

uGSOT National Entrance Test (uGNET)

Test Kit & Preparation Guide

About **uGNET**

uGNET is the official **entrance test** for admission into the **computer science engineering program at upGrad School of Technology (uGSOT)**. The test is designed to assess a student's **problem-solving ability, logical thinking, mathematical foundation, verbal comprehension, and readiness for a future-focused engineering curriculum**. Your performance in the uGNET, along with your overall profile score, makes you eligible for up to a **100% scholarship**.

Test Structure **Overview**

Parameter	Details
Total Questions	90
Total Marks	160
Test Duration	120 Minutes
Mode	Online
Question Types	MCQs + Input-based
Sections	Mathematical Ability, Logical Reasoning, Verbal Aptitude
Marking scheme	Easy: 1 mark Medium: 2 marks Difficult: 4 marks Wrong Answer: -1 mark (Negative Marking) Unattempted: No Penalty

Note: Marks per question vary based on difficulty level.



Preparation Guidelines

Please read these instructions carefully before attempting the uGNET. Non-compliance may lead to disqualification.

Technical Requirements (Important)

- ✔ Please attempt the test on a laptop or desktop computer only. Mobile phones and tablets are not allowed.
- ✔ The device must have a properly functioning webcam and microphone; both are mandatory throughout the test.
- ✔ Please use the latest version of Chrome (v. 111+), Firefox (v. 128+), or Safari (v. 16.4+)
- ✔ A stable internet connection of minimum or equal to 3 mbps is essential to avoid disruptions during the test.
- ✔ Please avoid switching networks or using shared or unstable connections while the assessment is in progress.

Proctoring Guidelines

- ✔ The webcam and microphone will remain switched on throughout the test, and your activity will be recorded.
- ✔ Please do not refresh, close, or navigate away from the test window once the assessment has started.
- ✔ Ensure your device is fully charged or connected to a power source to avoid interruptions.
- ✔ The uGNET is a proctored exam. Any signs of malice, cheating, misrepresentation will not be tolerated.
- ✔ Any individual(s) found guilty in this regard will be debarred from uGNET indefinitely.
- ✔ You should attempt the test in a quiet, well-lit room.
- ✔ The presence of other individuals, background noise, or the use of external devices such as books, notes, calculators, or secondary screens is strictly prohibited unless explicitly mentioned.

Section-wise Breakdown Written Test (Level I)

Section 1: Mathematical Ability

Parameter	Details
Questions	30
Max Marks	55
Difficulty Split	Easy (15), Medium (10), Difficult (5)
Question Type	MCQ + Input-based

Syllabus Coverage

- Ratios & Proportions, Percentages, Averages, Profit & Loss, simple & compound interest
- Time & Work, Speed–Time–Distance
- Number System: LCM, HCF, Divisibility, Exponents, Logarithms
- Algebra: Polynomials, Linear & Quadratic Equations, Inequalities
- Functions: Domain & Range
- Sets & Venn Diagrams
- Permutations & Combinations, Probability
- Sequences & Series (AP/GP)
- Matrices & Determinants
- Basic Differentiation & Integration
- Data Interpretation: Tables, Graphs, Charts

Section 2: Logical Reasoning (Pseudocoding + Critical Thinking)

Parameter	Details
Questions	45
Max Marks	75
Difficulty Split	Easy (25), Medium (15), Difficult (5)
Question Type	MCQ + Input-based

Logical & Analytical Reasoning

- Syllogisms & Logical Deduction
- Data Sufficiency & Cause–Effect
- Series completion, Coding–Decoding
- Blood Relations & Family Trees
- Direction Sense
- Seating Arrangements (Linear & Circular)
- Clocks & Calendars
- Complex Puzzles

Logical & Analytical Reasoning

- Input–Output flow
- Language-agnostic syntax
- Variables & Data Storage
- If–Else, Switch statements
- Loops (For, While, Nested)
- Arrays & Strings (basic manipulation)
- Functions (parameters, return values, logic tracing)

Section 3: Verbal Aptitude

Parameter	Details
Questions	15
Max Marks	30
Difficulty Split	Easy (6), Medium (6), Difficult (3)
Question Type	MCQs

Focus Areas

- Reading Comprehension
- Identifying main idea, tone, and inference
- Understanding context and intent

Personal Interview (Level II)

Students who qualify uGNET proceed to a **Personal Interview**.

Interview Overview

Parameter	Details
Duration	20–30 minutes
Total Marks	20
Mode	Online
Difficulty-based marking	Not applicable

What is assessed?

- Communication skills
- Problem-solving & analytical thinking
- Algorithmic reasoning
- Academic fundamentals
- Career aspirations & clarity of goals

Interview Format

- Self-introduction & aspirations
- Logical reasoning questions
- Quantitative aptitude questions
- Guesstimate-based problem solving

Interview & Test Grooming Guidelines

- ✔ Wear formal & simple clothing.
- ✔ Avoid caps, hoodies, or sunglasses
- **Ensure:** Your face is clearly visible Proper lighting (no backlight) Camera is placed at eye level

*Sit upright and avoid unnecessary movement during the test.

Preparation Support

- Students are strongly advised to attempt the mock papers before the main exam to understand the uGNET better.
- Preparation should focus on concept clarity, problem-solving speed, and logical thinking, not rote learning

uGNET is designed to identify students who can build, think, and adapt in a future-driven tech ecosystem.

You can view the uGNET guidelines and sample papers here: <http://bit.ly/4qp1C5l>

Get in Touch With Us

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Practice Paper with Answer Key - SET 1

Q1. (easy) [1 mark]

What is the average of the numbers 4, 8, and 12?

- a)8
- b)10
- c)12
- d)14

Q2. (easy) [1 mark]

If the ratio of boys to girls in a class is 3:4 and there are 12 boys, how many girls are there?

