

NAT II Physical Science Analytical

Sr	Questions	Answers Choice
1	<p>Two or more tealeaves out of five varieties – Livana, Mathia, Novajana, Oxia, and Piask are used in making all branded by a marketer following the rues given below.</p> <p>A brand containing Livana, should also contain Novajana twice that of Livana.</p> <p>A brancd containing Mathia, must also have equal quantity of Oxia.</p> <p>A single brand never contains Novajana as well as Oxia.</p> <p>Oxia and Piask should not be used together.</p> <p>A blend containing Piask should contain it in such a proportion that the total amount of Piask present should be greater than the total amount of the other tealeaves</p> <p>Q: Adding more amount of Novajana will make which of the following brands conformable with the conditions?</p>	<p>A. One part Livana, one part Novajana, five parts Piask</p> <p>B. Two parts Mathia, two parts Novajana, two parts Piask</p> <p>C. One part Mathia, one part Novajana, one part Piask</p> <p>D. Two parts Mathia, one part Novajana, four parts Piask</p> <p>E. Two parts Novajana, one part Oxia, three parts Piask</p>
2	<p>A chemist is preparing a nutriment using eight different vitamins and mineralsA, B, C, D, E, H, F(Ferric), and Z(Zinc). According to the recipes, the following requirements apply to the use of ingredients:</p> <p>(i) If B is used, both C and Z must also be used</p> <p>(ii) E and H must always be used together</p> <p>(iii) If C is used, at least two of A, B and F must also be used</p> <p>(iv) C and H cannot be used together</p> <p>(v) E, F and Z cannot all be used in a same nutrient</p> <p>(vi) A, D, and Z cannot all be used in the same nutriment</p> <p>Q: Which of the following is a suitable combination of vitamins and minerals for a nutriment?</p>	<p>A. A, B, C, F</p> <p>B. D, E, H, Z</p> <p>C. A, D, E, Z</p> <p>D. C, D, E, F</p> <p>E. E, H, F, Z</p>
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> <p>(i) At least one interview will take place each day</p> <p>(ii) No more than two interviews will take place on any day</p> <p>(iii) No more than three interviews will take place on any two consecutive days</p> <p>(iv) Ali's interview must take place on Saturday.</p> <p>(v) Amin's interview must place on the same with another interview.</p> <p>(vi) Saleem's interview must take place on the day before Osama's interview</p> <p>(vii) Omer's interview must take place on a day after Hamza's interview.</p> <p>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?</p>	<p>A. 1</p> <p>B. 2</p> <p>C. 3</p> <p>D. 4</p> <p>E. 5</p>
4	<p>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:</p> <p>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.</p> <p>Q: B could be placed at any of the following places in the order of presenters EXCEPT</p>	<p>A. First</p> <p>B. Second</p> <p>C. Third</p> <p>D. Fourth</p> <p>E. Fifth</p>

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.

5 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.

- A. R
- B. Y
- C. W
- D. T
- E. S

Q: In case, any of the nine individuals serves on committee C, which among the following could not be the candidate to serve on committee A?

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.

6 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 OFF, B OFF, C ON,
- E. A OFF, B OFF, C OFF,

Q: In case only switches B is ON in the default setting, what must be the second setting?

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:

7 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.

- A. A is first in the order of presenters.
- B. A is third in the order of presenter.
- 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.

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

8 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: Muzzaffar is terrible driver. He had ten traffic violations in the past year. Which of the following can be said about the above claim?

- A. Muzzaffar does not know how to drive
- B. Muzzaffar is an addict of drugs
- C. It is obvious that everyone has accidents in bad weather.
- D. Some thing, in this argument is hidden.
- E. The given statement is wrong.

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.

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9 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.

- A. 9
- B. 8
- C. 7
- D. 6
- E. 5

Q: of the nine individuals, the largest number that can serve together on committee C is

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- A. A ON, B ON, C ON,

- 10 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.
- Q: In case, switch A is OFF in the second setting. Which of the following could have been the default setting?
- 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.

- 11 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: Choose the best option to complete the above statement:
- 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

- 12 Three men (Tahir, Pervaiz and Javed) and three women (Elena, Ayesha and Kiran) are spending a few months at Abbottabad. They are to stay in a row of nine cottages, each on living in his or her own cottage. There are no others staying in the same row of cottages.
1. Ayesha, Tahir and Javed do not want to stay in any cottage, which is at the end of the row.
 2. Elena and Ayesha are unwilling to stay besides my occupied cottage.
 3. Kiran is next to Pervaiz and Javed.
 4. Between Ayesha and Javed's cottage there is just one vacant house.
 5. None of the girls occupies adjacent cottages.
 6. The house occupied by Tahir is next to an end cottage.
- Q: Which of the above statements can be said to have been derived from two other statements?
- A. Statement 1
B. Statement 2
C. Statement 3
D. Statement 5
E. Statement 6

- 13 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.

- 14 A chemist is preparing a nutriment 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
 - (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 nutriment
- Q: By the addition of exactly one more mineral, which of the following could make an acceptable combination of vitamins and minerals?
- A. A, D, Z
B. B, H, E
C. C, D, H
D. C, E, Z
E. E, H, F

- 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
- A. The general public has an interest in the free exchange of different political views.
B. Every person who uses wall chalking for the promotion of ideas is

- 15 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.
- Q: Wall chalking on public property should be outlawed. Radicals and fanatics have no right to use public property when promoting their unsavory views. The argument above is based on the idea
- Chalking for the promotion of ideas is a radical or fanatic.
C. Radicals and fanatics prefer the use of public property while propagating their viewpoint.
D. Legal constraints should be equal for all.
E. Any promotional activity, which is against public interest, should be protected by law.

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- 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?
- 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.

- Three men (Tahir, Pervaiz and Javed) and three women (Elena, Ayesha and Kiran) are spending a few months at Abbottabad. They are to stay in a row of nine cottages, each on living in his or her own cottage. There are no others staying in the same row of cottages.
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 2. Elena and Ayesha are unwilling to stay besides my occupied cottage.
 3. Kiran is next to Pervaiz and Javed.
 4. Between Ayesha and Javed's cottage there is just one vacant house.
 5. None of the girls occupies adjacent cottages.
 6. The house occupied by Tahir is next to an end cottage.
- Q: How many of them occupy cottages next to a vacant cottage?
- A. 2
B. 3
C. 4
D. 5
E. 6

- An observatory is setting up a schedule for school children to view a returning comet. Five school classes K, L, N, O, and P-will each view the comet exactly once during the four nights. Monday through Thursday, of its maximum brightness. Excellent viewing conditions are predicated for all four nights. The scheduling is subject to the following constraints:
- At most two classes can view the comet on any given night.
- 18 Class K cannot view the comet on the same night that Class N does.
- Class L must view the comet on a night prior to the night when Class P views the comet.
- Class O must view the comet on the same night that Class P does.
- Q: If Class N Views the comet on Thursday, which of the following could be true?
- A. Class P views the comet on Tuesday.
B. Class O views the comet on Thursday.
C. Class L views the comet on Tuesday.
D. Class L views the comet on Wednesday.
E. Class K views the comet on Thursday.

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

5. None of the girls occupies adjacent cottages.
6. The house occupied by Tahir is next to an end cottage.

D. II and III only
E. I, II and III

Q: Which among these statement(s) are true?

- a. Ayesha is between Elena and Javed.
b. At the most four persons can have occupied cottages on either side of them.
c. Tahir stays besides Pervaiz

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:

20

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)

Q: 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.