**Candidate’s Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Father Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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**CNIC:**

**PART-1**

**Analytical Reasoning & Quantitative for MPhil/PhD Degree Programs**

**Total Time Allowed:** 20 Minutes **Total marks:** 15

**Note:** Attempt all questions. There is no negative marking. However, cutting and overwriting are not allowed.

**Read the statement carefully and mark the most appropriate choice in following 1 to 3 questions.**

In Bahria Town, six houses R, S, W, X, Y and Z, are to be colored with different colors. Adjacent houses cannot be colored with the same color. The only houses adjacent to each other are as follows:

1. R, S, X and Y are each adjacent to W.
2. X is adjacent to Y.
3. R and S are each adjacent to Z.
4. Which of the following is a pair of houses that must be colored in different color from each other?
5. Y and Z
6. R and X
7. S and Z
8. S and X
9. If X is colored in the same color as Z, then it must be true that
10. W is colored in a different color from any other house
11. R is colored in the same color as Y
12. S is colored in the same color as X
13. X is colored in the same as Y
14. Which of the following houses can be colored in the same color as W?
15. S
16. X
17. Y
18. Z
19. Amir said, “All lemons I have tasted are sour; therefore, all lemons are sour.”

Which one of the following most closely parallels the logic of the above statement?

1. My income has increased each year for the past four years; therefore, it will increase again next year.
2. I sped to work every day last week and I did not get a ticket; therefore, they do not give tickets for speeding around here anymore.
3. All rubies are red. This gem is green; therefore, it is not a ruby.
4. Every student I had in school was selfish; therefore, all students are selfish.

**Questions 5-6 are based on the following passage.**

Machines deprive us of two things which are certainly important ingredients of human happiness, namely, spontaneity and variety. Machines have their own pace and their demands, a man who has a costly plant must keep it working. The great trouble with machines, from the point of view of emotions, is its automation.

1. In the above passage "deprive" means
2. Distract
3. Take away from
4. Deride
5. Vest with
6. The trouble with machines is
7. Spontaneity
8. Emotions
9. Automation
10. All of the above

**Questions 7-9 are based on the following passage.**

Directions: The following questions are based on a passage or set of conditions. To answer the question, choose the answer you think is most appropriate among the given options.

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 one living in his or her own cottage. There are no others staying in the same row of houses.

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 any 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.
7. Which of the above statements can be said to have been derived from two other statements?
8. Statement 1
9. Statement 2
10. Statement 3
11. Statement 4
12. Statement 5
13. Statement 6
14. How many of them occupy cottages next to a vacant cottage?
15. 2
16. 3
17. 4
18. 5
19. Which among these statement(s) are true?
20. Ayesha is between Elena and Javed.
21. At the most four persons can have occupied cottages on either side of them.
22. Tahir stays besides Pervaiz.
23. I only
24. II only
25. III only
26. II and III only
27. I and II only

**Questions 10-12**

An Internal Services Manager at 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. Mr. Fauzia requires non-smoker neighbors.

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

1. The ideal candidate to occupy the office farthest from Mr. Zahid would be
2. Mrs. Fauzia
3. Mr. mujahid
4. Mr. Shahid
5. Mr. Abid
6. Mrs. Ruby
7. The ideal office for Mr. Mujahid would be
8. B
9. F
10. A
11. C
12. The three employees who are smokers should be seated in the offices
13. B and D
14. C and F
15. B and E
16. B and C
17. B and F

**Questions 13-15**

A doctor has to treat a patient from Injection A, B, F, J, X, M, U and E into a patient. The following restrictions have to be obeyed:

1. Injection F has to be given before any other injection.
2. Injection J and Injection B have to be given simultaneously, if administered without Injection X.
3. Injection A has to be given before at least 2 other injections.
4. If Injection X has to be used, then the patient cannot receive any other injection except B afterwards.
5. Which of the following is an acceptable combination of injections?
6. A, F, B, J, U, E
7. F, B, J, A, U, E
8. F, A, U, E, X, B
9. F, U, E, B, J, X
10. If the doctor injects A, M and J in this order, then which of the following is true?
11. Injection X can be given in the end.
12. Injection F is never used
13. Injection U will follow Injection J, if needed
14. There are two other injections before Injection U.
15. If the doctor injects Injection B second, and M at the end, then which of the following is true?
16. Injection X was given first.
17. The order of injection U and Injection A do not matter.
18. Injection E can be given right before Injection M.
19. Injection A has to be given third.