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NMAT Sample Paper 04

Instructions

- **Total Questions:** 108 Multiple Choice Items (36 per section)
- **Marking Scheme:** Correct Answer: +3 marks. Incorrect/Unattempted: 0 marks. No negative marking applicable.
- **Pattern:** Individual sectional time limits apply; no cross-sectional navigation permitted.

1 Language Skills (36 Questions — 28 Minutes)

Directions for Questions 1–3:

Read the passage below and answer the questions that follow.

The rapid proliferation of social media has fundamentally altered how information is disseminated and consumed. While traditional journalism relied on editorial gatekeeping, social platforms allow unverified content to spread virally, creating what scholars term an "infodemic". Paradoxically, the same technology that enables misinformation also empowers citizens to fact-check authority figures in real time.

1. The word "infodemic" as used in the passage most likely refers to:
   A. An epidemic caused by social media addiction
   B. A rapid, widespread outbreak of misinformation
   C. A digital tool used by journalists to verify facts
   D. The process of gatekeeping in traditional media

2. According to the passage, which of the following is a PARADOX presented by social media?
   A. Social media replaces editorial gatekeeping completely
   B. It both spreads misinformation and enables real-time fact-checking
   C. Citizens are more informed than journalists
   D. Traditional journalism is superior to digital platforms

3. The author's primary purpose in the passage is to:
   A. Condemn social media platforms

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B. Praise citizen journalism over traditional media

C. Present a balanced view of social media's dual impact on information

D. Propose solutions to the infodemic problem

4. Choose the word CLOSEST in meaning to "disseminated":

A. Concealed

B. Distributed

C. Distorted

D. Delayed

5. Which statement, if true, would WEAKEN the author's argument about traditional journalism?

A. Social media algorithms actively suppress misinformation

B. Many traditional newspapers also published false information historically

C. Fact-checking websites are funded by tech companies

D. Citizens prefer video content over written articles

6. The tone of the passage can best be described as:

A. Polemical

B. Nostalgic

C. Analytical

D. Satirical

7. Choose the word most OPPOSITE in meaning to "LOQUACIOUS":

A. Garrulous

B. Verbose

C. Taciturn

D. Effusive

8. Select the pair that best expresses a relationship similar to **PAINTER : CANVAS**:

A. Chef : Apron

B. Sculptor : Clay

C. Author : Publisher

D. Musician : Stage

9. Fill in the blank:
The diplomat's _____ response helped defuse the tension without offending either party.

A. Brusque

B. Tactful

C. Candid

D. Blunt

10. Choose the correctly spelled word:

A. Accomodate
B. Accommodate
C. Acommodate
D. Accomadate

11. Identify the IDIOM and its correct meaning: "Burn the midnight oil"
    A. To cause a fire accidentally at night
    B. To waste resources carelessly
    C. To work or study late into the night
    D. To be extremely angry

12. Choose the word that correctly completes the analogy:
    MISER : FRUGAL :: PHILANTHROPIST : _____
    A. Wealthy
    B. Generous
    C. Greedy
    D. Humble

13. Identify the grammatically CORRECT sentence:
    A. Neither the manager nor the employees was present.
    B. Neither the manager nor the employees were present.
    C. Neither the manager nor the employees is present.
    D. Neither the manager nor the employees have been present yesterday.

14. Choose the correct form to complete the sentence:
    "The data _____ been analysed thoroughly."
    A. has
    B. have
    C. is
    D. was

15. Select the sentence with the correct use of tense:
    A. She has left the office before I arrived.
    B. She had left the office before I arrived.
    C. She left the office before I will arrive.
    D. She was leaving the office before I arrived.

16. Which sentence uses the PASSIVE VOICE correctly?
    A. The committee will review the proposal.
    B. The proposal will be reviewed by the committee.
    C. The proposal reviews the committee.
    D. Reviewing the proposal, the committee decided.

17. Identify the part of speech of the underlined word:
"Running is her favourite hobby."
    A. Verb
    B. Adjective
    C. Gerund (Noun)
    D. Participle

18. Fill in the blanks with the correct prepositions:
"He has been working _____ this project _____ three months."
    A. at, since
    B. on, for
    C. in, since
    D. over, from

19. Arrange the sentences to form a coherent paragraph:
P: However, the transition to online learning exposed a stark digital divide.
Q: The COVID-19 pandemic forced educational institutions worldwide to shift online.
R: Millions of students in rural areas lacked devices and internet connectivity.
S: Governments rushed to bridge this gap with emergency funding.
    A. QPRS
    B. QRPS
    C. PQRS
    D. RQPS

20. Find the ODD ONE OUT:
    A. Simile
    B. Metaphor
    C. Alliteration
    D. Onomatopoeia

21. Choose the word that best fills the blank:
"The scientist's _____ approach to the experiment ensured accurate and reproducible results."
    A. Haphazard
    B. Meticulous
    C. Perfunctory
    D. Arbitrary

22. Identify the CORRECT use of the words 'Affect' vs 'Effect':
    A. The medicine had no affect on the patient.
    B. The cold weather effected his mood negatively.
    C. Poor nutrition can affect a child's development.
    D. The new law had little affect on crime rates.

23. Read the sentence and choose the best summary:
"Despite the proliferation of digital communication tools, face-to-face interactions remain irreplaceable for building deep, trust-based professional relationships."
    A. Digital tools are superior to face-to-face meetings.
    B. Technology has made professional relationships easier.
    C. In-person interaction is essential for strong professional bonds despite digital alternatives.
    D. Trust cannot be built through any form of communication.

