

SAMPLE PAPER - HAT GENERAL

Fully Solved Edition with Explanations

Every MCQ answered, highlighted, and explained — Verbal Reasoning, Analytical Reasoning & Quantitative Reasoning

scholareye.xyz

VERBAL REASONING

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

1. My family and neighbors are _____ these days.

A. to worry

✓ B. worried

C. worries

D. worry

Correct Answer: B

Explanation: The sentence needs an adjective/participle that follows the linking verb “are” to describe the emotional state of the subject. “Worried” is the past-participle form used adjectivally (as in “are worried”), which fits perfectly after “are.” “Worry” and “worries” are verb forms that do not agree grammatically with “are,” and “to worry” (infinitive) does not fit either.

2. Please sit _____ this chair.

A. at

B. by

✓ C. in

D. on

Correct Answer: C

Explanation: When referring to sitting inside an enclosed seat such as an armchair, the preposition “in” is idiomatically used (e.g., “sit in this chair”). “At,” “by,” and “on” do not match this common usage pattern for chairs of this type.

Each of the following questions consists of a sentence with all or part of the sentence underlined. Following the requirements of standard written English, select (A) if the original is best; otherwise choose the best phrase from the options.

3. Nobody listened me.

A. Nobody listened me

B. Nobody listened at me

C. Nobody listened for me

✓ D. Nobody listened to me

Correct Answer: D

Explanation: The verb “listen” is intransitive and must be followed by the preposition “to” before its object (“listen to someone/something”). The original sentence omits this required preposition, so it is incorrect. Only “listened to me” is grammatically correct standard English.

Four lettered pairs (A to D) follow a related pair of words given in the question. Select the lettered pair that best expresses a relationship similar to that expressed in the original pair in capital letters.

4. SATURDAY : SUNDAY ::

A. first : last

✓ **B. November : December**

C. one : none

D. up : down

Correct Answer: B

Explanation: Saturday and Sunday are two consecutive units in a calendar sequence (days of the week). "November : December" expresses the same relationship — two consecutive units in a calendar sequence (months of the year). The other pairs express opposite or unrelated relationships, not consecutiveness.

5. JAPAN : JAPANESE ::

- A. Cantonese : Chinese
- B. France : Paris
- ✓ C. Holland : Dutch
- D. Iceland : polar

Correct Answer: C

Explanation: Japan is a country, and Japanese is the nationality/language associated with it. “Holland : Dutch” mirrors this exactly — Holland is a country and Dutch is its nationality/language. The other options pair a country with its capital, a dialect with a broader language group, or unrelated terms.

Choose the lettered word or phrase that is MOST NEARLY OPPOSITE in meaning to the word in capital letters.

6. Your RIVAL is not your _____.

- A. cousin
- ✓ B. friend
- C. neighbor
- D. spouse

Correct Answer: B

Explanation: A “rival” is a competitor or opponent. The word most nearly opposite in meaning is “friend,” since a friend is someone supportive and on your side, the direct opposite of a competitor. Cousin, neighbor, and spouse describe relationships, not an opposing role.

7. If you do something READILY, you do it without _____.

- A. fear
- B. help
- C. payment

✓ **D. reluctance**

Correct Answer: D

Explanation: “Readily” means willingly and promptly, without hesitation. Doing something “readily” therefore means doing it without “reluctance” (unwillingness). Fear, help, and payment are unrelated to the core sense of willingness carried by “readily.”

Choose the lettered word or phrase that is MOST NEARLY SIMILAR in meaning to the word in capital letters.

8. If you take HEED of something you _____ it.

- A. earn
- B. employ

✓ **C. pay attention to**

D. pay for

Correct Answer: C

Explanation: “Heed” means careful attention or notice. To “take heed of” something is to “pay attention to” it. Earn, employ, and pay for all involve different actions unrelated to attentiveness.

9. The audience **HECKLED** the speaker and _____ him many times.

- A. admired
- B. called
- C. ignored

✓ **D. interrupted**

Correct Answer: D

Explanation: To “heckle” means to interrupt a speaker with aggressive comments or jeering remarks. The closest synonym among the choices is “interrupted.” Admired and ignored are near-opposite in tone, and “called” does not capture the disruptive sense of heckling.

Questions 10 is based on the following paragraph.

Passage:

Cumner is a very pretty village in England. It has one short street of small houses, a police station, a post office and an old inn. Facing you, as you enter the street, is the lovely old church. There is a large grassy space, called The Common, which has houses on three sides of it. There is a butcher's shop, the big house belonging to Mr. Malcolmson, and a small house where Simon Eade, who worked for Mr. Malcolmson, lives with his wife and son. And there is Mr. Gibb's house behind a high brick wall.

