C) 3 (D) 4 (E) 6

ANSWERS:

Answer 1-4:

Explanation:

Given

Novel Name

Author

Publisher

Spy thriller	Rathko	Heron
Murder mystery	Gorky	Piegon
Gothic romance	Burchfield	Blueja
Science fiction	Hopper	Sparrow

Since Blueja doesn't publish the novel by Burchfield and Heron publishes the novel spy thriller, Piegon publishes the novel by Burchfield.

Since Hopper writes Gothic romance and Heron publishes the novel spy thriller, Blueja publishes the novel by Hopper.

Since Heron publishes the novel spy thriller and Heron publishes the novel by Gorky, Gorky writes Spy thriller and Rathko writes Murder mystery.

Answer 5: 3.

Explanation:

Since inclusion of any male player will reject a female from the team. Since there should be four member in the team and only three males are available, the girl, n should included in the team always irrespective of others selection.

Answer 6: (b)

Answer 7: d) Any of the other three.

Explanation : From the data given, we can infer the following.

A knows Spanish, Italian

B knows Spanish, English

C knows Italian, English

D knows Spanish, French

E knows Italian, French

To act as an interpreter between C and D, a person has to know one of the combinations Italian&Spanish, Italian&French, English&Spanish, English&French

A, B, and E know atleast one of the combinations.

Answer 8: b) Italian & Spanish

Explanation : No of executives who know

i) English is 2

ii) Spanish is 3

iii) Italian is 3

iv) French is 2

Italian & Spanish are spoken by the maximum no of executives. So, if the 6th executive is fluent in Italian & Spanish, he can communicate with all the original five because everybody knows either Spanish or Italian.

Practice Set 5

1. The office staff of XYZ corporation presently consists of three bookkeepers—A, B, C and 5 secretaries D, E, F, G, H. The management is planning to open a new office in another city using 2 bookkeepers and 3 secretaries of the present staff . To do so they plan to separate certain individuals who don't function well together. The following guidelines were established to set up the new office

I. Bookkeepers A and C are constantly finding fault with one another and should not be sent together to the new office as a team

II. C and E function well alone but not as a team , they should be separated

III. D and G have not been on speaking terms and shouldn't go together

IV Since D and F have been competing for promotion they shouldn't be a team

1.If A is to be moved as one of the bookkeepers,which of the following cannot be a possible working unit.

A.ABDEH

B.ABDGH

C.ABEFH

D.ABEGH

Ans.B

2.If C and F are moved to the new office,how many combinations are possible

A.1

B.2

C.3

D.4

Ans.A

3.If C is sent to the new office,which member of the staff cannot go with C

A.B

B.D

C.F

D.G

Ans.B

4.Under the guidelines developed,which of the following must go to the new office

- A.B
- B.D
- C.E
- D.G

Ans.A

5.If D goes to the new office,which of the following is/are true

- I.C cannot go
- II.A cannot go
- III.H must also go

- A.I only
- B.II only
- C.I and II only
- D.I and III only

Ans.D

2. After months of talent searching for an administrative assistant to the president of the college the field of applicants has been narrowed down to 5—A, B, C, D, E .It was announced that the finalist would be chosen after a series of all-day group personal interviews were held.The examining committee agreed upon the following procedure

- I.The interviews will be held once a week
- II.3 candidates will appear at any all-day interview session
- III.Each candidate will appear at least once
- IV.If it becomes necessary to call applicants for additional interviews, no more 1 such applicant should be asked to appear the next week
- V.Because of a detail in the written applications,it was agreed that whenever candidate B appears, A should also be present.
- VI.Because of travel difficulties it was agreed that C will appear for only 1 interview.

6.At the first interview the following candidates appear A,B,D.Which of the following combinations can be called for the interview to be held next week.

- A. BCD
- B. CDE
- C. ABE
- D. ABC

Ans. B

7. Which of the following is a possible sequence of combinations for interviews in 2 successive weeks

- A. ABC;BDE
- B. ABD;ABE
- C. ADE;ABC
- D. BDE;ACD

Ans. C

8. If A ,B and D appear for the interview and D is called for additional interview the following week,which 2 candidates may be asked to appear with D?

- I. A
 - II. B
 - III. C
 - IV. E
-
- A. I and II
 - B. I and III only
 - C. II and III only
 - D. III and IV only

Ans.D

9.Which of the following correctly state(s) the procedure followed by the search committee

- I.After the second interview all applicants have appeared at least once
- II.The committee sees each applicant a second time
- III.If a third session,it is possible for all applicants to appear at least twice

- A.I only
- B.II only
- C.III only
- D.Both I and II

Ans.A

3. A certain city is served by subway lines A,B and C and numbers 1 2 and 3

- When it snows , morning service on B is delayed
- When it rains or snows , service on A, 2 and 3 are delayed both in the morning and afternoon
- When temp. falls below 30 degrees farenheit afternoon service is cancelled in either the A line or the 3 line, but not both.

- When the temperature rises over 90 degrees farenheit, the afternoon service is cancelled in either the line C or the 3 line but not both.
- When the service on the A line is delayed or cancelled, service on the C line which connects the A line, is delayed.
- When service on the 3 line is cancelled, service on the B line which connects the 3 line is delayed.

10. On Jan 10th, with the temperature at 15 degree farenheit, it snows all day. On how many lines will service be affected, including both morning and afternoon.