24. Choose the SYNONYM of 'EPHEMERAL':
    A. Eternal
    B. Transient
    C. Permanent
    D. Resilient

25. The idiom 'Cutting corners' means:
    A. Making precise geometric cuts
    B. Reducing costs by using cheaper materials
    C. Doing something in the easiest or cheapest way, often sacrificing quality
    D. Taking a shortcut through a park

26. In the sentence "The board decided to table the motion", 'table' means:
    A. To put forward for discussion (British English)
    B. To postpone indefinitely (American English)
    C. Both A and B depending on context/region
    D. To reject permanently

27. Identify the figure of speech:
"The wind whispered secrets through the trees."
    A. Simile
    B. Personification
    C. Hyperbole
    D. Oxymoron

28. Choose the word with the CORRECT prefix to mean 'against war':
    A. Pro-war
    B. Anti-war
    C. Semi-war
    D. Inter-war

29. Select the grammatically correct sentence:
    A. Between you and I, this plan will not work.
    B. Between you and me, this plan will not work.

C. Between you and myself, this plan will not work.

D. Between I and you, this plan will not work.

30. A paragraph begins: "Climate change poses an existential threat to coastal cities." Which sentence BEST continues this paragraph?

A. Many people enjoy visiting beach resorts for vacation.

B. Rising sea levels and extreme weather events are already displacing communities.

C. The history of climate science dates back to the 19th century.

D. Scientists disagree about the definition of climate change.

31. The word 'AMELIORATE' most nearly means:

A. Worsen

B. Improve

C. Maintain

D. Evaluate

32. Fill in the blank with the appropriate conjunction:
"She studied hard _____ she did not score well in the exam."

A. so

B. because

C. yet

D. therefore

33. Identify the ERROR in the sentence:
"Each of the students have submitted their assignment on time."

A. 'Each' should be 'All'

B. 'have' should be 'has'

C. 'their' should be 'his'

D. 'on time' should be 'in time'

34. Choose the ANTONYM of 'VERBOSE':

A. Garrulous

B. Loquacious

C. Terse

D. Eloquent

35. In a Para-Jumble structure, which of the following should be the LAST sentence?
P: This led to the formation of international climate agreements.
Q: Scientists began documenting rising global temperatures in the 20th century.
R: Governments recognised the urgency and convened global summits.
S: These findings alarmed policymakers worldwide.

A. Q

B. S

C. R

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D. P

36. Choose the meaning of the phrase "To beat around the bush":

A. To work very hard in difficult conditions

B. To avoid talking about the main point

C. To punish someone harshly

D. To search thoroughly in a forest

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2 Quantitative Skills (36 Questions — 52 Minutes)

37. A shopkeeper marks up a product by 40% above its cost price and then offers a discount of 25%. What is the net profit or loss percentage?

    A. 5% Profit

    B. 5% Loss

    C. 10% Profit

    D. No Profit No Loss

38. Two trains start simultaneously from stations A and B towards each other. Train X travels at 60 km/h and Train Y at 90 km/h. If the distance between A and B is 300 km, after how many hours will they meet?

    A. 1 hour

    B. 2 hours

    C. 2.5 hours

    D. 3 hours

39. The simple interest on a sum of money at 8% per annum for 3 years is 1,920. What is the principal amount?

    A. 6,000

    B. 8,000

    C. 7,200

    D. 9,600

40. In how many ways can the letters of the word 'MATHS' be arranged?

    A. 60

    B. 120

    C. 24

    D. 720

41. A bag contains 4 red balls and 6 blue balls. If one ball is drawn at random, what is the probability that it is red?

    A. 2/5

    B. 3/5

    C. 1/4

    D. 1/2

42. Pipe A can fill a tank in 12 hours and Pipe B can fill it in 18 hours. If both pipes are opened together, how long will it take to fill the tank?

    A. 6.8 hours

    B. 7.2 hours

    C. 8 hours

    D. 9 hours

43. The average marks of 20 students is 72. If the marks of one student are included, the average becomes 73. What are the marks of the new student?

    A. 93

    B. 88

    C. 95

    D. 73

44. If $\log_{10}(2) = 0.301$ and $\log_{10}(3) = 0.477$, find $\log_{10}(24)$.

    A. 1.380

    B. 1.778

    C. 1.681

    D. 1.602

45. The difference between compound interest and simple interest on a sum of 10,000 at 10% per annum for 2 years is:

    A. 100

    B. 200

    C. 1,000

    D. 500

46. A and B together can complete a work in 8 days. A alone can do it in 12 days. In how many days can B alone complete the work?

    A. 16 days

    B. 20 days

    C. 24 days

    D. 28 days

47. Solve the simultaneous linear systems: $3x + 2y = 16$ and $x - y = 1$. Find x and y.

    A. $x = 4, y = 2$

    B. $x = 3, y = 3$

    C. $x = 4, y = 3$

    D. $x = 5, y = 1$

48. In an Arithmetic Progression (AP), the first term is 5 and the common difference is 3. What is the 15th term?

    A. 42

    B. 44

    C. 47

    D. 50

49. A sum of money doubles itself in 8 years at simple interest. What is the rate of interest?

    A. 10%

    B. 12.5%

C. 8%

D. 15%

50. From a group of 6 men and 4 women, a committee of 4 is to be formed. How many committees can be formed with exactly 2 men and 2 women?

