

NAT II Management Science Analytical

| Sr | Questions | Answers Choice |
|----|--|---|
| | A railway track from Lahore to Islamabad consists of six main stations, P, Q, R, X, Y, and Z. Trains run only according to the following condition: | |
| 1 | <ul style="list-style-type: none"> (i) Frm P to Q (ii) From Q to P and from Q to R (iii) From R to X (iv) From X to Q and from X to Y (v) From Z to P, from Z to Y and from Z to R (vi) From Y to X (vii) It is possible to transfer a station for another train. <p>Q. The greatest number of stations that can be visited without visiting any station more than once, is:</p> | <ul style="list-style-type: none"> A. 4 B. 5 C. 6 D. 3 E. 2 |
| 2 | <p>In a factory control room, there are three ON-OFF switches on the central control panel, labeled A, B and C. They are changed from default setting to a required setting based on the following rules:</p> <p>In case only switch A is ON in the default setting, then turn switch B ON.</p> <p>In case switches A and B are the only switches ON in the default setting, then turn switch C ON. In case all the three switches are ON, in default setting, then turn the switch C OFF. For any other default setting, turn ON all switches that are OFF and turn OFF all switches, if any, that are ON.</p> <p>Q: In case, in default setting the switches A and B are ON and the switch C is OFF, then what could be the second setting?</p> | <ul style="list-style-type: none"> A. A ON, B ON, C ON. B. A ON, B OFF, C ON. C. A ON, B OFF, C OFF. D. A OFF, B ON, C OFF. E. A OFF, B OFF, C ON. |
| 3 | <p>Six candidates Ali, Amin, Omer, Hamza, Saleem and Osama are being interviewed for a job. The interview will take place over four consecutive days, starting on Thursday. Each candidate will have only one interview. The day on which the different candidates will interview must confirm to the following conditions:</p> <ul style="list-style-type: none"> (i) At least one interview will take place each day (ii) No more than two interviews will take place on any day (iii) No more than three interviews will take place on any two consecutive days (iv) Ali's interview must take place on Saturday. (v) Amin's interview must place on the same with another interview. (vi) Saleem's interview must take place on the day before Osama's interview (vii) Omer's interview must take place on a day after Hamza's interview. <p>Q: If only one interview takes place on Thursday which candidate could have that interview?</p> | <ul style="list-style-type: none"> A. Ali B. Amin C. Omer D. Saleem E. Osama |
| 4 | <p>Follow us to the real Pakistan leaving behind the disturbances of civilization. Real Pakistan is still inhabited by the eagle, the cow, the black deer, and tigers; it is still spacious, sprawling, and majestic. Experience the freedom and serenity still to be found in -----.</p> <p>Q: Choose the best option to complete the above statement.</p> | <ul style="list-style-type: none"> A. The natural beauty of our land B. The fascinating urban centers C. The wild terrain of NWFP D. One's own subconscious E. The great sprawling cities of the upper Pakistan |

Six candidates Ali, Amin, Omer, Hamza, Saleem and Osama are being interviewed for a job. The interview will take place over four consecutive days, starting on Thursday. Each candidate will have only one interview. The day on which the different candidates will interview must conform to the following conditions:

5 (i) At least one interview will take place each day
(ii) No more than two interviews will take place on any day
(iii) No more than three interviews will take place on any two consecutive days
(iv) Ali's interview must take place on Saturday.
(v) Amin's interview must place on the same with another interview.
(vi) Saleem's interview must take place on the day before Osama's interview
(vii) Omer's interview must take place on a day after Hamza's interview.

A. 1
B. 2
C. 3
D. 4
E. 5

Q: If the director decides to take two interviews on Thursday and two on Sunday, how many candidates would be eligible to interview on Friday?

Three girls Joan, Rita and Kim and two boys Tim and Steve are the only dancers in a dance program, which consists of six numbers in this order: One a duet; two a duet; three a solo; four a duet; five a solo; and six a duet.

6 None of the dances is in two consecutive numbers or in more than two numbers. The first number in which Tim appears is the one that comes before the first number in which Kim appears.

The second number in which Tim appears is one that comes after the second number in which Kim appears.

Q: Rita must perform only in duets if

A. Kim is in number two
B. Kim is in number five
C. Tim is in number one
D. Tim is in number two
E. Tim is in number six

7 Follow us to the real Pakistan leaving behind the disturbances of civilization. Real Pakistan is still inhabited by the eagle, the cow, the black deer, and tigers; it is still spacious, sprawling, and majestic. Experience the freedom and serenity still to be found in -----.