- a)16
- b)18
- c)20
- d)12

Q3. (difficult) [4 marks]

If a polynomial $f(x) = x^3 + ax^2 + bx + c$ has roots 2, 3, and 4, what is the value of $a + b + c$?

- a)23
- b)20
- c)18
- d)15

Q4. (difficult) [4 marks]

A train travels 120 km at a speed of 60 km/h and then 180 km at a speed of 90 km/h. What is the average speed of the train for the entire journey?

- a)72 km/h
- b)75 km/h
- c)80 km/h
- d)78 km/h

Q5. (difficult) [4 marks]

If the product of two numbers is 72 and their HCF is 6, what is their LCM?

- a)12
- b)36
- c)48
- d)72

Q6. (difficult) [4 marks]

In a class of 60 students, the ratio of boys to girls is 3:2. If 5 boys transfer to another school, what will be the new ratio of boys to girls?

- a)2:3
- b)3:5
- c)11:8

d)8:11

Q7. (difficult) [4 marks]

A sum of money is invested at a rate of 10% per annum compounded annually. If the amount after 2 years is

\$1210, what was the principal amount?

- a)\$1000
- b)\$1100
- c)\$900
- d)\$1200

Q8. If the first term of an arithmetic sequence is 5 and the common difference is 3, what is the 10th term?

- a)32
- b)35
- c)30
- d)27

Q9. (medium) [2 marks]

What is the probability of getting a sum of 7 when two six-sided dice are thrown?

- a)1/6
- b)1/12
- c)1/4
- d)1/8

Q10. (medium) [2 marks]

In a class, 60% of the students are boys. If there are 30 boys, how many students are there in total?

- a)50
- b)70
- c)60
- d)80

Q11. (medium) [2 marks]

If a quadratic equation has roots 2 and 3, what is the equation in the standard form?

- a) $x^2 - 5x + 6 = 0$
- b) $x^2 - 6x + 5 = 0$
- c) $x^2 + 5x + 6 = 0$
- d) $x^2 + 6x + 5 = 0$

Q12. (medium) [2 marks]

What is the least common multiple (LCM) of 12 and 15?

- a)30
- b)45

- c)60
- d)75

Q13. (medium) [2 marks]

A car travels at a speed of 60 km/h. How long will it take to cover a distance of 240 km?

- a)3 hours
- b)4 hours
- c)5 hours
- d)6 hours

Q14. (medium) [2 marks]

If the principal amount is \$1000 at a simple interest rate of 5% per annum, what will be the total amount after 3 years?

- a)\$1150
- b)\$1050
- c)\$1100
- d)\$1200

Q15. A shopkeeper bought a watch for \$120 and sold it for \$150. What is the percentage profit?

- a)20%
- b)25%
- c)30%
- d)15%

Q16. (medium) [2 marks]

The ratio of the ages of A and B is 3:4. If A is 12 years old, what is B's age?

- a)16
- b)18
- c)14
- d)15

Q17. (medium) [2 marks]

A teacher has an average of 80 marks in her class of 20 students. If one student scored 60 marks, what will be the new average after excluding this student?

- a)79
- b)78
- c)77
- d)76

Q18. (easy) [1 mark]

If an item costs \$80 and is sold for \$100, what is the profit percentage?

- a)20%
- b)25%
- c)30%

d)15%

Q19. (easy) [1 mark]

If you invest \$1000 at an annual interest rate of 5% for 2 years, what will be the total amount using simple interest?

- a)\$1100
- b)\$1050
- c)\$1200
- d)\$1150

Q20. (easy) [1 mark]

A car travels 60 km in 1 hour. How far will it travel in 3 hours at the same speed?

- a)120 km
- b)180 km
- c)150 km
- d)200 km

Q21. (easy) [1 mark]

What is the HCF of 12 and 18?

- a)2
- b)3
- c)6
- d)9

Q22. What is 2^3 ?

- a)6
- b)8
- c)4
- d)10

Q23. (easy) [1 mark]

Which of the following is a solution to the equation $x + 5 = 10$?

- a)5
- b)3
- c)10
- d)15

Q24. (easy) [1 mark]

How many ways can you arrange the letters A, B, and C?

- a)3
- b)6
- c)9
- d)12

Q25. (easy) [1 mark]

If a bag contains 3 red balls and 2 blue balls, what is the probability of picking a blue ball?

- a) $1/5$
- b) $1/2$
- c) $2/5$
- d) $3/5$

Q26. (easy) [1 mark]

What is the sum of the first 5 natural numbers?

- a) 10
- b) 15
- c) 20
- d) 25

Q27. (easy) [1 mark]

If a matrix has 2 rows and 3 columns, what is its order?

- a) 2×3
- b) 3×2
- c) 2×2
- d) 3×3

Q28. (easy) [1 mark]

What is the derivative of x^2 ?

- a) 1
- b) $2x$
- c) x^2
- d) x

Q29. In a set of numbers {2, 4, 6, 8}, what is the complement of the number 4?

- a) {2, 6, 8}
- b) {2, 4, 6}
- c) {6, 8}
- d) {2, 8}

Q30. (easy) [1 mark]

What is the sum of the first 10 odd numbers?

- a) 90
- b) 120
- c) 100
- d) 50

Q31. (medium) [2 marks]

In the following code segment, what will be the output? FOR i = 1 TO 5 DO PRINT i END FOR

- a)1 2 3 4 5
- b)0 1 2 3 4
- c)1 2 3 4
- d)5 4 3 2 1

Q32. (medium) [2 marks]

If a train travels 60 km in 1 hour, how long will it take to cover 180 km?

- a)2 hours
- b)2.5 hours
- c)3 hours
- d)4 hours

Q33. (medium) [2 marks]

A clock shows the time as 3:15. What is the angle between the hour and the minute hands?

- a)52.5 degrees
- b)45 degrees
- c)67.5 degrees
- d)90 degrees

Q34. (medium) [2 marks]

In a coding-decoding scheme, if 'CAT' is coded as '31420' and 'DOG' as '51412', what will 'GOD' be coded as?