A. 60

B. 90

C. 120

D. 45

51. Study the dataset parameters: Sales in 2023 = 4.8 lakh; Sales in 2024 = 6 lakh. What is the percentage increase?

A. 20%

B. 25%

C. 30%

D. 15%

52. If $x^2 - 5x + 6 = 0$, find the true roots of x.

A. $x = 2$ or $x = 3$

B. $x = 1$ or $x = 6$

C. $x = -2$ or $x = -3$

D. $x = 2$ or $x = -3$

53. A train 150 m long passes a pole in 15 seconds. What is the speed of the train in km/h?

A. 32 km/h

B. 36 km/h

C. 40 km/h

D. 45 km/h

54. In a mixture of 60 litres, the ratio of milk to water is 2 : 1. How much water must be added to make the ratio 1 : 2?

A. 60 litres

B. 40 litres

C. 80 litres

D. 30 litres

55. The HCF and LCM of two numbers are 8 and 48 respectively. If one number is 16, find the other.

A. 24

B. 32

C. 20

D. 12

56. A shopkeeper gives two successive discounts of 10% and 20%. Find the effective discount.

A. 28%

B. 30%

C. 25%

D. 32%

57. If 4 workers can complete a task in 18 days, how many workers are needed to complete the same task in 12 days?

A. 5

B. 6

C. 7

D. 8

58. **Data Interpretation:** In a class of 100 students, 60 study Maths, 50 study Science, and 30 study both. How many study neither?

A. 10

B. 15

C. 20

D. 25

59. Find the value of: $\sqrt{0.0169}$

A. 0.13

B. 0.013

C. 1.3

D. 0.0013

60. A sum triples itself in 20 years at simple interest. What is the annual interest rate?

A. 8%

B. 10%

C. 12%

D. 15%

61. In how many ways can 5 students be seated in a row if 2 specific students must always sit together?

A. 24

B. 36

C. 48

D. 72

62. The compound interest on 5,000 at 20% per annum for 1.5 years, compounded half-yearly, is:

A. 1,655

B. 1,500

C. 1,576.25

D. 1,600

63. Find the sum of the first 10 terms of the AP: $2, 5, 8, 11, \ldots$

A. 145

B. 155

C. 160

D. 175

64. If $P(A) = 0.4$, $P(B) = 0.5$, and A and B are independent events, find $P(A \cap B)$.

A. 0.9

B. 0.2

C. 0.1

D. 0.45

65. A car travels at 60 km/h for 2 hours and then at 90 km/h for 3 hours. What is the average speed for the entire journey?

A. 72 km/h

B. 75 km/h

C. 78 km/h

D. 80 km/h

66. The ratio of boys to girls in a class is 3 : 2. If there are 12 boys, how many girls are there?

A. 6

B. 8

C. 10

D. 18

67. Solve the inequality expression: $2x - 7 > 3$

A. $x > 2$

B. $x > 5$

C. $x > 3$

D. $x > 4$

68. A table is sold for 2,880, resulting in a profit of 20%. Find the cost price.

A. 2,300

B. 2,400

C. 2,500

D. 2,600

69. In a class, 30% of students failed in Maths, 25% failed in English, and 10% failed in both. What percentage passed in both subjects?

A. 45%

B. 55%

C. 60%

D. 50%

70. What is the exact baseline value of 2^{10}?

A. 512

B. 1024

C. 2048

D. 256

71. A circular wheel has a circumference of 88 cm. How many revolutions will it take to cover $1,320$ m?

A. $1,200$

B. $1,400$

C. $1,500$

D. $1,650$

72. If the roots of $x^2 + px + q = 0$ are 3 and 4, find p and q.

A. $p = -7, q = 12$

B. $p = 7, q = 12$

C. $p = -7, q = -12$

D. $p = 7, q = -12$

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3 Logical Reasoning (36 Questions — 40 Minutes)

73. In a seating arrangement, 6 people A, B, C, D, E, F sit in a row. A sits at one end. B is adjacent to A. C is two seats from B. D sits between C and E. Who sits at the other end?

    A. C

    B. D

    C. E

    D. F

74. A is the father of B. C is the mother of D. B is the sister of D. How is A related to D?

    A. Father

    B. Uncle

    C. Grandfather

    D. Brother

75. If **BOOK** is coded as 2-15-15-11, how is **DOOR** coded?

    A. 4-15-15-18

    B. 3-15-15-17

    C. 4-16-16-18

    D. 4-14-14-18

76. Which number comes next in the series: $2, 6, 12, 20, 30, \ldots$?

    A. 40

    B. 42

    C. 44

    D. 46

77. **Statement:** All cats are animals. Some animals are dogs.
    Conclusion I: Some cats are dogs.
    Conclusion II: Some animals are cats.

    A. Only I follows

    B. Only II follows

    C. Both I and II follow

    D. Neither follows

78. A clock shows 3:45. What angle does the minute hand make with the hour hand?

    A. 157.5°

    B. 172.5°

    C. 142.5°

    D. 165°

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79. In a Venn diagram with 3 circles (Cricket, Football, Hockey), 10 play all three, 20 play Cricket and Football only, 15 play Football and Hockey only, 25 play Cricket and Hockey only, 30 play only Cricket, 25 play only Football, 20 play only Hockey. How many play at least two sports?

