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Candidate Name

Class

Section

# BLOOM Computer Olympiad (BCO)

## Question Paper 2024-25

Class  
**9**

Total Questions: **50+5** (Tie-Breaking Section)


**Total Time Allotted** : 60 minutes

**Total Marks** : 60

### Instructions

1. There are **50 Multiple Choice Questions** in this booklet having 4 options out of which **ONLY ONE** is correct.
2. There are two sections in the Question Paper; **Section A** having 40 Questions carrying 1 Mark each & **Section B** having 10 Higher Difficulty Order Questions carrying 2 Marks each.
3. All questions are compulsory. There is **NO negative** marking for incorrect answers.
4. Total time allotted to complete the paper is 60 minutes.
5. Please fill in your details in the space provided on this page before attempting the paper.

### OMR Sheet Instructions

1. Before starting the paper, fill in all the details in the OMR Sheet.
2. Additional 10 minutes will be provided to fill up the OMR sheet, before the start of the exam.
3. Use HB Pencil to darken the circle of the correct Option in OMR sheet. The correct way to darken the circle in OMR sheet is shown below.  

4. Use black or blue ball point pen/HB pencil to fill the information in the OMR sheet. Partially filled OMR sheet will not be checked.
5. Return the OMR sheet to the invigilator after the exam.

CODE#166

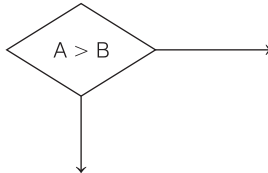
**Com9**



**BLOOM CAP**  
Founded by |  **arihant**

## Bloom Computer Olympiad Class 9

### Section A (1 Mark)

1. The memory which can be used for firmware in automatic appliances is.....  
(a) ROM (b) EPROM  
(c) Pen Drive (d) Both (a) and (b)
2. Every time you start your computer it shows wrong date and time. This keeps happening even after you have set the computer time several times. What needs to be done in such case?  
(a) The UPS needs to be replaced  
(b) The CMOS battery needs to be replaced.  
(c) The operating system needs to be reloaded.  
(d) The CPU needs to be changed.
3. The track on the disk surface is divided into invisible segments known as.....  
(a) Sector (b) Arms (c) Tracks (d) Platters
4. Which of the following operating systems works on specified time constraint?  
(a) Multi-user Operating System  
(b) Real Time Operating System  
(c) Distributed Operating System  
(d) Single-user Operating System
5. Machine language sometimes referred to as  
(a) programming language that is used widely by the programmer.  
(b) machine code or object code.  
(c) programming language that is more easily understood.  
(d) language that is not limited by the computer.
6. Which of the following parts of CPU fetches and decodes instructions from memory?  
(a) ALU (b) Registers  
(c) Control Unit (d) Memory
7. ....part of the operating system interacts with a specific hardware?  
(a) Kernel (b) Device Driver  
(c) Data Processor (d) None of these
8. Which of the following part of the computer system act as an intermediary between input/output devices and the CPU after booting?  
(a) BIOS (b) Motherboard  
(c) Buses (d) RAM
9. Which of the following is program capable of continually replicating with little or no user intervention?  
(a) Virus (b) Trojan Horses  
(c) Rootkit (d) Worms
10. A flowchart uses symbols to display the..... to be performed.  
(a) Instructions (b) Operations  
(c) Program (d) Sequence
11. Identify the below given symbol in flowchart  
  
(a) Decision symbol  
(b) Input/output Symbol  
(c) Processing Symbol  
(d) None of the above
12. Instructions are written from ..... while writing an algorithm.  
(a) Bottom to Top  
(b) Top to Bottom  
(c) Right to Left  
(d) Left to Right
13. In computer graphics, what is the full form of ZUI?  
(a) Zoomable user interaction  
(b) Zoomable user interface  
(c) Zoomed user interaction  
(d) Zoomed user interface

