

Class 9 · Computer Science Olympiad

Total questions 50	Total marks 60	Time 60 minutes	Negative marking None
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Each question has four options, of which only one is correct. Mark your answer on the answer sheet. The Achievers Section carries higher marks per question. The answer key with full solutions is at the end of this paper.

This is original practice material written to the Level 1 pattern. It is not a past paper and is not affiliated with SOF or any official olympiad body.

Logical Reasoning

10 questions · 1 mark each · 10 marks

Q1. If FAN is written as 6 - 1 - 14 using the positions of the letters in the alphabet, how is INK written?

- (A) 9 - 14 - 11 (B) 18 - 13 - 16 (C) 10 - 15 - 12 (D) 11 - 14 - 9

Q2. Find the odd one out: 18, 27, 45, 58, 90

- (A) 27 (B) 18 (C) 58 (D) 45

Q3. Arjun walks 8 m towards north, turns right and walks 6 m, then turns right again and walks 8 m. How far is Arjun from the starting point, and in which direction?

- (A) 6 m, West (B) 6 m, East (C) 8 m, East (D) 14 m, North

Q4. Pointing to a boy in a photograph, Anjali said, "He is the son of my paternal grandfather's only son." How is the boy related to Anjali?

- (A) Nephew (B) Brother (C) Uncle (D) Cousin

Q5. In the first row the numbers are 2, 4 and 10. In the second row they are 6, 4 and 26. In the third row they are 3, 2 and ____ . The same rule applies to every row.

- (A) 10 (B) 7 (C) 9 (D) 8

Q6. Find the next number in the pattern: 34, 43, 52, 61, ____

- (A) 61 (B) 71 (C) 79 (D) 70

Q7. Count backward in 2s: 22, 20, 18, 16, ____

- (A) 15 (B) 16 (C) 12 (D) 14

Q8. A father is 21 years older than his son. The son is 18 years old now. How old will the father be after 6 years?

- (A) 51 years (B) 45 years (C) 46 years (D) 39 years

Q9. If the 12th of a month is a Wednesday, what day of the week is the 29th of the same month?

- (A) Friday (B) Monday (C) Saturday (D) Sunday

Q10. In a row of 37 children, Ravi is 18th from the left end. What is Ravi's position from the right end?

- (A) 21th (B) 19th (C) 22th (D) 20th

Computer Science

30 questions · 1 mark each · 30 marks

Q11. Which of these is a programming language?

- (A) Python (B) Notepad (C) Windows (D) Firefox

- Q12. What is a bug in a program?
- (A) A small insect inside the computer (B) A type of cable
(C) A mistake that makes it behave wrongly (D) A kind of printer
- Q13. Which of these is a web browser?
- (A) Android (B) Linux (C) Windows (D) Firefox
- Q14. In a spreadsheet, where a row and a column meet is called a:
- (A) Border (B) Chart (C) Sheet (D) Cell
- Q15. What is a file extension such as .txt or .jpg used for?
- (A) To make the file smaller (B) To show what kind of file it is
(C) To print the file (D) To lock the file
- Q16. Which of these makes a computer run slowly and can harm files?
- (A) A folder (B) A shortcut (C) A wallpaper (D) A virus
- Q17. What is a computer virus?
- (A) A type of printer (B) A germ that makes the user ill
(C) A harmful program that can damage files (D) A broken wire inside the computer
- Q18. Which of these is an example of hardware?
- (A) A printer (B) A web page
(C) A song file (D) An operating system
- Q19. Which of these stores data permanently?
- (A) Hard disk (B) Cache (C) Clipboard (D) RAM
- Q20. What does CPU stand for?
- (A) Computer Printing Unit (B) Control Panel Unit
(C) Central Processing Unit (D) Central Program Utility
- Q21. Which memory loses all its contents when the computer is switched off?
- (A) RAM (B) ROM (C) Hard disk (D) Pen drive
- Q22. In programming, what does a variable do?
- (A) It deletes a file (B) It stores a value that can change
(C) It prints the screen (D) It connects to wifi
- Q23. What does it mean to "download" a file?
- (A) To delete it from your device (B) To send it to a friend
(C) To print it on paper (D) To copy it from the internet to your device
- Q24. Which part of a computer carries out calculations?
- (A) The keyboard (B) The printer (C) The monitor (D) The CPU
- Q25. What is the binary number 101 in decimal?
- (A) 6 (B) 9 (C) 5 (D) 3