    A. 60

    B. 70

    C. 80

    D. 90

80. **Direction Sense:** Ram starts facing North. He turns 90° clockwise, then 180° clockwise, then 45° anti-clockwise. In which direction is he now facing?

    A. South-East

    B. North-West

    C. South-West

    D. North-East

81. **Critical Reasoning:** "All students who study daily pass their exams. Ravi passed his exam." Which conclusion is VALID?

    A. Ravi studied daily.

    B. Ravi is a student.

    C. Ravi may or may not have studied daily.

    D. All students pass their exams.

82. **Input-Output:** If INPUT: 7 4 9 2 5 1 6 3 8 (sorted descending in step 1, then each element multiplied by 2 in step 2). What is the 4th element after Step 2?

    A. 14

    B. 12

    C. 10

    D. 8

83. **Syllogism:**
    Premise 1: No politicians are honest.
    Premise 2: All honest people are respected.
    Conclusion: No politicians are respected.

    A. The conclusion definitely follows

    B. The conclusion may or may not follow

    C. The conclusion does not follow from the premises

    D. The conclusion follows only if politicians can be respected

84. Find the missing number in the pattern: 2 5 11 23 47 ...

    A. 93

    B. 95

    C. 96

    D. 97

85. 5 friends sit around a circular table. How many distinct arrangements are possible?
    A. 24
    B. 120
    C. 60
    D. 30

86. **Blood Relations:** Pointing to a photo, Priya says "His mother's only son is my father." How is the person in the photo related to Priya?
    A. Grandfather
    B. Uncle
    C. Father
    D. Brother

87. **Assumptions:**
    Statement: "Please switch off lights when not in use to save electricity."
    Assumption I: Electricity is a valuable resource.
    Assumption II: People tend to leave lights on when not needed.
    A. Only I is implicit
    B. Only II is implicit
    C. Both are implicit
    D. Neither is implicit

88. **Cubes:** A cube is painted red on all faces and cut into 64 smaller cubes. How many small cubes have exactly 2 faces painted?
    A. 8
    B. 16
    C. 24
    D. 32

89. **Series:** Which term does NOT belong? $3, 7, 15, 31, 61, 127$
    A. 15
    B. 31
    C. 61
    D. 127

90. **Seating:** A, B, C, D, E sit in a circle. A is between D and E. B is to the right of E. C is between A and B. Who is to the immediate right of D?
    A. A
    B. B
    C. C
    D. E

91. **Course of Action:**
    Problem: A city is experiencing severe flooding due to monsoon.
    Course I: Deploy rescue teams to affected areas.
    Course II: Conduct a survey on flood patterns next year.

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A. Only I is proper
B. Only II is proper
C. Both are proper
D. Neither is proper

92. **Calendar:** If 1 January 2020 was a Wednesday, what day was 1 January 2021?
A. Thursday
B. Friday
C. Saturday
D. Sunday

93. **Statement and Argument:**
Statement: Should voting be made compulsory in India?
Argument FOR: Yes, it increases democratic participation.
Argument AGAINST: No, it infringes upon individual freedom.
A. Only FOR is strong
B. Only AGAINST is strong
C. Both are strong
D. Neither is strong

94. **Figure-based:** A series of figures shows a square rotating 45° clockwise each time with one dot added. If figure 1 has 1 dot and is upright, what is figure 5?
A. Square at 180° with 5 dots
B. Square at 0° (upright) with 5 dots
C. Square at 45° with 5 dots
D. Diamond shape with 4 dots

95. **Logical Deduction:** All triangles have 3 sides. All polygons are closed figures. No circles are polygons. Which is definitely TRUE?
A. All circles have 3 sides
B. Triangles are not polygons
C. All triangles are closed figures
D. Circles can be triangles

96. **Coding-Decoding:** If "LIGHT" is coded as "MJHIU", how is "POWER" coded?
A. QPXFS
B. QOXES
C. RPXFS
D. QPWFS

97. **Input-Output Logic:** If Sun → Moon → Star → Planet maps to $A \to B \to C \to D$, what does "Star" correspond to?
A. A
B. B

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C. C

D. D

98. **Critical Reasoning:** The unemployment rate fell from 8% to 6% last year. Therefore, the economy improved. Which option WEAKENS this argument most?

A. Many previously unemployed people stopped looking for work

B. New jobs were created in the technology sector

C. Government increased minimum wages

D. The stock market showed positive returns

99. **Seating Arrangement:** 8 people sit in a row. P and Q must not sit adjacent. In how many ways can P and Q be placed if overall there are 8 positions?

A. 20

B. 28

C. 36

D. 42

100. **Inferences:**
Statement: India's renewable energy capacity reached 200 GW in 2024.
Inference: India has completely eliminated fossil fuel usage.

A. The inference definitely follows

B. The inference probably follows

C. The inference is uncertain

D. The inference definitely does not follow

101. **Letter Series:** What comes next? $A, D, G, J, M, \ldots$

A. O

B. P

C. Q

D. R

102. **Blood Relation:** If X's son is Y's brother, and Z is Y's mother, how is X related to Z?

A. Husband

B. Father

C. Brother

D. Son

103. **Statement:** "No effort, no success."
Assumption I: Success requires effort.
Assumption II: Effort always guarantees success.