George Eade was a good-looking young man of twenty-six. He also worked for Mr. Malcolmson and was honest and

hardworking. However, he did not make friends easily, and had a very bad temper at times.

Mrs. Eade loved her son very much. She was, therefore, rather jealous when she found out that George was in love with, and meant to marry, Susan Archer. She did not like the girl very much.

Susan was the daughter of a farmer. Her parents managed a large farm belonging to Sir Oswald Dunstan, and they thought that their daughter was too good for the son of one of Mr. Malcolmson's workers. The young couple had met in the fields. The girl had been unwell for some time, and her doctor had said it would do her good to have a holiday in the open air. Now there were not many places that her parents thought fit to send her. But they knew and liked the Eades, so she was sent to Mr. Malcolmson's fields. She got better at once, but she also fell in love.

George had never cared for a woman before, and he fell deeply in love with Susan. They promised to marry as soon as they could.

But there was at this time a man called Geoffrey Gibbs, who was interested in Susan, and wanted to make her his wife. He had been left his house by a relation who had died some years ago and lived like a lord. The Archers thought he would be much better for Susan, and told her so, many

times. However, she did not like him, and had been heard to say that if he were ten times as rich, she would die rather than be married to the ugly monster.

And he was ugly not only in looks, but in his manner too. His legs were short, and his body and hands were long. He had a very large head, which gave him a top-heavy appearance. He had large eyebrows and nasty small eyes. His nose was shaped like a beak, and he had a huge mouth.

George and Geoffrey disliked each other very much. Gibbs hated George because Susan loved him.

10. The first paragraph of the passage contains a description of _____.

✓ **A. Cumner**

B. Geoffrey Gibbs

C. George Eade

D. The Commons

Correct Answer: A

Explanation: The opening paragraph describes the village itself — its street, houses, church, shops, and the residents' homes — setting the scene for the story. It is a general description of the village of Cumner, not a focused description of any single character or of The Common alone (The Common is only one feature mentioned within the wider description of the village).

ANALYTICAL REASONING

Passage:

Tinea is a skin infection caused by certain fungi. A significant fraction of the people who contract tinea have outbreaks of its symptoms again and again. This proves that, for each of these individuals, the original case of tinea was, in fact, never completely cured.

11. The argument above assumes that a person who has outbreaks of tinea symptoms again and again

✓ A. can never be completely cured of tinea

B. did not take steps to avoid contracting tinea

C. does not understand what causes tinea

D. has not been repeatedly infected with tinea

Correct Answer: A

Explanation: The argument concludes that repeated outbreaks “prove” the original infection was never fully cured. This conclusion only follows if we assume that recurring symptoms must stem from the same, never-cured infection rather than from a new, separate reinfection. That hidden assumption is captured by option A: that such a person can never be completely cured. The argument explicitly rules out the alternative explanation of repeated reinfection (option D), which is exactly why D is the assumption being denied, not made.

Passage:

The claim that learning computer programming is a sure way to a bright future is analogous to the contention, popular a few years ago, that if one wanted a successful career one should study law. Now, of course, there are more law students graduating than the market can absorb.

12. The point of the analogy above is that _____.

- A. computer programmers will increasingly need the services of lawyers
- B. graduating law students and programming students will soon be competing with each other for the same jobs
- C. there will soon be more jobs for lawyers than there are now

✓ **D. there will soon be more programming students graduating than there are jobs for them**

Correct Answer: D

Explanation: The analogy draws a parallel between two waves of career enthusiasm: the earlier rush into law (which resulted in an oversupply of law graduates compared to available jobs) and the current rush into computer programming. The implied warning is that programming will follow the same pattern — too many graduates chasing too few jobs. Option D states this outcome directly; the other options introduce ideas (lawyers needing programmers, students competing directly with each other, or more law jobs appearing) that are not part of the analogy's point.

Passage:

Whenever Ned is outdoors and the sun is shining, Ned wears his sunglasses. Whenever Ned is outdoors and the sun is not shining, Ned carries his sunglasses in his pocket. Sometimes the sun is shining when Ned is not outdoors.

13. If the statements above are true and Ned is not wearing his sunglasses, which of the following statements must also be true?

- A. Ned is carrying his sunglasses in his pocket
- B. Ned is not outdoors
- C. Ned is not outdoors, and the sun is not shining

✓ **D. Ned is not outdoors and/or the sun is not shining**

Correct Answer: D

Explanation: The rule says Ned wears his sunglasses only when (outdoors AND sun shining). So if Ned is NOT wearing his sunglasses, the condition “outdoors AND sun shining” must be false. By logical negation (De Morgan’s law), that means “not outdoors OR sun not shining” — which is exactly option D. Options B and C are too strong (they don’t allow for the case where Ned is outdoors but the sun isn’t shining, in which case he carries them rather than wears them), and option A is only one of several possible situations, not something that must always be true.