Q: The above paragraph is most likely to appear in which of the following?

A. A Guide to Pakistan's intrinsic beauty
B. Exploring the Great Outdoors
C. The Quiet Beauty of Harappa
D. how the Eagle Became Extinct
E. Returning to Pakistan

Nine Individuals – Z, Y, X, W, V, U, T, S AND R are the only candidates, who can serve on three committees labeled A, B and C.

Each candidate should serve on exactly one of the committees.

8 Committee A should consist of exactly one member more than that of committee.

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

Q: 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

In a factory control room, there are three ON-OFF switches on the central control panel, labeled A, B and C. They are changed from default setting to a required setting based on the following rules:

In case only switch A is ON in the default setting, then turn switch B ON.

9 In case switches A and B are the only switches ON in the default setting, then turn

switch C ON. In case all the three switches are ON, in default setting, then turn the switch C OFF. For any other default setting, turn ON all switches that are OFF and turn OFF all switches, if any, that are ON.

A. A ON, B ON, C ON.
B. A ON, B ON, C OFF.
C. A ON, B OFF, C ON.
D. A ON, B OFF, C OFF.
E. A OFF, B ON, C OFF.

Q: In case, all three switches are ON in the second setting, which among the following could have been the default setting?

10

In an in vitro study, 160 white cats were injected with Salt X. 160 other white cats injected with placebo. In two weeks, 39% of the white cats, who were injected with Salt X showed symptoms of Kay fever. Hence, it can be concluded that Kay fever is caused by some elements similar to the elements in Salt X

A. People suffering from Kay fever are the victims of the golden viper of Sindh.
B. One among the 160 white cats had already showed symptoms of Kay fever prior to the experiment.
C. The natural habitats of white cats does not contain any of the elements

Q: Which of the following statements would most seriously weaken the above discussion?

found in Salt X.

D. The 160 white cats used in the experiment were kept isolated from each other.
E. The scientists administered the injections being ignorant of the contents of the salt used.

A chemist is preparing a nutrient using eight different vitamins and minerals ...A, B, C, D, E, H, F(Ferric), and Z(Zinc). According to the recipes, the following requirements apply to the use of ingredients:

(i) If B is used, both C and Z must also be used
(ii) E and H must always be used together
11 (iii) If C is used, at least two of A, B and F must also be used
(iv) C and H cannot be used together
(v) E, F and Z cannot all be used in a same nutrient
(vi) A, D, and Z cannot all be used in the same nutrient

A. B
B. D
C. H
D. F
E. Z

Q: Which of the following cannot be included in a nutrient that contains E?

Four captains and the first mates of three of them were called to attend the annual meeting at head quarter. The captains were Luqman, Manzoor, Nauman and Osaf; the first mates were Ayesha, Durya and Gia. Each person in turn delivered a report to the chairperson as follows:

12 Each of the first mates delivered their report exactly after her captain. The first captain to speak was Manzoor, and captain Nauman spoke after him.

A. A spoke sometime before L.
B. D spoke sometime before O.
C. L spoke sometime before O.
D. O spoke sometimes before L.
E. O spoke sometime before N.

(Represent the person with first letter of his name)

Q: 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?

An Internal Services Manager at a large corporation has been assigned the task of allotting offices to six of the staff members. The offices are titled A through F.

Mrs. Ruby needs to use the telephone quite often throughout the day. Mr. Mujahid and Mr. Zahid need adjacent offices as they need to consult each other often while working. Mrs. Fauzia is a senior employee and has to be allotted the office marked E, having the biggest window. Mr. Abid requires silence in the offices next to his. Mr. Shahid, Mr. Mujahid and Mr. Abid are all smokers. Mrs. Fauzia requires non-smoker neighbors.

A. B
B. F
C. A
D. C
E. D

Unless specifically stated all the employees maintain an atmosphere of silence during office hours.

Q: The ideal office for Mr. Mujahid would be.

Six scientists A, B, C, D, E and F are to present a paper each at a one-day conference. Three of them will present their paper in the morning session before the lunch break whereas the other three will present in the afternoon session. The lectures have to be scheduled in such a way that they comply with the following restrictions:

A. A is first in the order of presenters.
B. A is third in the order of presenters.
C. A is fourth in the order of presenters.
D. B is first in the order of presenters.
E. C is fourth in the order of presenters.