- (A) 2
- (B) 3
- (C) 4
- (D) 5

Ans. D

11. On Aug 15th with the temperature at 97 degrees farenheit it begins to rain at 1 PM. What is the minimum number of lines on which service will be affected?

- (A) 2
- (B) 3
- (C) 4
- (D) 5

Ans. C

12. On which of the following occasions would service be on the greatest number of lines disrupted.

- (A) A snowy afternoon with the temperature at 45 degree farenheit
- (B) A snowy morning with the temperature at 45 degree farenheit
- (C) A rainy afternoon with the temperature at 45 degree farenheit
- (D) A rainy afternoon with the temperature at 95 degree farenheit

Ans. B

Practice Set 6

In a certain society, there are two marriage groups, red and brown. No marriage is permitted within a group. On marriage, males become part of their wives groups; women remain in their

own group. Children belong to the same group as their parents. Widowers and divorced males revert to the group of their birth. Marriage to more than one person at the same time and marriage to a direct descendant are forbidden

1. A brown female could have had

- I. A grandfather born Red
- II. A grandmother born Red
- III Two grandfathers born Brown

- (A) I only
- (B) III only
- (C) I, II and III
- (D) I and II only

Ans. D

2. A male born into the brown group may have

- (A) An uncle in either group
- (B) A brown daughter
- (C) A brown son
- (D) A son-in-law born into red group

Ans. A

3. Which of the following is not permitted under the rules as stated.

- (A) A brown male marrying his father's sister
- (B) A red female marrying her mother's brother
- (C) A widower marrying his wife's sister
- (D) A widow marrying her divorced daughter's ex-husband

Ans. B

4. If widowers and divorced males retained their group they had upon marrying which of the following would be permissible (Assume that no previous marriage occurred)

- (A) A woman marrying her dead sister's husband
- (B) A woman marrying her divorced daughter's ex-husband
- (C) A widower marrying his brother's daughter
- (D) A woman marrying her mother's brother who is a widower.

Ans. D

5. I. All G's are H's

II. All G's are J's or K's

III All J's and K's are G's

IV All L's are K's

V All N's are M's
VI No M's are G's

6. If no P's are K's which of the following must be true

- (A) No P is a G
- (B) No P is an H
- (C) If any P is an H it is a G
- (D) If any P is a G it is a J

Ans. D

7. Which of the following can be logically deduced from the stated conditions

- (A) No M's are H's
- (B) No H's are M's
- (C) Some M's are H's
- (D) No N's are G's

Ans. D

8. Which of the following is inconsistent with one or more conditions

- (A) All H's are G's
- (B) All H's are M's
- (C) Some H's are both M's and G's
- (D) No M's are H's

Ans. C

9. The statement "No L's are J's" is

I. Logically deducible from the conditions stated

II Consistent with but not deducible from the conditions stated

III. Deducible from the stated conditions together with the additional statements "No J's are K's"

- (A) I only
- (B) II only
- (C) III only
- (D) II and III only

Ans. D

Practice Set 7

Directions for questions 1-5:

The questions are based on the information given below

There are six steps that lead from the first to the second floor. No two people can be on the same step

Mr. A is two steps below Mr. C

Mr. B is a step next to Mr. D

Only one step is vacant (No one standing on that step)

Denote the first step by step 1 and second step by step 2 etc.

1. If Mr. A is on the first step, Which of the following is true?
 - (a) Mr. B is on the second step
 - (b) Mr. C is on the fourth step.
 - (c) A person Mr. E, could be on the third step
 - (d) Mr. D is on higher step than Mr. C.

2. If Mr. E was on the third step & Mr. B was on a higher step than Mr. E which step must be vacant
 - (a) step 1
 - (b) step 2
 - (c) step 4
 - (d) step 5
 - (e) step 6

3. If Mr. B was on step 1, which step could A be on?
 - (a) 2&e only
 - (b) 3&5 only
 - (c) 3&4 only
 - (d) 4&5 only
 - (e) 2&4 only

4. If there were two steps between the step that A was standing and the step that B was standing on, and A was on a higher step than D , A must be on step
 - (a) 2
 - (b) 3
 - (c) 4
 - (d) 5
 - (e) 6

5. Which of the following is false
 - i. B&D can be both on odd-numbered steps in one configuration
 - ii. In a particular configuration A and C must either both an odd numbered steps or both an

even-numbered steps

iii. A person E can be on a step next to the vacant step.

- (a) i only
- (b) ii only
- (c) iii only
- (d) both i and iii

Answers:

Ans 1: (d)

Ans 2: (a)

Ans 3: (c)

Ans 4: (c)

Ans 5: (c)

Directions for questions 6-9: The questions are based on the information given below

Six swimmers A, B, C, D, E, F compete in a race. The outcome is as follows.

- i. B does not win.
- ii. Only two swimmers separate E & D
- iii. A is behind D & E
- iv. B is ahead of E , with one swimmer intervening
- v. F is a head of D

6. Who stood fifth in the race ?

- (a) A
- (b) B
- (c) C
- (d) D
- (e) E

7. How many swimmers separate A and F ?

- (a) 1
- (b) 2
- (c) 3
- (d) 4
- (e) cannot be determined

8. The swimmer between C & E is

- (a) none
- (b) F
- (c) D

- (d) B
- (e) A

9. If the end of the race, swimmer D is disqualified by the Judges then swimmer B finishes in which place

- (a) 1
- (b) 2
- (c) 3
- (d) 4
- (e) 5

Answers:

Ans 6: (e)

Ans 7: (d)

Ans 8: (a)

Ans 9: (b)

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