- Q26. Which shortcut is normally used to print?
(A) Ctrl + S (B) Ctrl + P (C) Ctrl + D (D) Ctrl + F
- Q27. Which program is best for adding up a column of numbers automatically?
(A) A music player (B) A spreadsheet
(C) A word processor (D) A paint program
- Q28. What does a modem or router mainly help you do?
(A) Print in colour (B) Connect to the internet
(C) Cool the computer (D) Store photos
- Q29. What will be printed? $x = 5$; $x = x + 3$; `print(x)`
(A) 5 (B) 53 (C) 3 (D) 8
- Q30. What does "debugging" mean?
(A) Renaming the program (B) Printing the program
(C) Finding and fixing errors in a program (D) Deleting the program
- Q31. Which number system does a computer use internally?
(A) Roman (B) Binary (C) Octal (D) Decimal
- Q32. What should you do with a password?
(A) Tell your whole class (B) Use your name as password
(C) Keep it secret (D) Write it on the desk
- Q33. In programming, what is a loop used for?
(A) To delete a file (B) To stop the program
(C) To print a document (D) To repeat a set of instructions
- Q34. Which shortcut selects everything in a document?
(A) Ctrl + W (B) Ctrl + E (C) Ctrl + Q (D) Ctrl + A
- Q35. Which of these is an operating system?
(A) Chrome (B) Excel (C) Linux (D) Photoshop
- Q36. Which of these is a storage device?
(A) Monitor (B) Hard disk (C) Mouse (D) Speaker
- Q37. Which of these is the safest password?
(A) password (B) 123456
(C) Ra1n@Kolkata#27 (D) myname
- Q38. What does "www" appear in?
(A) A file size (B) A password
(C) A website address (D) A phone number

Q39. What is software?

- (A) The wires inside a computer
- (B) A set of programs that tell the computer what to do
- (C) The physical parts of a computer
- (D) The screen of a computer

Q40. What is the output of the instruction: `print(2 + 3 * 4)`?

- (A) 9
- (B) 20
- (C) 24
- (D) 14

AI, Robotics and Information Technology

5 questions · 1 mark each · 5 marks

Q41. What is a QR code used for?

- (A) To print photos
- (B) To store information a camera can read quickly
- (C) To cool the computer
- (D) To charge a phone

Q42. What does a scanner do?

- (A) It copies a printed page into the computer
- (B) It plays sound
- (C) It charges the battery
- (D) It prints a page

Q43. Which of these is an example of using technology politely?

- (A) Calling during an exam
- (B) Playing loud videos in class
- (C) Silencing your phone in class
- (D) Recording people without asking

Q44. What should you do if a stranger online asks for your home address?

- (A) Post it publicly
- (B) Send it politely
- (C) Refuse and tell a trusted adult
- (D) Share your school name instead

Q45. A computer program that answers questions in ordinary language is an example of:

- (A) A spreadsheet
- (B) Artificial Intelligence
- (C) A printer driver
- (D) A screensaver

Achievers Section

5 questions · 3 marks each · 15 marks

Q46. How many numbers between 40 and 60 leave a remainder of 4 when divided by 6?

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

Q47. Two identical glasses hold water at 10°C and at 80°C. In which glass will a sugar cube dissolve faster?

- (A) The glass at 10°C
- (B) The glass at 80°C
- (C) Both at the same speed
- (D) Neither will dissolve

Q48. The average of 4 numbers is 34. 3 of them are 127, 7, 1. What is the remaining number?

- (A) 34
- (B) -1
- (C) 3
- (D) 1

Q49. You press Ctrl + C, then Ctrl + V twice. What happens?

- (A) The copied text is pasted two times
- (B) The text is deleted twice
- (C) The text is cut then pasted
- (D) Nothing happens the second time

Q50. Rahul finished the puzzle in two minutes and said it was 'to break the ice'. What did he mean?

- (A) to go skating (B) to spoil a plan
(C) to feel cold (D) to start a conversation

Answer Key

1	2	3	4	5	6	7	8	9	10
A	C	B	B	D	D	D	B	C	D
11	12	13	14	15	16	17	18	19	20
A	C	D	D	B	D	C	A	A	C
21	22	23	24	25	26	27	28	29	30
A	B	D	D	C	B	B	B	D	C
31	32	33	34	35	36	37	38	39	40
B	C	D	D	C	B	C	C	B	D
41	42	43	44	45	46	47	48	49	50
B	A	C	C	B	C	B	D	A	D

Solutions

Q1. (A) I is letter 9 and N is letter 14 and K is letter 11, so INK = 9 - 14 - 11.

Q2. (C) Every other number is a multiple of 9. 58 is not.