14. What do you understand by motion graphics?
- (a) It refers to any moving/ animated graphics created by use of digital sequencing of frames.
  - (b) It tends to encompass all animated movies
  - (c) Both (a) and (b)
  - (d) None of the above

15. Which of the following is a small program embedded inside a GIF ( Graphics Interchange Format) image.

- (a) Botnet (b) Spam
- (c) Web bug (d) Cookie

16. A variable name cannot be more than..... characters, in Visual Basics.

- (a) 1048 (b) 256 (c) 255 (d) 128

17. In Visual Basics, which of the following is the method that moves the focus to the specified control or form?

- (a) Setfocus (b) Getfocus
- (c) Focuson (d) Focus

18. Which of the following options in Flash CS6 allows you to see a faint ghost image of the previous frame?

- (a) Masking (b) Onion Skin
- (c) Layer (d) Locking

19. Match the following.

Column A	Column B
(A) Movie	1. The area on screen to work with layers.
(B) Timeline	2. The first file that opens when you open a flash document.
(C) Scene	3. It consists of animated objects.
(D) Layer	4. Transparent sheets containing various objects.

- (a) A-2,B-1,C-3,D-4 (b) A-1,B-2,C-3,D-4
- (c) A-3,B-1,C-2,D-4 (d) A-4,B-1,C-3,D-2

20. Is Python is a case sensitive language?

- (a) Yes
- (b) No
- (c) Depends on the machine
- (d) None of the above

21. Choose the correct statement regards variable names in Python?

- (a) All private members must have leading and trailing underscores
- (b) Underscore and ampersand are the only two special characters allowed
- (c) Unlimited length
- (d) All of the above

22. Ctrl+End key in MS word is used for.....

- (a) Moves the cursor to the end of the document
- (b) Moves the cursor to the end of the paragraph
- (c) Moves the cursor to the end of the line
- (d) Moves the cursor to the end of the word

23. Which of the following device takes data sent from one network device and forwards is to all devices on the network regardless of the intended recipient?

- (a) DNS server (b) Switch
- (c) Hub (d) Gateway

24. Which one of the following is an example of WLAN(wireless local area network).

- (a) Bluetooth (b) WIFI
- (c) Walky-talky (d) Telephone line

25. Sajal created a PowerPoint presentation on his Physics project which he wants to present to his class. Sajal wants to add some additional point (not present in the slides) to help him remember what he wants to say in each slide. Which PowerPoint feature is best suited for this purpose?

- (a) Master Slides (b) Comments
- (c) Notes (d) Track changes

26. In a worksheet in MS Excel, what is the shortcut key to hide the entire row?

- (a) Ctrl +2 (b) Ctrl + 9
- (c) Ctrl + N (d) Ctrl + -

27. Which of the following options is not essential component to perform a mail merge operation?

- (a) Data source (b) Main document
- (c) Merge fields (d) word fields

28. .... is not a section break option in MS Word?

- (a) Odd page
- (b) Even page
- (c) Next page
- (d) Previous page

29. Karan is working on a project in his office, He wants to add chart in his excel sheet. Which of the following steps he should follow to open chart wizard?

- (a) Insert-> Tools-> Chart
- (b) Insert->Picture->Chart
- (c) Insert->Chart
- (d) Insert->Shapes-> Chart

30. By using number formatting option in excel you can change the property of a value in a cell to.....

- (a) Time
- (b) Text
- (c) Currency
- (d) All of the above

31. .... is a background on which your script runs or your sprite moves.

- (a) Background
- (b) Sprite
- (c) Stage
- (d) window

32. What does the term “event-driven” mean in scratch?

- (a) Scratch has events like concerts
- (b) Scratch is powered by batteries
- (c) Scratch runs automatically without any user input
- (d) Actions are triggered by specific events, like mouse clicks or keyboard inputs

33. What is the binary equivalent of the decimal number 9?

- (a) 1010
- (b) 1100
- (c) 1001
- (d) 1011

34. What will be the octal equivalent of the binary number ‘1011101011’ ?

- (a) 7353
- (b) 1353
- (c) 4325
- (d) 1236

35. Network topology defines the way to connect the computers to each other in a network. In which of the following network topologies if one node fails, it does not affect the entire network.

