



# **SAMPLE PAPER STATISTICAL OFFICERS-SOTS**

**VERBAL**

Complete the sentences by choosing the most appropriate option, from the given lettered choices (A to D) below each.

1. Sara \_\_\_\_\_ the smell of gas in the kitchen.
  - A. developed
  - B. saw
  - C. determined
  - D. detected
  
2. Sunspots are known to cause \_\_\_\_\_ enormous increase in the intensity of the sun's electromagnetic radiation.
  - A. an
  - B. a
  - C. some
  - D. one
  
3. Which is the \_\_\_\_\_ subject at school?
  - A. difficult
  - B. more difficult
  - C. most difficult
  - D. much difficult
  
4. The adjective of cheer is \_\_\_\_\_.
  - A. Cheery
  - B. Chair
  - C. Cheerful
  - D. Cheers

Choose the lettered word or phrase that is most nearly opposite in meaning to the word in capital letters.

5. ANCIENT:
  - A. very old
  - B. antique
  - C. modern
  - D. ruin
  
6. CLEAN:
  - A. rich
  - B. neat
  - C. tidy
  - D. dirty

7. ABOLISH:

- A. exterminate
- B. cancel
- C. continue
- D. hide

**8. FINISH:**

- A. initiate
- B. close
- C. shape
- D. perfect

Questions 09-10 are based on the following passage.

Everyone wants to live in beautiful and pleasant surroundings. Especially ones home is the center of attraction for every individual. We want to see our homes as something special something pleasing to the mind and heart, and something which gives us new hope and energy to face the problems of the world. With this view in mind, we must try to improve the look of our homes as much as possible.

A house is just a building made of wood or mud or bricks and cement. It becomes a home when feelings and emotions showing a sense of belonging are attached to it. The care and attention that go into a house in order to express our love for it, turn a simple 'house' into a 'home'.

**9. Everyone wants to live in:**

- A. the jungle
- B. the village
- C. large families
- D. pleasant surroundings

**10. What turns a house into a home?**

- A. When we use bricks in it
- B. when we attach emotions to it
- C. When we use wood in it
- D. When we use colours in it

## ANALYTICAL REASONING

Now Sony Electronics brings tomorrow's technology to today's home stereo. The same space-age circuitry used by the Wanderer spacecraft to send images of the most distant planets back to earth has been incorporated in the new Sony X-2700 stereo system. If your home entertainment is important to you, why settle for an old-fashioned stereo system when the Sony X-2700 is priced at only a few rupees more?

11. The most serious logical weakness of this argument is its failure to
- A. provide technical data on the manufacturing specifications of the Sony X-2700
  - B. show the relevance of space-age circuitry to the requirements of home stereo
  - C. specify the exact price difference between the Sony X-2700 and old-fashioned stereo systems
  - D. acknowledge the contributions of scientists in the space program to the development of the advanced circuitry mentioned

According to Albert Einstein's famous theory of relativity, time travel is theoretically possible. Assuming that time travel were to be made possible through some technological breakthrough, it would be advantageous to send someone back in time to prevent the assassination of Archduke Franz Ferdinand in 1914 and thus keep World War I from ever occurring.

12. The argument above makes which of the following assumptions?
- A. It is not possible to alter a significant current in world history merely by changing a single event
  - B. The technology necessary for time travel is likely to be developed in the near future
  - C. If Franz Ferdinand had not been assassinated, some other catalytic event would have led to the start of World War I
  - D. The assassination of Franz Ferdinand was the crucial event that triggered the start of World War I

PTCL, Wateen and Instaphone are the Telecommunication sales companies of Pakistan. And Qadeer, Rafi, Saliq and Turaab are sales executives that work for these companies. Each sales executive works for at least one of the Telecommunication sales companies.

Qadeer always works for PTCL and at least one of the other companies. Some of the time Wateen employs only one of these sales executives; the rest of the time it employs exactly two of them.

PTCL and Instaphone each employ exactly two of these sales executives all the time.

13. If Rafi works for Instaphone only and if Saliq works for Wateen and Instaphone only, Turaab works for:

- A. PTCL only
- B. Wateen only
- C. Instaphone only
- D. both PTCL and Wateen

**14.If Qadeer and Rafi both work for the same two Telecommunication sales companies, Turaab must work for:**

- A. both PTCL and Wateen
- B. both PTCL and Instaphone
- C. either PTCL or Wateen but not both
- D. Wateen only

## SUBJECT

- 15. What is the purpose of a box plot in statistics?**
- A. To display the distribution of a dataset**
  - B. To identify outliers in a dataset**
  - C. To compare the means of two datasets**
  - D. To calculate the standard deviation of a dataset**
- 16. In hypothesis testing, what does a p-value represent?**
- A. The probability of making a Type I error**
  - B. The probability of rejecting the null hypothesis when it is true**
  - C. The probability of obtaining the observed results or more extreme results if the null hypothesis is true**
  - D. The probability of obtaining a sample mean equal to the population mean**
- 17. Which of the following best describes statistical inference?**
- A. Drawing conclusions about a population based on information from a sample.**
  - B. Collecting data from a random sample.**
  - C. Estimating the mean and standard deviation of a population.**
  - D. Calculating probabilities of events in a random experiment.**
- 18. In econometrics or machine learning, what does the term "overfitting" refer to?**
- A. When the model captures the underlying patterns in the data and generalizes well to new, unseen data.**
  - B. When the model performs poorly on the training data but generalizes well to new data.**
  - C. When the model learns noise or random fluctuations in the training data, performing well on training data but poorly on new data.**
  - D. When the model is too simple to capture the complexity of the underlying data patterns.**
- 19. In machine learning, what is the purpose of regularization techniques such as Lasso and Ridge?**
- A. To increase the complexity of the model.**
  - B. To decrease the bias of the model.**
  - C. To reduce the variance of the model.**
  - D. To penalize large coefficients and prevent overfitting.**
- 20. In time series analysis, what does autocorrelation refer to?**
- A. The correlation between two different time series variables.**
  - B. The correlation between consecutive observations within the same time series.**

- C. The correlation between the current observation and the average of past observations.**
- D. The correlation between the current observation and future observations.**

**21. In panel or cross-sectional data surveys, what does the term "fixed effects" typically refer to?**

- A. Variables that are constant across different units or individuals.**
- B. Random variations in the data that are difficult to control.**
- C. Time-varying factors that affect all units equally.**
- D. Systematic differences between individual units that remain constant over time.**

## ANSWER KEY

Q #.	Right Choice
1	D
2	A
3	C
4	C
5	C
6	D
7	C
8	A
9	D
10	B
11	B
12	D
13	A
14	D
15	A
16	C
17	A
18	C
19	D
20	B
21	D