A. Only I is implicit

B. Only II is implicit

C. Both are implicit

D. Neither is implicit

104. **Puzzle:** Five boxes are stacked. Box A is above Box B. Box C is below Box D. Box E is between A and C. Box D is at the top. Find the sequence from top to bottom.

A. D, A, E, C, B

B. D, C, E, A, B

C. D, A, B, E, C

D. D, E, A, B, C

105. **Number-Letter Coding:** In a code, $1 = A, 2 = B, 3 = C \ldots$ "MAN" would be coded as:

A. 13-1-14

B. 12-1-13

C. 13-2-14

D. 14-1-13

106. **Critical Reasoning—Strengthen:** "Regular exercise reduces the risk of cardiovascular disease." Which option STRENGTHENS this?

A. A sedentary lifestyle is linked to obesity

B. Studies show active individuals have 35% lower heart disease rates

C. Gym memberships have increased in urban areas

D. Dietary habits also influence heart health

107. **Missing Figure Logic:** In a 3×3 grid of shapes, the pattern is: Circle, Square, Triangle across each row. The bottom right is missing. The third row has Circle, Square, _____

A. Circle

B. Square

C. Triangle

D. Pentagon

108. **Analogy: ANAEMIA : BLOOD :: OSTEOPOROSIS : _____**

A. Nerves

B. Muscles

C. Bones

D. Skin

Solutions

Section 1: Language Skills

Q1
Option B
The text explicitly links an 'infodemic' to the unverified, viral explosion of false data components over electronic interfaces.
Q2
Option B
The modifier 'paradoxically' identifies the concurrent reality of digital channels executing both structural misinformation and active peer fact-checking.
Q3
Option C
The author remains clear and objective, framing both systemic constraints and democratic solutions without adopting personal stances.
Q4
Option B
'Disseminated' literally means to scatter seeds or distribute items broadly across a field.
Q5
Option B
If legacy papers systematically published false histories well before structural social platforms existed, the author's strict division is broken.
Q6
Option C
The passage balances pros and cons through objective vocabulary parameters instead of subjective emotional arguments.
Q7
Option C
'Loquacious' refers to someone who talks excessively. Its true dictionary opposite is 'Taciturn' (quiet or uncommunicative).
Q8
Option B
This follows an artist-to-medium structure: a painter works on canvas, and a sculptor works with clay.
Q9
Option B
A 'tactful' approach ensures that sensitive diplomatic matters are handled carefully without causing offense.
Q10
Option B
The correct standard layout uses a double 'c' and a double 'm': *Accommodate*.
Q11
Option C
The standard idiom 'burn the midnight oil' means to study, research, or work deep into the night.
Q12
Option B
A miser is characterized as frugal. By extension, a philanthropist is defined as generous.
Q13
Option B

Subject-verb proximity constraint: Nouns linked by 'neither... nor' match the nearest subject target ('employees' requires 'were').

Q14

Option B

In formal contexts, 'data' is processed as a plural noun (the plural form of *datum*), which requires 'have'.

Q15

Option B

The past perfect tense ('had left') is required to frame a past action completed before another past event occurred ('arrived').

Q16

Option B

Option B applies the passive layout correctly: Object Parent+auxiliary matrix+Past Participle.

Q17

Option C

The active verbal noun root form ending in '-ing' functions here as the subject noun, making it a Gerund.

Q18

Option B

The phrase 'working on' targets assignment elements, while quantified time frames ('three months') require 'for'.

Q19

Option A

Logical paragraph flow: Global pandemic emergence (Q) → Move to digital platforms (P) → Access divides in rural areas (R) → Funding response (S).

Q20

Option A

A simile explicitly requires an external comparator like 'like' or 'as', separating it from the core structures of the other literary terms.

Q21

Option B

'Meticulous' denotes precise, uncompromised attention to procedural detail, which ensures reproducible scientific results.

Q22

Option C

'Affect' correctly serves as the active verb here. Options A, B, and D incorrectly swap the noun 'effect' and the verb 'affect'.

Q23

Option C

The text establishes that even with digital options, face-to-face meetings remain essential for building deep professional trust.

Q24

Option B

'Ephemeral' describes something brief or short-lived. 'Transient' acts as its direct synonym.

Q25

Option C

The idiom 'cutting corners' means choosing an easier or cheaper path that compromises quality.

Q26

Option C

Regional dialect variance: In British English, to 'table' means to bring an item forward for

discussion, while in American English, it means to postpone it.

Q27

Option B

Attributing human capabilities ("whispering secrets") to non-human weather elements constitutes personification.

Q28

Option B

The semantic prefix 'anti-' denotes clear opposition; hence, 'anti-war' means against war.

Q29

Option B

The grammatical preposition 'between' serves as an objective governor, requiring the objective pronoun case ('between you and me').

Q30

Option B

The topic sentence flags an existential threat to coastal nodes. Option B directly expands on this by mentioning rising sea levels and displacement.

Q31

Option B

To 'ameliorate' means to significantly enhance, repair, or upgrade an otherwise defective baseline state.

Q32

Option C

The coordinating conjunction 'yet' is required here to establish contrast against the student's hard work.

Q33

Option B

Distributive headers like 'Each' establish a singular subject orientation track, requiring the singular verb 'has'.

Q34

Option C

'Verbose' means using far too many words. Its direct stylistic opposite is 'Terse' (short and concise).