- a)51241
- b)51412
- c)41251
- d)41325

Q35. (medium) [2 marks]

If the array arr = [10, 20, 30, 40], what will arr[2] + arr[3] return?

- a)30
- b)40
- c)70
- d)10

Q36. Consider the following pseudocode: IF (x > 10) THEN y = x + 5 ELSE y = x - 5 What will be the value of y if x is 8?

- a)3
- b)5
- c)8
- d)13

Q37. (medium) [2 marks]

Which of the following statements logically follows from the premises: 'All roses are flowers' and 'Some flowers fade quickly'?

- a) Some roses fade quickly.
- b) All flowers are roses.
- c) No roses fade quickly.
- d) Some flowers are not roses.

Q38. (medium) [2 marks]

In a family, A is the brother of B. C is the sister of A. D is the father of B. How is C related to D?

- a) Daughter
- b) Son
- c) Daughter-in-law
- d) Sister-in-law

Q39. (medium) [2 marks]

If all cats are mammals and some mammals are not dogs, which of the following statements is necessarily true?

- a) Some cats are not dogs.
- b) All mammals are cats.
- c) No cats are dogs.
- d) All dogs are mammals.

Q40. (easy) [1 mark]

In a linear arrangement of 5 people, if A is at position 1 and E is at position 5, how many people are there between A and E?

- a) 1
- b) 2
- c) 3
- d) 4

Q41. (medium) [2 marks]

Given the statements: 'If it rains, then the ground is wet.' and 'The ground is not wet.' What can be concluded?

- a) It is not raining.
- b) It is raining.
- c) The rain is light.
- d) We cannot conclude anything.

Q42. (medium) [2 marks]

A group of friends consists of Tom, Jerry, and Spike. Tom and Jerry are brothers, and Spike is Tom's cousin. How is Spike related to Jerry?

- a) Brother
- b) Cousin
- c) Friend

d)Sibling

Q43. If the function $f(x) = x^2 + 2x$ returns 20 when $x=2$, what is the value of x when $f(x) = 30$?

- a)3
- b)4
- c)5
- d)6

Q44. (medium) [2 marks]

In a circular seating arrangement, if P is sitting to the left of Q and R is sitting to the right of Q, who is sitting opposite to P?

- a)Q
- b)R
- c)Neither
- d)Both

Q45. (medium) [2 marks]

If A can complete a task in 10 days and B can complete the same task in 15 days, how long will they take together?

- a)6 days
- b)8 days
- c)10 days
- d)12 days

Q46. (difficult) [4 marks]

In a family of six members A, B, C, D, E, and F, there are two married couples. A is the mother of C, who is the sister of F. D is the father of B. E is the grandmother of C. Which of the following statements is definitely true?

- A) B is a male.
- B) F is a female.
- C) D is married to A.
- D) E is the mother of D.

Q47. (difficult) [4 marks]

Consider the following pseudocode: 1. Initialize $sum = 0$ 2. For i from 1 to N do 3. If $i \% 2 == 0$ then 4. $sum = sum + i$ 5. End If 6. End For 7. Output sum What does this pseudocode calculate?

- A) The sum of all integers from 1 to N .
- B) The sum of all even integers from 1 to N .
- C) The sum of all odd integers from 1 to N .
- D) The sum of all integers excluding N .

Q48. (difficult) [4 marks]

A clock shows the time as 3:15. If the hour hand moves at a rate of 0.5 degrees per minute, and the minute hand moves at a rate of 6 degrees per minute, what will be the angle between the two hands after 45 minutes?

- A) 180 degrees
- B) 225 degrees
- C) 270 degrees
- D) 300 degrees

Q49. (difficult) [4 marks]

You are given a series of numbers: 2, 4, 8, 16, ?, 64. Identify the missing number.

- A) 24
- B) 32
- C) 40
- D) 48

Q50. (difficult) [4 marks]

In a certain code language, 'CAT' is coded as '3120', 'DOG' as '4157', and 'FISH' as '61938'. Based on this coding pattern, how would 'HAT' be coded?

- A) 120
- B) 138
- C) 1210
- D) 183

Q51. (medium) [2 marks]

In a linear seating arrangement, if A is sitting to the left of B and C is sitting to the right of A, who is in the middle?

- A) A
- B) B
- C) C
- D) None of the above

Q52. (easy) [1 mark]

Which of the following is NOT a control structure in programming?

- A) If-Else
- B) For Loop
- C) Function
- D) Switch Case

Q53. (easy) [1 mark]

What is the relationship between the variables X and Y in the pseudocode: IF X = Y THEN PRINT 'Equal' ELSE PRINT 'Not Equal'?

- A) X is greater than Y
- B) X is less than Y
- C) X and Y are equal

D) X and Y are different

Q54. (easy) [1 mark]

In a family, A is the father of B. C is the mother of B. D is the sister of A. How is D related to B?

- A) Aunt
- B) Mother
- C) Cousin
- D) Sister

Q55. (easy) [1 mark]

If 'A' is coded as '1', 'B' as '2', and so on, what is the code for 'CAT'?

- A) 24
- B) 31
- C) 23
- D) 29

Q56. (easy) [1 mark]

Which of the following is NOT a valid output of the pseudocode: START, INPUT A, PRINT A, END?

- A) The program prints nothing
- B) The program prints a number
- C) The program prints text
- D) The program prints A

Q57. In a linear seating arrangement, if A is to the left of B and C is to the right of B, who is in the middle?

- A) A
- B) B
- C) C
- D) None of the above

Q58. (easy) [1 mark]

If a clock shows 3:15, what is the angle between the hour and minute hands?

- A) 45 degrees
- B) 90 degrees
- C) 112.5 degrees
- D) 135 degrees

Q59. (easy) [1 mark]

What will be the output of the following pseudocode: START, A = 5, B = A + 3, PRINT B, END?

