

Class 8 · 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. Arjun walks 9 m towards north, turns right and walks 8 m, then turns right again and walks 9 m. How far is Arjun from the starting point, and in which direction?

- (A) 17 m, North (B) 8 m, West (C) 9 m, East (D) 8 m, East

Q2. Which letter comes next? G, I, L, P, ____

- (A) V (B) U (C) S (D) T

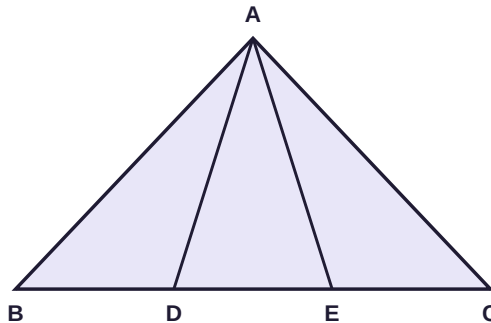
Q3. Which letter comes next? B, E, H, K, ____

- (A) Q (B) M (C) O (D) N

Q4. Find the next number in the pattern: 15, 21, 27, 33, ____

- (A) 40 (B) 33 (C) 39 (D) 45

Q5. How many triangles are there in the given figure?



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

Q6. In a class, 14 students play cricket, 14 play football and 7 play both games. Every student plays at least one of the two. How many students are there in the class?

- (A) 28 (B) 21 (C) 14 (D) 22

Q7. Count backward in 2s: 12, 10, 8, 6, ____

- (A) 2 (B) 4 (C) 5 (D) 6

Q8. Find the next number in the pattern: 5, 11, 23, 47, ____

- (A) 96 (B) 93 (C) 95 (D) 94

Q9. Read the statements and choose the conclusion that **MUST** be true.

All roses are flowers. All flowers need water.

- (A) Only roses need water.
- (B) All flowers are roses.
- (C) Some roses do not need water.
- (D) All roses need water.

Q10. If FAN is written as 6 - 1 - 14 using the positions of the letters in the alphabet, how is BAG written?

- (A) 3 - 2 - 8
- (B) 2 - 1 - 7
- (C) 25 - 26 - 20
- (D) 7 - 1 - 2

Computer Science

30 questions · 1 mark each · 30 marks

Q11. Which shortcut is normally used to save your work?

- (A) Ctrl + S
- (B) Ctrl + O
- (C) Ctrl + P
- (D) Ctrl + N

Q12. Which of these is an operating system?

- (A) Excel
- (B) Photoshop
- (C) Linux
- (D) Chrome

Q13. What does "debugging" mean?

- (A) Printing the program
- (B) Renaming the program
- (C) Finding and fixing errors in a program
- (D) Deleting the program

Q14. Which is the largest unit of the four?

- (A) 1 gigabyte
- (B) 1 kilobyte
- (C) 1 megabyte
- (D) 1 byte

Q15. Which of these is an example of hardware?

- (A) An operating system
- (B) A printer
- (C) A web page
- (D) A song file

Q16. How many bits make one byte?

- (A) 16
- (B) 4
- (C) 8
- (D) 32

Q17. Which of these files is most likely a song?

- (A) page.html
- (B) song.mp3
- (C) notes.txt
- (D) photo.jpg

Q18. Which number system does a computer use internally?

- (A) Decimal
- (B) Roman
- (C) Binary
- (D) Octal

Q19. What does a folder do?

- (A) It holds files together in one place
- (B) It deletes files
- (C) It types files
- (D) It prints files

Q20. Which program would you use to type and format a letter?

- (A) A word processor
- (B) A spreadsheet
- (C) A web browser
- (D) A paint program

Q21. Which shortcut is normally used to print?

- (A) Ctrl + F
- (B) Ctrl + S
- (C) Ctrl + P
- (D) Ctrl + D

Q22. Which of these is a web browser?

- (A) Android
- (B) Firefox
- (C) Linux
- (D) Windows

Q23. What should you do with a password?

- (A) Tell your whole class
- (B) Use your name as password
- (C) Write it on the desk
- (D) Keep it secret

Q24. What will be printed? `x = 5; x = x + 3; print(x)`

- (A) 53
- (B) 3
- (C) 5
- (D) 8

Q25. Which shortcut selects everything in a document?