- (a) Mesh
- (b) Star
- (c) Ring
- (d) Both (a) and (b)

36. By..... technique a single channel is shared by multiple signals in a computer network?

- (a) Modulation
- (b) Multiplexing
- (c) Demultiplexing
- (d) Digital modulation

37. Bluetooth was developed by which of the following firm?

(a) **SONY**

(b)   
**ERICSSON**

(c) 

(d) **SAMSUNG**

38. .... mode in web browsers is primarily designed to prevent your local browsing history from being stored on your device.

- (a) Incognito
- (b) Hidden
- (c) Safe Browsing
- (d) None of the above

39. Which of the following is an element of cyber security?

- (a) Operational Security
- (b) Network Security
- (c) Application Security
- (d) All of the above

40. An unsolicited commercial email is known as the .....email.

- (a) Spam
- (b) Junk
- (c) Malware
- (d) Virus

## Section B (2 marks)

- 41. Assertion(A)** In scratch, you can use the “forever” block to create an infinite loop .

**Reason(R)** The “forever” block is used to repeat a set of instructions only a specific number of times.

- (a) Both A and R are true, and R is the correct explanation of A.
- (b) Both A and R are true, but R is not the correct explanation of A.
- (c) A is true, but R is false
- (d) A is false, but R is true

- 42.** Match the following cyber security terms with their correct description.

Term	Description
A. Spyware	1. Method used to steal information by pretending to be a trustworthy entity.
B. Malware	2. A barrier that protects a network from unauthorized access.
C. Phishing	3. Malicious software designed to harm or exploit devices.
D. Firewall	4. A software that monitors your actions without your knowledge.

- (a) A-4,B-3,C-1,D-2
- (b) A-3,B-4,C-1,D-2
- (c) A-4,B-1,C-3,D-2
- (d) A-4,B-3,C-2,D-1

- 43.** Which of the following statements is false regards MS Excel 2016?

- (a) In MS Excel 2016, you can apply conditional formatting to highlight cells based on specific criteria.
- (b) In MS Excel 2016, the ‘VLOOKUP’ function can be used to search for data in a row.
- (c) In MS Excel 2016, the ‘Freeze Panes’ feature allows you to keep a portion of the sheet visible while scrolling through the rest.
- (d) In MS Excel 2016, pivot tables are used for data analysis and summarization.

- 44. Assertion(A)** Python provides a built-in function called ‘input()’ for taking user input.

**Reason(R)** The input() function in Python returns data as a string by default.

- (a) Both A and R are true, and R is the correct explanation of A.
- (b) Both A and R are true, but R is not the correct explanation of A.
- (c) A is true, but R is false
- (d) A is false, but R is true

- 45.** Which one of the following statements holds true about MS power point.

- 1. Template is a file consists of readymade styles that we can use for our presentation.
- 2. You can insert text boxes from drawing toolbar in PowerPoint.
- 3. You can type text directly into a slide but typing in text box is more convenient.

- (a) Only 1 is true
- (b) Only 2 is true
- (c) Both 1 and 2 are true
- (d) All are true

- 46.** The simultaneous transmission of data to a number of stations is known as:

- (a) ADHOC
- (b) broadcast
- (c) bandwidth
- (d) analog transmission

- 47.** Match the following IT developments with their correct descriptions:

Developments	Descriptions
(A) Artificial Intelligence	1. A new generation of wireless communication technology with higher speed and lower latency.
(B) 5G technology	2. A decentralized digital ledger that records transactions across multiple computers.
(C) Blockchain	3. The simulation of human intelligence processes by machines.

- (a) A-4,B-3,C-1
- (b) A-3,B-1,C-2
- (c) A-4,B-1,C-3
- (d) A-4,B-3,C-2

- 48.** Identify the false statement about the evolution of computers:

- (a) The third generation of computers introduced to use of magnetic tape for storage.