- A) 5
- B) 8
- C) 3
- D) 2

Q60. (easy) [1 mark]

In the sequence 2, 4, 8, 16, what is the next number?

- A) 20
- B) 24
- C) 32
- D) 36

Q61. (easy) [1 mark]

If $X = 10$, what will be the value of Y in the following code: IF $X > 5$ THEN $Y = 2$ ELSE $Y = 3$?

- A) 2
- B) 3
- C) 10
- D) 5

Q62. (easy) [1 mark]

Which of the following statements is a cause-effect relationship?

- A) All cats are animals
- B) If it rains, the ground gets wet
- C) Some birds can fly
- D) Some flowers are red

Q63. (easy) [1 mark]

If A is taller than B and B is taller than C , who is the shortest?

- A) A
- B) B
- C) C
- D) Cannot be determined

Q64. In a blood relation puzzle, if E is the sister of D and D is the brother of C , how is E related to C ?

- A) Sister
- B) Brother
- C) Cousin
- D) None of the above

Q65. (easy) [1 mark]

In the sequence 5, 10, 15, 20, what is the next number?

- A) 22
- B) 25
- C) 30
- D) 35

Q66. (easy) [1 mark]

If the current year is 2023, what year will it be after 5 years?

- A) 2028
- B) 2024
- C) 2025
- D) 2026

Q67. (easy) [1 mark]

Which of the following statements is true about arrays?

- A) Arrays can hold different data types
- B) Arrays are always sorted
- C) Arrays have fixed size
- D) Arrays can only store numbers

Q68. (easy) [1 mark]

In a circular seating arrangement, if A is sitting next to B, who can be to A's left?

- A) B
- B) C
- C) D
- D) None of the above

Q69. (easy) [1 mark]

If $A = 1$, $B = 2$, and $C = A + B$, what is the value of C?

- A) 1
- B) 2
- C) 3
- D) 4

Q70. (easy) [1 mark]

What is the output of the following pseudocode: START, A = 'Hello', PRINT A, END?

- A) Hello
- B) A
- C) Error
- D) None of the above

Q71. (easy) [1 mark]

If today is Monday, what day will it be in 30 days?

- A) Monday
- B) Tuesday
- C) Wednesday
- D) Thursday

Q72. (easy) [1 mark]

If all roses are flowers and some flowers fade quickly, which of the following is true?

- A) Some roses fade quickly
- B) All flowers are roses
- C) No roses fade quickly
- D) Some flowers do not fade quickly

Q73. (easy) [1 mark]

What is the output of the following pseudocode: START, FOR I = 1 TO 3, PRINT I, END?

- A) 1 2 3
- A) 1 2
- C) 3
- D) 1 2 3 4

Q74. (easy) [1 mark]

A group of friends consists of Alice, Bob, and Carol. Alice and Bob are sisters, and Carol is Bob's cousin. How is Carol related to Alice?

- A) Sister
- B) Brother
- C) Cousin
- D) Aunt

Q75. (easy) [1 mark]

A family includes Rahul, Amit, and Neha. Rahul and Amit are brothers, and Neha is Rahul's daughter. How is Neha related to Amit?

- A) Sister
- B) Cousin
- C) Daughter
- D) Niece

Q76. (difficult) [4 marks]

In a text analyzing the effects of social media on interpersonal relationships, which of the following inferences can be drawn about the author's perspective on digital communication?

- A. Digital communication enhances face-to-face interactions.
- B. The author believes that social media fosters deeper connections among individuals.
- C. The author suggests that social media can lead to misunderstandings and weakened bonds.
- D. The author views social media as an insignificant factor in relationship dynamics.

Q77. (difficult) [4 marks]

After reading a passage that critiques modern education systems, what tone does the author predominantly convey through the use of sarcastic language and critical examples?

- A. Optimistic and encouraging about potential reforms.
- B. Pessimistic and disillusioned with current practices.
- C. Neutral and objective, focusing solely on facts.

D. Indifferent towards the issues raised in education.

Q78. (difficult) [4 marks]

In a passage discussing the impacts of climate change on biodiversity, which of the following best summarizes the author's main argument regarding the interconnectedness of species?

- A. Climate change leads to habitat destruction, which in turn affects food chains.
- B. Biodiversity is essential for human survival and should be prioritized over economic growth.
- C. Species extinction is a natural process that is exacerbated by climate change.
- D. Climate change has minimal effects on species survival in diverse ecosystems.

Q79. (medium) [2 marks]

After reading a passage on renewable energy sources, which of the following best describes the author's tone?

- A) Cynical
- B) Enthusiastic
- C) Indifferent
- D) Hostile

Q80. (medium) [2 marks]

In a text about the importance of mental health awareness, what can be inferred about the author's stance on stigma?

- A) Stigma surrounding mental health is decreasing.
- B) Stigma is a barrier to seeking help.
- C) There is no stigma associated with mental health.
- D) Stigma has no impact on mental health awareness.

Q81. (medium) [2 marks]

What is the primary purpose of the passage discussing the effects of social media on communication?

- A) To criticize social media's influence
- B) To show that communication has improved
- C) To highlight the dual nature of social media's impact
- D) To promote social media usage

Q82. (medium) [2 marks]

After reading a passage about technological advancements in education, what would be the best summary of the author's viewpoint?

- A) Technology is detrimental to education.
- B) Technology enhances educational opportunities.
- C) Education remains unchanged by technology.
- D) Only traditional methods are effective.

Q83. (medium) [2 marks]

In a passage about economic growth, which of the following statements can be inferred about the author's perspective on sustainability?

- A) Sustainability is not necessary for growth.
- B) Economic growth should consider sustainability.
- C) Sustainability is a hindrance to growth.
- D) Growth and sustainability are unrelated.

Q84. (easy) [1 mark]

What is the primary purpose of a summary?

- A) To provide a detailed analysis
- B) To condense the main ideas
- C) To criticize the author's perspective
- D) To offer personal opinions

Q85. (easy) [1 mark]

If a passage has a sarcastic tone, what does that imply?