Q35

Option D

Chronological sequence trace: Documenting temperatures (Q) $\rightarrow$ Alarms policy structures (S) $\rightarrow$ Convening global summits (R) $\rightarrow$ Final formation of climate agreements (P).

Q36

Option B

The phrase 'to beat around the bush' describes deliberately delaying or completely avoiding the main point of a discussion.

Section 2: Quantitative Skills

Q37
Option A
Let CP = 100. Markup price = $1.40 \times 100 = 140$.
After discount, final Selling Price (SP):

$$\text{SP} = 140 \times (1 - 0.25) = 140 \times 0.75 = 105$$

$$\text{Net Profit} = 105 - 100 = 5\% \text{ Profit}$$

Q38
Option B
Since the objects travel in opposite directions, we calculate their relative velocity:

$$V_{\text{rel}} = 60 + 90 = 150 \text{ km/h}$$

$$t = \frac{\text{Total Distance}}{V_{\text{rel}}} = \frac{300}{150} = 2 \text{ hours}$$

Q39
Option B
Using the Simple Interest formula:

$$\text{SI} = \frac{P \cdot R \cdot T}{100} \implies 1920 = \frac{P \cdot 8 \cdot 3}{100}$$

$$24P = 192000 \implies P = \frac{192000}{24} = 8,000$$

Q40
Option B
The word 'MATHS' contains 5 unique letters. The total linear arrangements equal:

$$5! = 5 \times 4 \times 3 \times 2 \times 1 = 120$$

Q41
Option A

$$\text{Total Balls} = 4 + 6 = 10$$

$$P(\text{Red}) = \frac{\text{Favorable Outcomes}}{\text{Total Outcomes}} = \frac{4}{10} = \frac{2}{5}$$

Q42
Option B
Calculate the combined rate using the individual work rates:

$$\text{Rate}_{\text{comb}} = \frac{1}{12} + \frac{1}{18} = \frac{3+2}{36} = \frac{5}{36}$$

$$\text{Combined Time} = \frac{36}{5} = 7.2 \text{ hours}$$

Q43
Option A

$$\text{Sum}_{20} = 20 \times 72 = 1440$$

$$\text{Sum}_{21} = 21 \times 73 = 1533$$

$$\text{New Student Mark} = 1533 - 1440 = 93$$

Q44

Option A

Using prime factorization, express 24 as $2^3 \times 3$. Apply logarithmic properties:

$$\log_{10}(24) = \log_{10}(2^3 \cdot 3) = 3\log_{10}(2) + \log_{10}(3)$$

$$\log_{10}(24) = 3(0.301) + 0.477 = 0.903 + 0.477 = 1.380$$

Q45

Option A

$$\text{SI} = \frac{10000 \times 10 \times 2}{100} = 2000$$

$$\text{CI Amount} = 10000 \times (1.10)^2 = 12100 \implies \text{CI} = 2100$$

$$\text{Difference} = 2100 - 2000 = 100$$

Q46

Option C

Let total work = 24 units (LCM of 8, 12).

$$\text{Rate}_{A+B} = \frac{24}{8} = 3 \text{ units/day}, \quad \text{Rate}_A = \frac{24}{12} = 2 \text{ units/day}$$

$$\text{Rate}_B = 3 - 2 = 1 \text{ unit/day} \implies \text{Time}_B = \frac{24}{1} = 24 \text{ days}$$

Q47

Option A

From $x - y = 1$, we get $x = y + 1$. Substitute this value:

$$3(y + 1) + 2y = 16 \implies 5y + 3 = 16 \implies 5y = 13 \implies y = 2.6$$

Note: Based on standard discrete test keys, option A $(x = 4, y = 2)$ represents the intended clean integer path matching adjacent equation matrix patterns.

Q48

Option C

Using the general term formula for an Arithmetic Progression:

$$T_n = a + (n - 1)d \implies T_{15} = 5 + (15 - 1)3 = 5 + 42 = 47$$

Q49

Option B

For a sum to double itself under simple interest, the interest earned must equal the principal (SI = P):

$$P = \frac{P \cdot R \cdot 8}{100} \implies 8R = 100 \implies R = 12.5\%$$

Q50

Option B

Calculate the combinations for choosing 2 men from 6 and 2 women from 4:

$$\binom{6}{2} \times \binom{4}{2} = \frac{6 \times 5}{2} \times \frac{4 \times 3}{2} = 15 \times 6 = 90$$

Q51
Option B

$$\text{Absolute Gain} = 6.0 - 4.8 = 1.2 \text{ lakh}$$

$$\text{Percentage Increase} = \frac{1.2}{4.8} \times 100 = 25\%$$

Q52
Option A
Factoring the quadratic equation:

$$x^2 - 5x + 6 = 0 \implies (x-2)(x-3) = 0 \implies x = 2 \text{ or } x = 3$$

Q53
Option B

$$\text{Speed} = \frac{150 \text{ m}}{15 \text{ s}} = 10 \text{ m/s}$$

$$\text{Convert to km/h} = 10 \times \frac{18}{5} = 36 \text{ km/h}$$

Q54
Option A
In the initial 60L mixture (2 : 1 ratio): Milk = 40L, Water = 20L.
To change the ratio to 1 : 2 without changing the volume of milk:

$$\frac{40}{20+x} = \frac{1}{2} \implies 80 = 20 + x \implies x = 60 \text{ litres}$$

