

NAT II Physical Science Analytical

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 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 only switches B is ON in the default setting, what must be the second setting?	I, C ON, I, C OFF, FF, C ON, DFF, C ON,
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 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 only switches B is ON in the default setting, what must be the second	I, C OFF, FF, C ON, DFF, C ON,
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 only switches B is ON in the default setting, what must be the second	I, C OFF, FF, C ON, DFF, C ON,
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 only switches B is ON in the default setting, what must be the second	F, C ON, OFF, C ON,
the first mates were Ayesha, Durya and Gia. Each person in turn delivered a report to the chairperson as follows: mate; A is O's B. D is M's first	t mate; G is N's first first mate. t mate; G is N's first ne second to speak
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. after L. C. The order of speakers was larger than the captain to speakers was larger than the captain to speak was Manzoor.	
(Represent the person with first letter of his name) speakers was	
Q: Among the following statements, which would make M, D, N, G, L, O, A the only possible sequence of speakers?	
Follow us to the real Pakistan leaving behind the disturbances of civilization. Real the people are Pakistan is still inhabited by the eagle, the cow, the black deer, and tigers; it is still treatment spacious, sprawling, and majestic. Experience the freedom and serenity still to be B. The survey	o not work seriously so not satisfied with their was conducted at only s of big cities, so it is
Dieticians claim that those people who seek help to quit the habit of over eating, are unable to stop overeating. Therefore, doctors have concluded that success in breaking such habit is rare. A large-scale survey shows that thousands of people have quit the habit of over eating. If both of the statements above are correct, an explanation that resolves their apparent contradiction is.	blay vital role in it such habits d more food. succeeded in quitting
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:	
(i) At least one interview will take place each day on Thursday	erview will take place
(ii) No more than two interviews will take place on any day on Friday	terview will take place
4 (iii) No more than three interviews will take place on any two consecutive days Saturday	terview will take place
(iv) Ali's interview must take place on Saturday. on Saturday E. Amin's interview.	view will take place on
(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.	
Q: If Hamza and Osama have their interviews on the same day which of the following	

be must be true?

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 ecomist 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 receives 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.

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:

- (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

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:

A must be shown earlier than C. 7

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.

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:

A must be shown earlier than C.

B must be shown earlier than D.

E should be the fifth film shown.

Q: Which among the following is an acceptable order for showing the educational films?

B. A, C, D, E, B C. B, D, C, A, E D. B, D, E, A, C E. E, B, C, A, D

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

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.

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

A. Class K views the comet on Monday.

B. Class L views the comet on Monday.

C. Class L views the comet on Tuesday.

D. Class N views the comet on Wednesday

10

8

9

5

6

comet. E. Class views the comet on Thursday. Class O must view the comet on the same night that Class P does. Q: If Class O can view the comet neither on Wednesday nor on Thursday, which of the following must be true? 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. A. A ON, B ON, C ON. B. A ON, B ON, C OFF. 11 In case switches A and B are the only switches ON in the default setting, then turn C. A ON, B OFF, C O D. A ON, B OFF, C OFF. switch C ON. In case all the three switches are ON, in default setting, then turn the E. A OFF, B ON, C OFF. 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? 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: A. Second. A must be shown earlier than C. B. First 12 C. Third D. Fifth B must be shown earlier than D. F. Fourth E should be the fifth film shown. Q: In case B, D and E are to be shown one after the other in the given order, the position from first to fifth in which A could possibly be shown is 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: (i) If B is used, both C and Z must also be used (ii) E and H must always be used together A. A, B, C, F B. D, E, H, Z (iii) If C is used, at least two of A, B and F must also be used 13 C. A, D, E, Z D. C, D, E, F (iv) C and H cannot be used together E. E, H, F, Z (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: Which of the following is a suitable combination of vitamins and minerals for a nutriment? A. Animal have not a sense to A group of dog lovers declare that the principal virtue of the dog is its general friendliness understand human behaviour towards all people. But, another group of cat lovers declare that the principal virtue of the cat B. Groups of animal lovers are is its peculiar friendliness towards its provider. 14 friendly

Which of the following is true of the claims of both dogs and cats lovers?

C. Friendliness is a virtue

- D. They apply the same standard E. Uncommon virtue of friendliness
- A. Some of the elements in Salt X are

In an in vitro study, 160 white cars 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 would most strengthen the argument above?

extracted from the root of a certain poisonous herb of Hunza.

B. The blood test of the victims of Kay fever revealed the presence of a toxic element in their blood, normally

found in salt X.
C. Almost all the white cats died within two days after the first

symptom appeared.
D. Normally the rate of Kay fever among white cats is less than 0.01%.
E. Within two weeks, about 40% of the white cats, who were injected with placebo, also contracted Kay fever.

15

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.

A. Are ignored by young generation B. Are an obstacle in the

development in new tunes

C. Should be stored in museums. D. Lose their distinctive features as

time passes.

F. Need our respect and admiration. even if their tunes and ideas they express are no longer current.

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

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.

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

A brancd 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, which combination cannot be used together in an agreeable brand containing two or more types of tealeaves?

A. Livana and Mathia

B. Livana and Novajana

C. Livana and Piask D. Mathia and Oxia

E. Piask and Novajana

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

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: B could be placed at any of the following places in the order of presenters **EXCEPT**

A. First

B. Second

Third D. Fourth

E. Fifth

At IOWA University, Students of Economics must complete a total to twelve courses

selected from three different parts of the syllabus Comparative economics, environmental economics, and regional economics... in order to graduate, the students must meet the following course distribution requirements:

(i) At least six of the required twelve course must be from the environmental economics

(ii) At least five of the required twelve courses must be from comparative economics and regional economics, with at least one, but no more than three, selected from comparative economics.

Q: The minimum number of regional economics courses required to fulfil the course distribution requirements is

C. 5

D. 2 E. 4

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.

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

A brancd 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

. . ..

A. One part Livana

B. One part Mathia

C. Two parts Novajana

D. One part Oxia

E. Two parts Piask

20

16

17

18

19

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?