- A) The author is being serious
- B) The author is expressing genuine praise
- C) The author is mocking or ridiculing
- D) The author is confused

Q86. (easy) [1 mark]

Which of the following is a higher-order inference one might make from a text?

- A) Summarizing the text
- B) Identifying the main idea
- C) Predicting the author's future work
- D) Listing the characters

Q87. (easy) [1 mark]

What does it mean if a passage has an optimistic tone?

- A) It conveys hope and positivity
- B) It expresses doubt and uncertainty
- C) It is neutral and unbiased
- D) It highlights negative aspects

Q88. (easy) [1 mark]

Which of the following best describes the summary of an article?

- A) A personal opinion about the article
- B) A detailed critique of the content
- C) A brief restatement of the main points
- D) A list of references used in the article

Q89. (easy) [1 mark]

What can be inferred if a text repeatedly emphasizes the importance of teamwork?

- A) The author dislikes working alone
- B) Teamwork is a critical theme of the text
- C) The author prefers individual accomplishments
- D) There is no relevance to the main idea

Q90. (medium) [2 marks]

In a passage discussing the impact of climate change on polar bears, the author primarily conveys which tone?

- A) Optimistic
- B) Pessimistic
- C) Neutral
- D) Indifferent

Q1. B	Q11. A	Q21. C	Q31. A	Q41. A	Q51. A	Q61. A	Q71. A	Q81. C
Q2. A	Q12. A	Q22. B	Q32. C	Q42. B	Q52. C	Q62. B	Q72. A	Q82. B
Q3. B	Q13. B	Q23. A	Q33. C	Q43. B	Q53. C	Q63. C	Q73. A	Q83. B
Q4. A	Q14. B	Q24. B	Q34. B	Q44. B	Q54. A	Q64. A	Q74. C	Q84. B
Q5. B	Q15. A	Q25. C	Q35. C	Q45. B	Q55. C	Q65. B	Q75. D	Q85. C
Q6. C	Q16. A	Q26. B	Q36. B	Q46. A	Q56. A	Q66. A	Q76. C	Q86. C
Q7. A	Q17. B	Q27. A	Q37. D	Q47. B	Q57. B	Q67. C	Q77. B	Q87. A
Q8. B	Q18. B	Q28. B	Q38. A	Q48. C	Q58. C	Q68. B	Q78. A	Q88. C
Q9. A	Q19. A	Q29. A	Q39. A	Q49. B	Q59. B	Q69. C	Q79. B	Q89. B
Q10. B	Q20. B	Q30. C	Q40. B	Q50. B	Q60. C	Q70. A	Q80. B	Q90. B

Practice Paper with Answer Key - SET 2

Q1. (easy) [1 mark]

If the ratio of boys to girls in a class is 3:2, what is the ratio of girls to boys?

- A) 2:3
- B) 3:2
- C) 1:1
- D) 4:3

Q2. (difficult) [4 marks]

A train travels at a speed of 60 km/h. How long will it take to cover a distance of 450 km?

- A) 6.5 hours
- B) 7 hours
- C) 7.5 hours
- D) 8 hours

Q3. (difficult) [4 marks]

If the roots of the quadratic equation $ax^2 + bx + c = 0$ are 2 and 3, which of the following is true about the relationship between a, b, and c?

- A) $a = 5, b = -10, c = 6$
- B) $a = 6, b = -10, c = 3$
- C) $a = 1, b = -5, c = 6$
- D) $a = 1, b = -6, c = 5$

Q4. (difficult) [4 marks]

In a class of 60 students, the ratio of boys to girls is 2:3. If 5 boys leave the class, what will be the new ratio of boys to girls?

- A) 1:3
- B) 2:3
- C) 3:4
- D) 2:5

Q5. (difficult) [4 marks]

A sum of money is invested at a compound interest rate of 5% per annum. If the amount becomes \$1,276 after 3 years, what was the principal amount?

- A) \$1,000
- B) \$1,100
- C) \$1,200
- D) \$1,250

Q6. (difficult) [4 marks]

A mixture contains two types of tea, A and B, in the ratio 3:5. If the total weight of the mixture is 64 kg, how much tea A is there in the mixture?

- A) 24 kg
- B) 30 kg
- C) 32 kg
- D) 40 kg

Q7. (medium) [2 marks]

If the function $f(x) = 2x + 3$, what is the value of $f(4)$?

- A) 8
- B) 10
- C) 11
- D) 12

Q8. (medium) [2 marks]

What is the sum of the first 10 terms of the arithmetic sequence where the first term is 2 and the common difference is 3?

- A) 150
- B) 165
- C) 170
- D) 175

Q9. (medium) [2 marks]

A box contains 5 red, 3 green, and 2 blue balls. If one ball is drawn at random, what is the probability that the ball is green?

- A) $\frac{1}{10}$
- B) $\frac{1}{5}$
- C) $\frac{3}{10}$
- D) $\frac{1}{3}$

Q10. (medium) [2 marks]

In a set of numbers, 4, 8, 12, 16, what is the average of the set?

- A) 10
- B) 11
- C) 12
- D) 13

Q11. (medium) [2 marks]

If a and b are two numbers such that $a + b = 12$ and $a - b = 4$, what is the value of a ?

- A) 8
- B) 6
- C) 4
- D) 10

Q12. (medium) [2 marks]

What is the least common multiple (LCM) of 12 and 15?

- A) 30
- B) 60
- C) 75
- D) 90

Q13. (medium) [2 marks]

A train travels 60 km at a speed of 30 km/h and then 90 km at a speed of 45 km/h. What is the average speed of the train for the entire journey?

- A) 36 km/h
- B) 40 km/h
- C) 42 km/h
- D) 45 km/h

Q14. (medium) [2 marks]

If a sum of money doubles in 5 years under simple interest, what is the rate of interest per annum?