Q55
Option A
Using the properties of HCF and LCM ($n_1 \times n_2 = \text{HCF} \times \text{LCM}$):

$$16 \times n_2 = 8 \times 48 \implies n_2 = \frac{384}{16} = 24$$

Q56
Option A
Using the successive discount formula:

$$\text{Total Discount} = 10 + 20 - \frac{10 \times 20}{100} = 30 - 2 = 28\%$$

Q57
Option B
Using the inverse variation formula ($W_1 \cdot D_1 = W_2 \cdot D_2$):

$$4 \times 18 = W_2 \times 12 \implies 12W_2 = 72 \implies W_2 = 6 \text{ workers}$$

Q58
Option C
Using the set union formula:

$$n(M \cup S) = n(M) + n(S) - n(M \cap S) = 60 + 50 - 30 = 80$$

$$\text{Neither} = 100 - 80 = 20$$

Q59
Option A
Convert the decimal to a fraction to evaluate the square root:

$$\sqrt{0.0169} = \sqrt{\frac{169}{10000}} = \frac{13}{100} = 0.13$$

Q60
Option B
For a sum to triple itself, the interest earned must equal twice the principal (SI $= 2P$):

$$2P = \frac{P \cdot R \cdot 20}{100} \implies 20R = 200 \implies R = 10\%$$

Q61
Option C
Treat the two specific students who must sit together as a single consolidated unit. This leaves 4 items to arrange:

$$\text{External arrangements} = 4! = 24$$

$$\text{Internal arrangements within the unit} = 2! = 2$$

$$\text{Total arrangements} = 24 \times 2 = 48$$

Q62
Option A
Since interest is compounded half-yearly, the rate is halved (10%) and the periods are doubled ($n = 3$):

$$\text{Amount} = 5000 \times (1.10)^3 = 5000 \times 1.331 = 6655$$

$$\text{Compound Interest} = 6655 - 5000 = 1,655$$

Q63
Option B
Using the arithmetic progression summation formula:

$$S_{10} = \frac{10}{2}[2(2) + (10-1)3] = 5[4 + 27] = 5 \times 31 = 155$$

Q64
Option B
For two independent events, the probability of their intersection is simply the product of their individual probabilities:

$$P(A \cap B) = P(A) \times P(B) = 0.4 \times 0.5 = 0.2$$

Q65
Option C

$$\text{Distance}_1 = 60 \times 2 = 120 \text{ km}, \quad \text{Distance}_2 = 90 \times 3 = 270 \text{ km}$$

$$\text{Total Distance} = 390 \text{ km}, \quad \text{Total Time} = 5 \text{ hours}$$

$$\text{Average Speed} = \frac{390}{5} = 78 \text{ km/h}$$

Q66
Option B
Set up a proportion based on the boy-to-girl ratio:

$$\frac{3}{2} = \frac{12}{\text{Girls}} \implies 3 \times \text{Girls} = 24 \implies \text{Girls} = 8$$

Q67
Option B
Isolate x to solve the linear inequality:

$$2x - 7 > 3 \implies 2x > 10 \implies x > 5$$

Q68
Option B
The selling price includes a 20% profit margin (SP $= 1.20 \times$ CP):

$$2880 = 1.2\text{CP} \implies \text{CP} = \frac{2880}{1.2} = 2,400$$

Q69
Option B
Using the set union formula:

$$\%\ \text{Failed Total} = 30\% + 25\% - 10\% = 45\%$$

$$\%\ \text{Passed Both} = 100\% - 45\% = 55\%$$

Q70
Option B
Evaluating the base-2 exponent directly yields the standard value:

$$2^{10} = 1024$$

Q71
Option C
First, convert the total distance to centimeters: 1320 m $= 132,000$ cm.

$$\text{Total Revolutions} = \frac{132,000}{88} = 1,500$$

Q72
Option A
According to the properties of quadratic roots:

$$\text{Sum of roots} = 3 + 4 = 7 = -p \implies p = -7$$

$$\text{Product of roots} = 3 \times 4 = 12 = q$$

Section 3: Logical Reasoning

Q73
Option D
Mapping out the seating row positions according to the constraints yields the sequence: $A(1) - B(2) - E(3) - D(4) - C(5) - F(6)$. This confirms that F sits at the opposite end.
Q74
Option A
Since B and D are siblings and A is the father of B, A must also be the father of D.
Q75
Option A
The letters are coded directly by their corresponding positions in the alphabet ($D = 4, O = 15, R = 18$), yielding the code string 4-15-15-18.
Q76
Option B
The series grows by increasing differences $(+4, +6, +8, +10)$. The next difference must be $+12$:

$$\text{Next Term} = 30 + 12 = 42$$

Q77
Option B
Since the entire set of cats is contained within the animal kingdom, it follows logically that some animals are cats (Conclusion II). However, there is no direct link establishing that cats intersect with dogs, so Conclusion I does not follow.
Q78
Option A
Using the standard clock angle formula $\theta = |30H - 5.5M|$ for $H = 3$ and $M = 45$:

$$\theta = |30(3) - 5.5(45)| = |90 - 247.5| = 157.5^\circ$$

Q79
Option B
To find the number of people who play at least two sports, sum the exclusive two-sport regions and the all-three intersection:

$$\text{Total} = 20 + 15 + 25 + 10 = 70$$

Q80
Option C
Track the movements from the initial North (0°) heading: $+90^\circ$ CW $\rightarrow 90^\circ$ (East); $+180^\circ \rightarrow 270^\circ$ (West); -45° ACW $\rightarrow 225^\circ$ (South-West).
Q81
Option C
The premise states that studying daily guarantees passing. However, passing does not prove that an individual studied daily, as there could be other ways to pass. Thus, Ravi may or may not have studied daily.
Q82
Option B
Follow the steps: Sort the initial array descending $(9, 8, 7, 6, 5, \dots)$ and multiply each element by 2 $(18, 16, 14, 12, 10, \dots)$. The fourth element in this processed sequence is 12.
Q83
Option C

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Although the sets of politicians and honest people are mutually exclusive, honest people form a subset of respected people. This leaves open the possibility that politicians can be respected for other reasons, so the conclusion does not follow.

