

## NAT II Physical Science Analytical

Sr	Questions	Answers Choice
1	<p>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:</p> <p>At most two classes can view the comet on any given night.</p> <p>Class K cannot view the comet on the same night that Class N does.</p> <p>Class L must view the comet on a night prior to the night when Class P views the comet.</p> <p>Class O must view the comet on the same night that Class P does.</p> <p>Q: If Class O can view the comet neither on Wednesday nor on Thursday, which of the following must be true?</p>	<p>A. Class K view s the comet on Monday.</p> <p><b>B. Class L views the comet on Monday.</b></p> <p>C. Class L views the comet on Tuesday.</p> <p>D. Class N views the comet on Wednesday.</p> <p>E. Class views the comet on Thursday.</p>
2	<p>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.</p> <p>Q: Classical songs occupy a unique and peculiar position in every culture. They are imperishable as cultural landmarks, but the emotions expressed in some of the folks are often superseded by newer tunes. However, the classics survive just as heritage, as imposing features of the society, yet unsuited for habitation unless remodeled. The principle point put forth in the above passage is that classical works</p>	<p>A. Are ignored by young generation</p> <p>B. Are an obstacle in the development in new tunes</p> <p>C. Should be stored in museums.</p> <p>D. Lose their distinctive features as time passes.</p> <p><b>E. Need our respect and admiration even if their tunes and ideas they express are no longer current.</b></p>
3	<p>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:</p> <p>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.</p> <p>(Represent the person with first letter of his name)</p> <p>Q: Among the following statements, which would make M, D, N, G, L, O, A the only possible sequence of speakers?</p>	<p>A. D is M's first mate; G is N's first mate; A is O's first mate.</p> <p><b>B. D is M's first mate; G is N's first mate; A was the second to speak after L.</b></p> <p>C. The order of the first four speakers was M, D, N G.</p> <p>D. The order of the last three speakers was L,O, A.</p> <p>E. The order in which the captains spoke was M, N, L, O.</p>
4	<p>Multan Institute of Higher Studies plans to show five educational films A, B, C, D and E to a group of students. The film shows are planned in an order, which conforms to the following conditions:</p> <p>A must be shown earlier than C.</p> <p>B must be shown earlier than D.</p> <p>E should be the fifth film shown.</p> <p>Q: Which among the following is an acceptable order for showing the educational films?</p>	<p><b>A. A, C, B, D, E</b></p> <p>B. A, C, D, E, B</p> <p>C. B, D, C, A, E</p> <p>D. B, D, E, A, C</p> <p>E. E, B, C, A, D</p>
1	<p>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.</p> <p>1. Ayesha, Tahir and Javed do not want to stay in any cottage, which is at the end of</p>	

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.

5 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 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

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

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

- A. We are always trying to undermine other endeavors.
- B. People always deceive one another.
- C. Even close friends are not trustworthy.
- D. People want power to control others
- E. There are many occasions when we graciously offer our assistance.

7 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: 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 C is to be the fifth scientist to present his paper, then B must be

- A. First
- B. Second
- C. Third
- D. Fourth
- E. Fifth

8 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 rules given below.

A brand containing Livana, should also contain Novajana twice that of Livana.

A brand containing Mathia, must also have equal quantity of Oxia.

A single brand never contains Novajana as well as Oxia.

Oxia and Piask should not be used together.

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

Q: Among the following, the addition of which combination would make a brand containing two parts Novajana and one part Piask conformable with the conditions?

- A. One part Livana
- B. One part Mathia
- C. Two parts Novajana
- D. One part Oxia
- E. Two parts Piask

9 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.

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

- 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 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.

10 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.

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

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

- 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?

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.

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

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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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12

A must be shown earlier than C.

B must be shown earlier than D.

E should be the fifth film shown.

Q: In case, C is shown earlier than E, which among the following will hold true?

- A. A is the second film shown.
- B. B is the second film shown.
- C. C is the third film shown.
- D. D is the fourth film shown.
- E. E is the fourth film shown.

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.

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- A. A, B and D
- B. B, C and F
- C. A, B and E
- D. A, B and C
- E. A, B and F

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

Q: The three employees who are smokers should be seated in the offices.

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

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

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.

15

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. O
- B. Q
- C. N
- D. L
- E. M

Q: In case N is the fourth stop, which among the following must be the stop immediately before P?

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16 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. Mrs. Fauzia
- B. Mr. Mujahid
- C. Mr. Shahid
- D. Mr. Abid
- E. Mrs. Ruby

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

Q: The idea candidate to occupy the office farthest from Mr. Zahid would be.

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- 17
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.

- A. Statement 1
- B. Statement 2
- C. Statement 3
- D. Statement 5
- E. Statement 6

Q: Which of the above statements can be said to have been derived from two other statements?

18 One's ability to adjust in an environment successfully leads to happiness. War at a universal level destroys the weaker people, who are the most unable to adjust to their environment. Thus, war at the universal level puts weakling out of their misery and allows more space for their predators to enjoy life in a better manner. As those actions have to be performed, which maximize the level of happiness of the greatest number, war at a universal level should take place.

Q: If Rubina was born in KPK, then she is a citizen of Pakistan, The statement above can be deduced from which of the following statement?

- A. Every citizen of the Pakistan is resident either of one of the province or of one of the tribal area.
- B. Rubina was born either in KPK or in Sindh.
- C. Some people born in KPK are citizens of Pakistan.
- D. Everyone born in Pakistan is a citizen of Pakistan.
- E. Rubina is citizen either of Pakistan or of any other country.

19 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:

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 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 & third speakers were captains.

20 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: In 1970, Shaheen Inn earned Rs. 10 million in hotel business. By 1990, revenue doubled and in 2000, it reached the sum of Rs. 40 million. Each of the following, if true, may explain the trend in hotel business except:

- A. The number of total hotel rooms has increased.
- B. Average cost per room has increased.
- C. The number of customers has increased from 1970 to 1990.
- D. Average stay per customer has increased.
- E. The average price of customer services has increased.