- A) 10%
- B) 12%
- C) 15%
- D) 20%

Q15. (medium) [2 marks]

A trader bought a bicycle for \$300 and sold it for \$360. What is the percentage profit?

- A) 15%
- B) 20%
- C) 25%
- D) 30%

Q16. What is the complement of the set $\{1, 2, 3\}$ in the universal set $\{1, 2, 3, 4, 5\}$?

- A) $\{4, 5\}$

- B) {1, 2}
- C) {3, 4}
- D) {1, 3, 4, 5}

Q17. (medium) [2 marks]

If the ratio of the ages of A and B is 4:5 and the sum of their ages is 45 years, what is the age of A?

- A) 20 years
- B) 25 years
- C) 30 years
- D) 35 years

Q18. (easy) [1 mark]

What is the average of the numbers 8, 10, and 12?

- A) 9
- B) 10
- C) 11
- D) 12

Q19. (easy) [1 mark]

A shirt originally priced at \$40 is on sale for 25% off. What is the sale price?

- A) \$30
- B) \$35
- C) \$25
- D) \$20

Q20. (easy) [1 mark]

If an item is bought for \$200 and sold for \$250, what is the profit percentage?

- A) 25%
- B) 50%
- C) 75%
- D) 20%

Q21. (easy) [1 mark]

What is the simple interest on \$1000 at a rate of 5% per annum for 3 years?

- A) \$150
- B) \$100
- C) \$50
- D) \$75

Q22. (easy) [1 mark]

If a car travels 60 km in 1 hour, what is its speed in meters per second?

- A) 16.67 m/s
- B) 60 m/s
- C) 10 m/s
- D) 20 m/s

Q23. How many days will it take for 5 men to complete a work if 10 men can finish it in 10 days?

- A) 20 days
- B) 15 days
- C) 10 days
- D) 5 days

Q24. (easy) [1 mark]

What is 15% of 200?

- A) 30
- B) 25
- C) 35
- D) 20

Q25. (easy) [1 mark]

If $x + 2 = 5$, what is the value of x ?

- A) 3
- B) 2
- C) 5
- D) 1

Q26. (easy) [1 mark]

What is the probability of rolling a 3 on a fair six-sided die?

- A) $1/6$
- B) $1/3$
- C) $1/2$
- D) $1/4$

Q27. (easy) [1 mark]

Which of the following represents the solution set of the inequality $x > 3$?

- A) $(-\infty, 3)$
- B) $(3, \infty)$
- C) $[3, \infty)$
- D) $[3, 3]$

Q28. (easy) [1 mark]

What is the next number in the sequence 2, 4, 8, 16?

- A) 20
- B) 24
- C) 32
- D) 28

Q29. (easy) [1 mark]

The LCM of 12 and 18 is?

- A) 36
- B) 24
- C) 18
- D) 12

Q30. If a circle has a radius of 7 cm, what is the area of the circle? (Use $\pi = 22/7$)

- A) 154 cm^2
- B) 144 cm^2
- C) 100 cm^2
- D) 120 cm^2

Q31. (medium) [2 marks]

In a linear arrangement of people, if A is to the left of B and C is to the right of A, who is in the center?

- A) A
- B) B
- C) C
- D) None

Q32. (medium) [2 marks]

If all roses are flowers and some flowers fade quickly, which of the following statements is logically valid?

- A) Some roses fade quickly
- B) All flowers are roses
- C) No roses fade quickly
- D) Some flowers do not fade quickly

Q33. (medium) [2 marks]

What will be the result of the following pseudocode? \n Start \n For I = 1 to 5 Do Print I End For \n End

- A) 1 2 3 4 5
- B) 5 4 3 2 1
- C) 1 2 3 4
- D) Error

Q34. (medium) [2 marks]

In a seating arrangement, A sits to the left of B, and C sits to the right of B. Who sits in the middle?

- A) A
- B) B
- C) C
- D) None

Q35. (medium) [2 marks]

If a person travels 5 km north, then 3 km east, what is the shortest distance from the starting point?

- A) 5 km
- B) 8 km
- C) 6 km
- D) 7 km

Q36. (medium) [2 marks]

Given the set of items {A, B, C, D}, if A is a member of the set and all members are either A or B, which of the following must be true?

- A) C is B
- B) C is A
- C) D is A
- D) D is B

Q37. In a clock, if the hour hand points at 3 and the minute hand points at 12, what is the angle between them?

- A) 90 degrees
- B) 180 degrees
- C) 270 degrees
- D) 360 degrees

Q38. (medium) [2 marks]

If 'A' is coded as '1', 'B' as '2', 'C' as '3', and so on, what will be the code for 'CAT'?

- A) 24
- B) 31
- C) 27
- D) 28

Q39. (medium) [2 marks]

What will be the output of the following pseudocode? \n Start \n A = 10; B = 20; If A > B Then Print A Else Print B End If \n End

- A) 10
- B) 20
- C) 30
- D) Error

Q40. (medium) [2 marks]

In a family, A is the brother of B, and B is the sister of C. If C is the daughter of D, how is A related to D?

- A) Son
- B) Daughter
- C) Brother
- D) Father

Q41. (medium) [2 marks]

If 'X' is 5 years older than 'Y', and 'Y' is twice as old as 'Z', if Z is 10 years old, how old is X?

- A) 20
- B) 15
- C) 25
- D) 30

Q42. (medium) [2 marks]

What is the output of the pseudocode given below? \n Start \n A = [1, 2, 3]; Print A[1] + A[2];

End

- A) 2
- B) 3
- C) 4
- D) 5

Q43. (medium) [2 marks]

If the current year is 2023, what will be the year 10 years from now?

- A) 2022
- B) 2032
- C) 2025
- D) 2030

Q44. A person moves 3 km south, then 4 km east, and finally 2 km north. What is the net displacement from the starting point?