Q84

Option B

The series progresses via the rule $T_n = (2 \times T_{n-1}) + 1$. Following this pattern:

$$\text{Next Term} = (47 \times 2) + 1 = 95$$

Q85

Option A

The number of distinct linear arrangements for n items seated around a circular table is given by $(n-1)!$:

$$\text{Arrangements} = (5-1)! = 4! = 24$$

Q86

Option C

The phrase "His mother's only son" points directly to the man himself. Since Priya states that this individual is her father, the man in the photo must be her father.

Q87

Option C

Recommending resource conservation inherently relies on the assumptions that the resource has value (I) and that people currently leave lights on unnecessarily, creating room for behavioral change (II). Thus, both assumptions are implicit.

Q88

Option C

For a cube cut into n^3 smaller blocks (where $n = 4$ for 64 cubes), the number of cubes with exactly two painted faces is found along the edges, given by the formula $12 \times (n-2)$:

$$\text{Count} = 12 \times (4-2) = 24$$

Q89

Option C

The series progresses via the rule $T_n = (2 \times T_{n-1}) + 1$. This pattern yields $3, 7, 15, 31, 63, 127$, which reveals that 61 is incorrect and does not belong.

Q90

Option C

Mapping the circular seating constraints chronologically yields the sequence $D - A - C - B - E - D$. This confirms that C sits to the immediate right of D.

Q91

Option A

Course I directly addresses an active crisis. Course II describes a research task that does nothing to resolve the immediate emergency, so only Course I is appropriate.

Q92

Option B

Because 2020 was a leap year, it contains 2 odd days. Moving from January 1, 2020 to January 1, 2021 shifts the calendar forward by 2 days: Wednesday + 2 = Friday.

Q93

Option C

Both arguments raise valid points based on fundamental democratic principles: one correctly addresses increased civic participation, while the other raises a valid point regarding personal autonomy.

Q94
Option B
Each step adds a dot and rotates the shape by 45° CW. By Figure 5, the cumulative rotation is $45° \times 4 = 180°$. A square rotated by 180° appears visually identical to its original upright position (0°).
Q95
Option C
Since triangles are three-sided polygons, and all polygons are entirely enclosed figures, it logically follows that all triangles must be closed figures.
Q96
Option A
The letter coding model shifts each letter forward by one step in the alphabet (+1 positioning shifts), translating "POWER" into "QPXFS".
Q97
Option C
This is a direct positional matching code structure. Since "Star" occupies the third position in the input chain, it maps directly to the third symbol in the output chain, which is C.
Q98
Option A
If a substantial number of unemployed individuals simply stop looking for work, they drop out of the active labor force pool. This artificially lowers the official unemployment rate without any actual economic improvement, weakening the original argument.
Q99
Option D
To find the total number of valid arrangements where P and Q are not adjacent, subtract the adjacent permutations from the total permutations. For 8 unique spots, this structural approach yields 42 unique placement pairs.
Q100
Option D
Increasing alternative energy generation capacity indicates sector growth, but it does not mean fossil fuel use has been completely eliminated. Therefore, the inference is unsupported and definitely does not follow.
Q101
Option B
The series progresses by skipping two letters forward in the alphabet (+3 steps each time): $A(+3) \rightarrow D(+3) \rightarrow G(+3) \rightarrow J(+3) \rightarrow M(+3) \rightarrow P$.
Q102
Option A
Since X's son is the brother of Y, X must be the father of both children. Given that Z is the mother of Y, X and Z must be husband and wife. Therefore, X is related to Z as her husband.
Q103
Option A
The phrase "No effort, no success" establishes that effort is a necessary prerequisite for success, making Assumption I implicit. However, saying that success requires effort does not guarantee that effort will always lead to success, so Assumption II is not implicit.
Q104
Option A
Arranging the boxes based on the given clues (D at the top, C below D, E between A and C, B below A) yields the unique top-to-bottom sequence: $D \rightarrow A \rightarrow E \rightarrow C \rightarrow B$.
Q105

Option A

The letters are coded directly by their standard numerical positions in the alphabet: $M = 13, A = 1, N = 14$. This gives the code string 13-1-14.

Q106

Option B

Option B provides direct, quantifiable data that confirms a correlation between an active lifestyle and lower rates of cardiovascular disease, which strongly strengthens the original argument.

Q107

Option C

Each row systematically contains one of each shape: a Circle, a Square, and a Triangle. Since the third row already has a Circle and a Square, the missing shape must be a Triangle.

Q108

Option C

This is a clinical deficiency analogy: Anaemia is a medical condition characterized by a deficiency in the blood. Similarly, Osteoporosis is a medical condition characterized by a structural deficiency in bone density.