14 B should present his paper immediately before C's presentation; their presentations cannot be separated by the lunch break. D must be either the first or the last scientist to present his paper.

Q: In case F and E are the fifth and sixth presenters respectively then which of the following must be true?

Four captains and the first mates of three of them were called to attend the annual meeting at head quarter. The captains were Luqman, Manzoor, Nauman and Osaf; the first mates were Ayesha, Durya and Gia. Each person in turn delivered a report to the chairperson as follows:

A. M, A, N, G, O, L, D
B. M, D, N, G, L, O, A

15

Each of the first mates delivered their report exactly after her captain. The first captain to speak was Manzoor, and captain Nauman spoke after him.

(Represent the person with first letter of his name)

C. M, N, A, L, D, O, G
D. M, N, A, O, D, L, G
E. M, N, G, D, O, L, A

Q: Which of the following order of delivering report is not conformable with the conditions?

16

Selfishness is a principal evil in our society. Every person is concerned with only himself. 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, ----- . However, these are only short-term occurrences, which ultimately serve our long-term goal of personal gain.

Q: Professor Taimoor told his class that teacher's evaluation by students is not a valid measure of teaching quality. For this evaluation, students should fill out questionnaires at the end of the course. Which of the following, if true, supports professor Taimoor's suggestion?

A. Students' evaluation of teachers is a wrong method.
B. Student's opinions against teachers are filtered during course.
C. Professor Taimoor had received low ratings from his students.
D. Teachers are not interested in any survey.
E. Students show interest in teacher evaluation.

17

Follow us to the real Pakistan leaving behind the disturbances of civilization. Real Pakistan is still inhabited by the eagle, the cow, the black deer, and tigers; it is still spacious, sprawling, and majestic. Experience the freedom and serenity still to be found in ----- .

Q: If I am elected, I will fight for changes effecting the growth and prosperity of the poor. We will work together to do away with the bureaucratic bogs which have existed ever since my opponent took office. Every one of you knows what I stand for; I invite my opponent to

A. Extend his support to me
B. Make his mind clear
C. Stop lying to the public
D. Hand in his resignation graciously
E. Get our city more federal aid

18

Follow us to the real Pakistan leaving behind the disturbances of civilization. Real Pakistan is still inhabited by the eagle, the cow, the black deer, and tigers; it is still spacious, sprawling, and majestic. Experience the freedom and serenity still to be found in ----- .

Q: Our beliefs regarding the world cannot be certain. Even well confirmed scientific theory is likely to change over a short period. If we do not try to understand, then it is like to be away from the human race. Undoubtedly, life is worth living in other respects -- as it is no mean thing to be an animal. It is also true that a man wishes to see this speculative domain beyond his next breakfast. From the above discussion it can be concluded that the author believes that

A. Men spend a lot of time on thinking about future
B. Science is the major hurdle in development
C. Life is contingent so a man should not think about his future.
D. Man is a social animal
E. Men are different from animals on the basis of their reasoning abilities

19

A bus has exactly six stops on its route. The bus first stops at stop one and then at stops two, three, four, five and six respectively. After the bus leaves stop six, the bus turns and returns to stop one and repeats the cycle. The stops are at six buildings that are, in alphabetical order L, M, N, O, P and Q.

P is the third stop. M is the sixth stop. The stop O is the stop immediately before Q. N is the stop immediately before L.

A. N
B. L
C. P
D. O
E. Q

Q: In case L is the second stop, which among the following must be the stop immediately before M?

20

Selfishness is a principal evil in our society. Every person is concerned with only himself. 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, ----- . However, these are only short-term occurrences, which ultimately serve our long-term goal of personal gain.

Q: As any economist knows, healthy people pose less of an economic burden to society than unhealthy people. Not surprisingly, then, every rupee our government spends on prenatal care for undocumented immigrants will save taxpayers of this country three rupees. Which of the following, if true, would best explain why the statistics cited above are not surprising?

A. The taxpayers pay for prenatal care of all immigrants.
B. Pregnant women who do not receive prenatal care are more likely to experience health problems than other pregnant women.
C. Benefits for prenatal care serve to promote undocumented immigration.
D. Babies whose mothers did not receive prenatal care are just as healthy as other babies.
E. Babies born in this state to undocumented immigrant parents are entitled to infant care benefits from government.