- A) 7 km
- B) 5 km
- C) 3 km
- D) 4 km

Q45. (medium) [2 marks]

In a family tree, if P is the father of Q, R is the mother of Q, and S is the sibling of Q, how is S related to P?

- A) Son
- B) Daughter
- C) Child
- D) None

Q46. (difficult) [4 marks]

In a family, A is the father of B. C is the mother of B. D is the brother of B. If E is the sister of D, how is A related to E?

- A) Father
- B) Uncle
- C) Grandfather
- D) Brother

Q47. (difficult) [4 marks]

Consider the following pseudocode
BEGIN INPUT X IF X < 10 THEN Y := X + 5 ELSE Y := X - 5
ENDIF PRINT Y END What will be the output if the input X is 8?

- A) 5
- B) 13
- C) 3
- D) 10

Q48. (difficult) [4 marks]

A clock shows the time as 3:15. What is the angle between the hour hand and the minute hand?

- A) 30 degrees
- B) 45 degrees
- C) 52.5 degrees
- D) 75 degrees

Q49. (medium) [2 marks]

A series is formed by the following numbers: 2, 6, 12, 20, ?, 42. What number should replace the question mark?

- A) 30
- B) 32
- C) 36
- D) 40

Q50. (difficult) [4 marks]

In a circular seating arrangement, if P is sitting to the immediate left of Q, and R is sitting opposite P, who is sitting to the immediate right of R?

- A) P
- B) Q
- C) R
- D) None of the above

Q51. If 'x' is an array containing [1, 2, 3, 4], what is x[2]?

- A) 1
- B) 2
- C) 3
- D) 4

Q52. (easy) [1 mark]

In a circular arrangement, if A is next to B and C is opposite A, where is C in relation to B?

- A) Next to B
- B) Opposite B
- C) In between
- D) Not determined

Q53. (easy) [1 mark]

If all cats are animals and some animals are dogs, which of the following is true?

- A) All cats are dogs
- B) Some cats are dogs
- C) No cats are dogs
- D) Some dogs are animals

Q54. (easy) [1 mark]

In a family, A is the father of B. C is the mother of B. D is the brother of B. What is A to D?

- A) Father
- B) Brother
- C) Uncle
- D) Grandfather

Q55. (medium) [2 marks]

If the code 'CAT' is written as '3120', how would 'DOG' be written?

- A) 4157
- B) 4156
- C) 4167
- D) 4165

Q56. (easy) [1 mark]

The clock shows 3:15. What is the angle between the hour and minute hands?

- A) 45 degrees
- B) 22.5 degrees
- C) 90 degrees
- D) 135 degrees

Q57. (easy) [1 mark]

If 'A' is a variable that stores the number 5, what will be the output of 'print(A + 3)'?

- A) 5
- B) 8
- C) 3
- D) 15

Q58. In a linear arrangement, A is to the left of B and C is to the right of B. Where is A in relation to C?

- A) Left
- B) Right
- C) In between
- D) Not determined

Q59. (easy) [1 mark]

What is the output of the following pseudocode? 'x = 10; if x > 5 then print(x) else print(0)'

- A) 10
- B) 0
- C) 5
- D) Error

Q60. (easy) [1 mark]

If the sequence is 2, 4, 8, 16, what is the next number?

- A) 20
- B) 24
- C) 32
- D) 36

Q61. (easy) [1 mark]

Which of the following statements is sufficient to determine if it will rain tomorrow?

- A) It rained today
- B) It is cloudy
- C) Weather forecast says no rain
- D) None of the above

Q62. (easy) [1 mark]

In a seating arrangement, if A sits to the immediate right of B, which statement is true?

- A) B is to the left of A
- B) A is to the left of B
- C) A and B are opposite
- D) A is at the end

Q63. (easy) [1 mark]

What does the following pseudocode do? 'for i = 1 to 5 do print(i)'

- A) Prints 1 to 5
- B) Prints 5 to 1
- C) Prints 0 to 5
- D) Prints an error

Q64. (easy) [1 mark]

If A is true and B is false, what is the output of 'A AND B'?

- A) True
- B) False
- C) Neither
- D) Both

Q65. If a person travels 5 km east and then 5 km north, what is the shortest distance from the starting point?

- A) km
- B) 7.5 km
- C) 10 km
- D) 12.5 km

Q66. (easy) [1 mark]

Which of the following is NOT a control structure in programming?

- A) If-Else
- B) For Loop
- C) Variable Declaration

D) Switch Case

Q67. (easy) [1 mark]

If 'x' is a variable assigned to a string 'Hello', what will be the output of 'print(x[1])'?

- A) H
- B) e
- C) l
- D) o

Q68. (easy) [1 mark]

If $A = 8$ and $B = 6$, what is the value of $A + B * 2$?

- A) 20
- B) 18
- C) 16
- D) 14

Q69. (easy) [1 mark]

Which of the following is a valid declaration of an array in pseudocode?

- A) array x[5];
- B) x = new int[5];
- C) int x[5];
- D) array x = [1, 2, 3];

Q70. (easy) [1 mark]

If A is true and B is true, what is the output of 'A OR B'?

- A) True
- B) False
- C) Neither
- D) Both

Q71. (easy) [1 mark]

What will be the output of the pseudocode: 'for i from 1 to 3 do print(i * 2)'?

- A) 2 4 6
- B) 1 2 3
- C) 3 6 9
- D) 2 3 4

Q72. (medium) [2 marks]

In a family, there are six members A, B, C, D, E, and F. A is the father of B, B is the mother of C, C is the daughter of D, and D is the sister of E. How is E related to C?

- A) Uncle
- B) Aunt
- C) Cousin
- D) Brother

Q73. (easy) [1 mark]

What is the next term in the arithmetic sequence 2, 5, 8, 11?

- A) 10
- B) 12
- C) 14
- D) 13

Q74. (easy) [1 mark]

What is the probability of rolling a sum of 7 with two six-sided dice?