Q3. (B) The two 8 m walks (north, then south) cancel out, leaving only the 6 m walked towards the east. So the answer is 6 m, East.

Q4. (B) Anjali's paternal grandfather's only son is Anjali's own father, so that man's son is Anjali's own sibling. The answer is Brother.

Q5. (D) The rule is: multiply the two numbers, then add 2. Check: 2, 4 gives 10 and 6, 4 gives 26; so 3, 2 gives 8.

Q6. (D) Each number is 9 more than the one before it, so the next is $61 + 9 = 70$.

Q7. (D) Subtracting 2 from 16 gives 14.

Q8. (B) The father is $18 + 21 = 39$ now, so after 6 years he will be $39 + 6 = 45$ years.

Q9. (C) 17 days later is 2 week(s) and 3 day(s), so the day moves 3 place(s) on from Wednesday to Saturday.

Q10. (D) Position from the right = total - position from the left + 1 = $37 - 18 + 1 = 20$ th.

Q11. (A) Python is a programming language; the others are programs or an operating system.

Q12. (C) A bug is an error in the program. The answer is A mistake that makes it behave wrongly.

Q13. (D) Firefox is a web browser; the others are operating systems.

Q14. (D) The box where a row meets a column is a cell.

Q15. (B) The extension tells the computer and the user what type of file it is. The answer is To show what kind of file it is.

Q16. (D) A virus is harmful software that can slow a computer and damage files.

Q17. (C) A virus is a malicious program; it cannot make a person ill. The answer is A harmful program that can damage files.

Q18. (A) Hardware is a physical part, like a printer.

Q19. (A) A hard disk keeps data even when the computer is switched off; RAM does not.

Q20. (C) CPU stands for Central Processing Unit.

Q21. (A) RAM is volatile: its contents disappear when the power goes off.

- Q22. (B) A variable is a named place in memory holding a value that can change. The answer is It stores a value that can change.
- Q23. (D) Downloading brings a file from the internet onto your own device. The answer is To copy it from the internet to your device.
- Q24. (D) The CPU performs the calculations and processing.
- Q25. (C) 101 in binary is $1 \times 4 + 0 \times 2 + 1 \times 1 = 5$.
- Q26. (B) Ctrl + P opens the print dialog.
- Q27. (B) A spreadsheet arranges data in rows and columns and can calculate totals.
- Q28. (B) A modem or router connects your devices to the internet. The answer is Connect to the internet.
- Q29. (D) x starts at 5, then $5 + 3 = 8$ is stored back in x , so 8 is printed.
- Q30. (C) Debugging is locating and fixing mistakes in code. The answer is Finding and fixing errors in a program.
- Q31. (B) Computers work in binary, using only the digits 0 and 1.
- Q32. (C) A password must be kept secret, or anyone can use your account. The answer is Keep it secret.
- Q33. (D) A loop repeats instructions until a condition is met. The answer is To repeat a set of instructions.
- Q34. (D) Ctrl + A selects all.
- Q35. (C) Linux is an operating system; the others are application programs.
- Q36. (B) A hard disk stores data.
- Q37. (C) A strong password mixes capitals, small letters, digits and symbols and is hard to guess. The answer is Ra1n@Kolkata#27.
- Q38. (C) Many website addresses begin with www. The answer is A website address.
- Q39. (B) Software is the set of instructions; hardware is the physical machine. The answer is A set of programs that tell the computer what to do.
- Q40. (D) Multiplication happens before addition: $3 \times 4 = 12$, then $2 + 12 = 14$.
- Q41. (B) A QR code holds information that a camera can read instantly. The answer is To store information a camera can read quickly.
- Q42. (A) A scanner turns a paper document into a digital image, so it is an input device. The answer is It copies a printed page into the computer.
- Q43. (C) Silencing your phone shows respect for others. The answer is Silencing your phone in class.
- Q44. (C) Never share personal details online; always tell a trusted adult. The answer is Refuse and tell a trusted adult.
- Q45. (B) Understanding and answering ordinary language is an AI task. The answer is Artificial Intelligence.
- Q46. (C) The numbers are 46, 52, 58 — 3 of them.
- Q47. (B) Substances dissolve faster in hotter water because its particles move faster. The answer is The glass at 80°C .
- Q48. (D) The 4 numbers add up to $34 \times 4 = 136$. The given numbers add up to 135, so the missing number is $136 - 135 = 1$.
- Q49. (A) Ctrl + C copies once; each Ctrl + V pastes that copy again. The answer is The copied text is pasted two times.
- Q50. (D) In this sentence 'to break the ice' means to start a conversation.

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