Passage:

The equity for women bill was narrowly defeated several times in a country’s legislature. Thirty-three votes were

required for passage. Thirty-two members of the legislature voted for the bill in 1985, whereas only 30 legislators voted for it in 1987. This was true even though no legislators changed their votes.

14. Which of the following, if true, best explains why the number of votes for the bill changed from 32 in 1985 to 30 in 1987?

A. In 1985 the effort to pass the bill was led by an influential, experienced legislator, whereas in 1987 the effort was led by a little known, inexperienced legislator

B. In 1986 an organization that opposed the bill mounted an extensive lobbying campaign to persuade legislators to vote against it

C. There was an election in 1986 in which a party leader who did not support the bill was reelected and the party that was in power lost a seat in the legislature

✓ **D. There was an election in 1986 in which two legislators who supported the bill lost their seats in the legislature and no one who supported the bill was newly elected**

Correct Answer: D

Explanation: The puzzle states that no sitting legislator changed their vote, so the drop from 32 to 30 must be explained by a change in who was sitting in the legislature, not a change of heart. Option D provides exactly this: two pro-bill legislators lost their seats in the 1986 election and were not replaced by new supporters, which accounts precisely for the loss of two votes (32 to 30). Options A, B, and C would only be relevant if legislators had changed their minds, which the passage rules out.

Passage (Questions 15–20):

Exactly seven children R, S, T, V, W, X, and Y are to be divided into two study groups, group 1 and group 2. Group 1 must have three members, and group 2 must have four members. The children are being assigned to groups according to the following conditions:

- R cannot be in the same group as T.
- If S is in group 1, V must be in group 1.
- If W is in group 1, T must be in group 2.
- X must be in group 2.

15. If R is in group 2, which of the following must also be in group 2?

A. S

B. T

✓ C. W

D. Y

Correct Answer: C

Explanation: Suppose W were in group 1 instead. Then the rule “if W is in group 1, T must be in group 2” forces T into group 2. But R is already in group 2, and R can never share a group with T — a direct contradiction. Therefore W cannot be in group 1 when R is in group 2, which means W must be in group 2.

16. If W is in group 1, which of the following must also be in group 1?

✓ A. R

B. S

C. T

D. V

Correct Answer: A

Explanation: If W is in group 1, the rule forces T into group 2. Since R can never be in the same group as T, and T is now in group 2, R must be in the other group, group 1.

17. If T and Y are both in group 1, which of the following must be true?

A. S is in the same group as V

✓ B. S is in the same group as W

C. V is in the same group as R

D. W is in the same group as T

Correct Answer: B

Explanation: With T and Y already in group 1, only one seat remains in group 1 (which holds exactly three). R cannot join because R can't share a group with T, so R goes to group 2. W cannot join either, because W in group 1 would force T into group 2, contradicting T's placement here. If S filled the last seat, the rule would force V into group 1 too, overfilling it to four members — impossible. So the last seat must go to V, giving group 1 = {T, Y, V} and group 2 = {R, S, W, X}. In this arrangement S and W are both in group 2, so "S is in the same group as W" must be true.

18. If W is in the same group as T, any of the following is a pair of children who could be in a group together EXCEPT:

A. R and S

✓ B. S and Y

C. V and Y

D. W and X

Correct Answer: B

Explanation: If W and T were together in group 1, the rule would immediately force T into group 2 — a contradiction. So W and T must both be in group 2 instead. Since T is in group 2, R (who can never share T's group) must be in group 1. Working out the two valid arrangements that satisfy all the rules gives: group 1 = {R, S, V}, group 2 = {W, T, X, Y}; or group 1 = {R, V, Y}, group 2 = {W, T, X, S}. Checking each answer option against both arrangements shows that S and Y are never in the same group in either valid case, so that pair could never occur together — making it the exception.

19. If V is in the same group as Y, which of the following must be true?

A. R is in group 1

B. S is in group 1

C. T is in group 1

✓ D. W is in group 2

Correct Answer: D

Explanation: Testing the possibility that V and Y are together in group 2 leads to a contradiction in every combination of remaining members (R, S, T, W), so V and Y must instead both be in group 1. The only workable third member for group 1 turns out to be R or T (S is impossible because it would force V in too, overfilling the group; W is impossible because it would force T into group 2, clashing with R being forced into group 1). In both valid arrangements, W always ends up in group 2, so that is the statement that must be true.

20. If S is in group 1, which of the following must be true?

- A. T is in group 1
- B. T is in group 2
- C. Y is in group 1

✓ D. Y is in group 2

Correct Answer: D

Explanation: If S is in group 1, the rule forces V into group 1 as well, filling two of the three seats. The last seat can only be filled by R or T (not both, since they can't share a group, and not W, since W in group 1 would force T into group 2 while also stranding R with T in group 2 — a contradiction; and not Y, for the same reason). Since Y is never the valid third member in group 1, Y must always end up in group 2.