- (A) Ctrl + A
- (B) Ctrl + Q
- (C) Ctrl + W
- (D) Ctrl + E

Q26. What is a file extension such as .txt or .jpg used for?

- (A) To print the file
- (B) To make the file smaller
- (C) To show what kind of file it is
- (D) To lock the file

Q27. What is an email used for?

- (A) Playing music only
- (B) Sending messages over the internet
- (C) Charging the battery
- (D) Printing documents

Q28. Which memory loses all its contents when the computer is switched off?

- (A) Pen drive
- (B) Hard disk
- (C) RAM
- (D) ROM

Q29. What is the output of the instruction: `print(2 + 3 * 4)`?

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

Q30. In programming, what is a loop used for?

- (A) To print a document
- (B) To stop the program
- (C) To delete a file
- (D) To repeat a set of instructions

Q31. What is a bug in a program?

- (A) A kind of printer
- (B) A small insect inside the computer
- (C) A type of cable
- (D) A mistake that makes it behave wrongly

Q32. What does it mean to "download" a file?

- (A) To delete it from your device
- (B) To copy it from the internet to your device
- (C) To print it on paper
- (D) To send it to a friend

Q33. In a spreadsheet, where a row and a column meet is called a:

- (A) Cell
- (B) Sheet
- (C) Border
- (D) Chart

Q34. What is software?

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

Q35. What does a modem or router mainly help you do?

- (A) Connect to the internet
- (B) Cool the computer
- (C) Store photos
- (D) Print in colour

Q36. What is a computer virus?

- (A) A broken wire inside the computer (B) A harmful program that can damage files
(C) A germ that makes the user ill (D) A type of printer

Q37. Which of these makes a computer run slowly and can harm files?

- (A) A folder (B) A virus (C) A shortcut (D) A wallpaper

Q38. What is the brain of the computer called?

- (A) Keyboard (B) CPU (C) Printer (D) Monitor

Q39. Which part of a computer carries out calculations?

- (A) The CPU (B) The keyboard (C) The monitor (D) The printer

Q40. What is the @ symbol used in?

- (A) A password only (B) An email address
(C) A file name (D) A phone number

AI, Robotics and Information Technology

5 questions · 1 mark each · 5 marks

Q41. Which of these is an example of using technology politely?

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

Q42. A machine that learns from examples rather than being told every rule is using:

- (A) Machine learning (B) Scanning
(C) Printing (D) Word processing

Q43. What does a printer need in order to print?

- (A) Petrol (B) Sand
(C) Water and soap (D) Paper and ink or toner

Q44. What does a scanner do?

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

Q45. Which of these lets you talk to someone far away using the internet?

- (A) A keyboard (B) A scanner (C) A video call (D) A printer

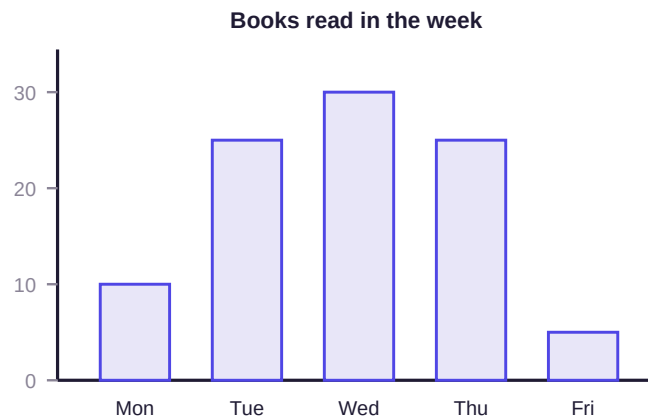
Achievers Section

5 questions · 3 marks each · 15 marks

Q46. How many numbers between 60 and 80 leave a remainder of 4 when divided by 8?

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

Q47. The bar graph shows the number of books read by a class on each day of one week. How many books were read in the whole week?



- (A) 105 (B) 90 (C) 95 (D) 100

Q48. The average of 3 numbers is 16. 2 of them are 4, 21. What is the remaining number?

- (A) 21 (B) 23 (C) 25 (D) 16

Q49. Rahul finished the puzzle in two minutes and said it was 'to break the ice'. What did he mean?