- A) $\frac{1}{6}$
- B) $\frac{1}{8}$
- C) $\frac{1}{12}$
- D) $\frac{1}{36}$

Q75. (easy) [1 mark]

If all cats are animals, and some animals are dogs, which of the following is true?

- A) Some cats are dogs.
- B) All dogs are cats.
- C) Some animals are not cats.
- D) All animals are cats.

Q76. (easy) [1 mark]

What is the primary tone of the passage describing a serene lake at sunset?

- A) Joyful
- B) Melancholic
- C) Neutral
- D) Angry

Q77. (difficult) [4 marks]

In a critical analysis of modern education systems, the author argues that standardized testing stifles creativity and critical thinking among students. Which of the following statements best reflects the author's position on this issue?

- A) Standardized testing is essential for measuring student performance.
- B) Educational reforms should prioritize creativity over standardization.
- C) The current education system effectively balances testing with creative learning.
- D) Standardized tests are a fair assessment of a student's abilities.

Q78. (difficult) [4 marks]

A passage describes the evolution of social media and its impact on interpersonal communication, culminating in a discussion about the paradox of connectivity leading to isolation. Which of the following inferences can be drawn regarding the author's viewpoint?

- A) The author believes social media enhances personal relationships significantly.
- B) The author sees social media as a necessary evil in modern society.
- C) The author argues that social media fundamentally changes the essence of human interaction.
- D) The author is indifferent to the effects of social media on communication.

Q79. (difficult) [4 marks]

In a passage discussing the implications of climate change on coastal cities, the author emphasizes the urgency of addressing rising sea levels and extreme weather patterns. Which of the following best summarizes the author's tone throughout the passage?

- A) Optimistic about future interventions
- B) Cautiously skeptical of current measures
- C) Urgently alarmed by the potential consequences
- D) Indifferent to the ongoing changes

Q80. (medium) [2 marks]

In a passage analyzing the role of art in society, which statement reflects the author's tone?

- A) Art is a trivial pursuit.
- B) Art plays a crucial role in cultural identity.
- C) Art has no place in modern society.
- D) Art is only for the wealthy.

Q81. (medium) [2 marks]

What can be inferred about the author's perspective in an article criticizing fast fashion?

- A) The author supports fast fashion.
- B) The author believes sustainability is important.
- C) The author is indifferent to consumer choices.
- D) The author thinks fashion should be inexpensive.

Q82. (medium) [2 marks]

Based on a reading about climate change effects, which inference can be drawn about future weather patterns?

- A) Weather patterns will remain consistent
- B) Natural disasters will likely increase
- C) Droughts will decrease globally
- D) Temperature will stabilize

Q83. (medium) [2 marks]

In a passage that describes the emotional journey of a character overcoming adversity, what tone is primarily conveyed?

- A) Optimistic
- B) Indifferent
- C) Pessimistic
- D) Fearful

Q84. (medium) [2 marks]

What is the primary theme of the passage discussing the impact of technology on education?

- A) Increased accessibility
- B) Decreased student engagement
- C) Higher costs of education
- D) Limited teacher involvement

Q85. (easy) [1 mark]

What conclusion can be drawn from the statement, 'Despite the rain, the festival was a huge success'?

- A) The rain ruined the festival.
- B) The festival was successful regardless of the weather.
- C) People didn't attend the festival due to rain.
- D) The festival was canceled.

Q86. (easy) [1 mark]

In a passage that discusses the benefits of reading, what is the overall tone?

- A) Negative
- B) Pessimistic
- C) Encouraging
- D) Indifferent

Q87. (easy) [1 mark]

What is the effect of the author's use of vivid imagery in the description of the bustling city?

- A) To confuse the reader
- B) To create a sense of liveliness
- C) To make the city seem dangerous
- D) To encourage the reader to avoid the city

Q88. (easy) [1 mark]

What can be inferred about the character's feelings when they say, 'I never thought I would enjoy this so much'?

- A) They are surprised and pleased.
- B) They are being sarcastic.
- C) They are feeling regret.
- D) They are indifferent.

Q89. (easy) [1 mark]

Which of the following best summarizes the main idea of a story about a young girl's adventure in a magical forest?

- A) A girl discovers a new world and learns about friendship.
- B) The girl gets lost in the forest and returns home.
- C) The forest is full of dangerous creatures.
- D) The girl's adventure is only a dream.

Q90. (medium) [2 marks]

Which of the following best summarizes a passage that discusses both the benefits and drawbacks of social media?

- A) Social media has no significant impact.
- B) Social media only has negative effects on society.
- C) Social media offers both positive and negative consequences.
- D) Social media is solely beneficial for communication.

Q1. A	Q11. A	Q21. B	Q31. A	Q41. C	Q51. C	Q61. C	Q71. A	Q81. B
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Q2. C	Q12. B	Q22. A	Q32. D	Q42. C	Q52. B	Q62. A	Q72. B	Q82. B
Q3. C	Q13. A	Q23. A	Q33. A	Q43. B	Q53. D	Q63. A	Q73. C	Q83. A
Q4. A	Q14. A	Q24. A	Q34. B	Q44. B	Q54. A	Q64. B	Q74. A	Q84. A
Q5. A	Q15. B	Q25. A	Q35. C	Q45. C	Q55. A	Q65. B	Q75. C	Q85. B
Q6. A	Q16. A	Q26. A	Q36. D	Q46. A	Q56. A	Q66. C	Q76. A	Q86. C
Q7. C	Q17. A	Q27. B	Q37. A	Q47. B	Q57. B	Q67. B	Q77. B	Q87. B
Q8. B	Q18. B	Q28. C	Q38. C	Q48. C	Q58. A	Q68. B	Q78. C	Q88. A
Q9. C	Q19. B	Q29. A	Q39. B	Q49. B	Q59. A	Q69. C	Q79. C	Q89. A
Q10. A	Q20. A	Q30. A	Q40. A	Q50. D	Q60. C	Q70. A	Q80. B	Q90. C

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