QUANTITATIVE REASONING

21. The sum of the sequence 15, 12, 9, 6, 3, 0 is _____.

A. 35

B. 40

✓ C. 45

D. 50

Correct Answer: C

Explanation: This is an arithmetic sequence with 6 terms, first term 15, last term 0. $\text{Sum} = (\text{number of terms} \div 2) \times (\text{first term} + \text{last term}) = (6 \div 2) \times (15 + 0) = 3 \times 15 = 45$.

22. The price of 30 pens is Rs. 750. Then the price of 25 such pens is Rs. _____.

A. 450

B. 500

C. 580

✓ D. 625

Correct Answer: D

Explanation: Price per pen = $750 \div 30 = \text{Rs. } 25$. Price of 25 pens = $25 \times 25 = \text{Rs. } 625$.

23. Sum of exterior angles of any polygon is _____.

A. 180°

B. 270°

✓ C. 360°

D. 540°

Correct Answer: C

Explanation: For any convex polygon, regardless of the number of sides, the sum of the exterior angles (one at each vertex, taken in the same rotational direction) always equals 360° , since together they represent one complete turn around the polygon.

24. If $x - 1/x = 2$, then $x^2 + 1/x^2 =$ _____.

A. 2

B. 4

✓ C. 6

D. 8

Correct Answer: C

Explanation: Square both sides of $x - 1/x = 2$: $(x - 1/x)^2 = 2^2$
 $\Rightarrow x^2 - 2(x)(1/x) + 1/x^2 = 4 \Rightarrow x^2 + 1/x^2 - 2 = 4 \Rightarrow x^2 + 1/x^2 = 6$.

25. The value of variance in the given data 1, 3, 5, 7, 9 is _____.

A. 0

B. 5

✓ C. 8

D. 9

Correct Answer: C

Explanation: Mean = $(1+3+5+7+9)/5 = 25/5 = 5$. Deviations from the mean: $-4, -2, 0, 2, 4$. Squared deviations: 16, 4, 0, 4, 16, summing to 40. Variance = $40 \div 5 = 8$.

26. $3/4$ is a _____ number.

A. integer

B. irrational

C. natural

✓ D. rational

Correct Answer: D

Explanation: $3/4$ can be expressed as a ratio of two integers (3 and 4) with a non-zero denominator, which is precisely the definition of a rational number. It is not a whole integer, not irrational (it has a terminating decimal, 0.75), and not a natural number (natural numbers are whole counting numbers).

27. $-\sqrt{16}$ is a _____ number.

✓ **A. integer**

B. irrational

C. natural

D. whole

Correct Answer: A

Explanation: $\sqrt{16} = 4$, so $-\sqrt{16} = -4$. Negative four is a whole number with a minus sign, which places it in the set of integers ($\dots, -2, -1, 0, 1, 2, \dots$). It cannot be natural or whole, since those sets contain only non-negative numbers, and it is not irrational since it is a terminating, exact integer value.

28. If $A = \{1, 2, 4\}$ and $B = \{1, 3, 4, 5, 7\}$ then number of elements in $A \times B =$ _____.

A. 1

B. 5

C. 7

✓ **D. 15**

Correct Answer: D

Explanation: The number of elements in the Cartesian product $A \times B$ is the product of the number of elements in each set: $|A| \times |B| = 3 \times 5 = 15$.

29. If $f(x) = (x^2 - 25)/(x + 5)$ then range of function is _____.

A. all real numbers

✓ B. all real numbers except -10

C. all real numbers except -5

D. all real numbers except 5

Correct Answer: B

Explanation: Factor the numerator: $x^2 - 25 = (x + 5)(x - 5)$. For $x \neq -5$, the function simplifies to $f(x) = x - 5$, which is just a straight line with the single point at $x = -5$ removed (a hole). The output value that would have occurred at $x = -5$ is $f(-5) = -5 - 5 = -10$, so this value is never actually produced by the function. The range is therefore all real numbers except -10 .

30. The value of $\log_a b \times \log_b c \times \log_c d \times \log_d e \times \log_e f =$ _____.

A. 1

✓ B. $\log_a f$

C. $\log_f a$

D. $\log_a f$

Correct Answer: B

Explanation: This is a telescoping chain-rule product of logarithms: $\log_a b \times \log_b c \times \log_c d \times \log_d e \times \log_e f$. Using the change-of-base identity $\log_a b = \ln(b)/\ln(a)$, each factor's denominator cancels with the numerator of the next factor in sequence (the 'b' in the denominator of the first term cancels with the 'b' that appears in the second term, and so on), leaving only $\ln(f)/\ln(a) = \log_a f$.