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

Q50. Find the next number: 2, 4, 8, 14, 22, ____

- (A) 32 (B) 30 (C) 34 (D) 33

Answer Key

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

Solutions

Q1. (D) The two 9 m walks (north, then south) cancel out, leaving only the 8 m walked towards the east. So the answer is 8 m, East.

Q2. (B) The gaps grow by one each time (+2, +3, +4, +5), so after P the next letter is U.

Q3. (D) Each letter moves 3 place(s) forward in the alphabet, so after K comes N.

Q4. (C) Each number is 6 more than the one before it, so the next is $33 + 6 = 39$.

- Q5. (A) Every triangle has apex A and two of the 4 base points as its other corners. Choosing 2 from 4 gives 6 triangles.
- Q6. (B) $14 + 14 - 7 = 21$. The 7 who play both were counted twice, so they are subtracted once.
- Q7. (B) Subtracting 2 from 6 gives 4.
- Q8. (C) Each number is doubled and 1 is added: $47 \times 2 + 1 = 95$.
- Q9. (D) From "All roses are flowers. All flowers need water." it follows necessarily that all roses need water.
- Q10. (B) B is letter 2 and A is letter 1 and G is letter 7, so $BAG = 2 - 1 - 7$.
- Q11. (A) Ctrl + S saves the current file.
- Q12. (C) Linux is an operating system; the others are application programs.
- Q13. (C) Debugging is locating and fixing mistakes in code. The answer is Finding and fixing errors in a program.
- Q14. (A) A gigabyte is larger than a megabyte, which is larger than a kilobyte, which is larger than a byte. The answer is 1 gigabyte.
- Q15. (B) Hardware is a physical part, like a printer.
- Q16. (C) One byte is made of 8 bits.
- Q17. (B) An .mp3 file holds audio. The answer is song.mp3.
- Q18. (C) Computers work in binary, using only the digits 0 and 1.
- Q19. (A) Folders group related files together. The answer is It holds files together in one place.
- Q20. (A) A word processor is designed for typing and formatting text.
- Q21. (C) Ctrl + P opens the print dialog.
- Q22. (B) Firefox is a web browser; the others are operating systems.
- Q23. (D) A password must be kept secret, or anyone can use your account. The answer is Keep it secret.
- Q24. (D) x starts at 5, then $5 + 3 = 8$ is stored back in x, so 8 is printed.
- Q25. (A) Ctrl + A selects all.
- Q26. (C) 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.
- Q27. (B) Email carries written messages over the internet. The answer is Sending messages over the internet.
- Q28. (C) RAM is volatile: its contents disappear when the power goes off.
- Q29. (D) Multiplication happens before addition: $3 \times 4 = 12$, then $2 + 12 = 14$.
- Q30. (D) A loop repeats instructions until a condition is met. The answer is To repeat a set of instructions.
- Q31. (D) A bug is an error in the program. The answer is A mistake that makes it behave wrongly.
- Q32. (B) Downloading brings a file from the internet onto your own device. The answer is To copy it from the internet to your device.
- Q33. (A) The box where a row meets a column is a cell.
- Q34. (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.
- Q35. (A) A modem or router connects your devices to the internet. The answer is Connect to the internet.
- Q36. (B) A virus is a malicious program; it cannot make a person ill. The answer is A harmful program that can damage files.
- Q37. (B) A virus is harmful software that can slow a computer and damage files.
- Q38. (B) The Central Processing Unit (CPU) carries out the instructions, so it is called the brain of the computer.
- Q39. (A) The CPU performs the calculations and processing.
- Q40. (B) Every email address has an @ between the user name and the domain. The answer is An email address.
- Q41. (D) Silencing your phone shows respect for others. The answer is Silencing your phone in class.
- Q42. (A) Machine learning means a program improves from data and examples.

Q43. (D) A printer needs paper and ink or toner.

Q44. (C) 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.

Q45. (C) A video call carries picture and sound over the internet.

Q46. (A) The numbers are 68, 76 — 2 of them.

Q47. (C) $10 + 25 + 30 + 25 + 5 = 95$ books.

Q48. (B) The 3 numbers add up to $16 \times 3 = 48$. The given numbers add up to 25, so the missing number is $48 - 25 = 23$.

Q49. (A) In this sentence 'to break the ice' means to start a conversation.

Q50. (A) The gaps grow 2, 4, 6, 8, so the next gap is 10 and $22 + 10 = 32$.

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