- (b) The second generation of computers replaced vacuum tubes with transistors.
- (c) The fourth generation of computers is characterized by the use of microprocessors.
- (d) The fifth generation of computers is focused on artificial intelligence and machine learning.

**49. Assertion(A)** Multitasking is a feature of modern operating systems that allows multiple processes to run simultaneously.

**Reason(R)** Multitasking is achieved by allocating a separate processor to each task.

- (a) Both A and R are true, and R is the correct explanation of A.
- (b) Both A and R are true, but R is not the correct explanation of A.
- (c) A is true, but R is false
- (d) A is false, but R is true

**50.** Select the incorrect statement regards multimedia and animation.

- 1. In multimedia audio and video cannot be combined in a single file format.
- 2. Vector graphics are composed of paths and are resolution-independent.
- 3. 3D animation requires the use of three-dimensional models and can include techniques such as rigging and rendering.
- 4. In multimedia presentation, interactivity is not possible, users can only view content passively.

- (a) Both 1 and 2 are incorrect.
- (b) Only 1 is incorrect.
- (c) Only 3 is incorrect.
- (d) Both 1 and 4 are incorrect.

## Tie-Breaking Section

### Instructions

- 1. This section consists of 5 questions.
- 2. The score achieved in this section will not be included in the total marks.
- 3. If overall marks of two or more students are same, winner will be decided based on the score in this section.
- 4. Participation in this section is optional and students may choose to attempt it or not.

**1.** Which of the following statement is not correct about DMA (Direct Memory Access)?

- I. DMA is much faster and more efficient than a CPU processor to perform I/O in the computer system.
- II. DMA sends data from memory to an I/O device directly, without using CPU in the computer.
- III. DMA takes a lot of time to transfer data from memory to I/O.
- IV. Without DMA, CPU reads the block of data from memory and writes it to an I/O device in the computer.

#### Codes

- (a) Only II
- (b) Both I and II
- (c) II and IV
- (d) Only III

**2.** In the following algorithm for identifying a triangle, fill the blanks with proper statements.

Algorithm

Step 1: Start

Step 2: Read three sides of triangle and store them in a, b, c.

Step 3: Check ..... (1)

Step 4: If ..... (2) , print "Equilateral Triangle" and go to .....(3)

Step 5: Check ..... ( 4)

Step 6: If true, print "Isosceles Triangle" and go to step 8

Step 7: Print ..... (5)

Step 8: Stop

#### Codes

- (a) (1) if a == b and b == c
- (2) true
- (3) step 8

- (4) if a == b or b == c or c == a  
 (5) "Scalene Triangle"
- (b) (1) if a = b and b = c  
 (2) True  
 (3) exit  
 (4) if a == b or b == c or c == a  
 (5) "Scalene Triangle"
- (c) (1) if a == b and b == c  
 (2) true  
 (3) step 8  
 (4) if a = b and b = c and c = a  
 (5) "Scalene Triangle"
- (d) (1) if a == b and b == c  
 (2) True  
 (3) step 8  
 (4) if a == b or b == c or c == a  
 (5) "Invalid Input"

3. Match the following lists.

List I	List II
A. The process of transferring data intended for a peripheral device into a disk.	1. Multitasking
B. The technique in which the operating system of a computer executes several programs concurrently.	2. Booting
C. The name given to the process of initializing a microcomputer with its operating system	3. Spooling
D. A translator which reads an entire programme written in a high level language.	4. Compiler

Codes

	A	B	C	D
(a)	1	3	2	4
(b)	3	4	1	2

- (c) 3 1 2 4  
 (d) 1 2 3 4

4. If you right-click on a sprite's thumbnail, the following list of menu options is displayed. Match the menu option to the result.

List I (Menu Option)	List II (Result)
A. Show	1. Exports a Sprite as a file, making it available to be imported by other scratch projects.
B. Export this Sprite	2. Centers a Sprite on the stage, placing it on top of all other Sprites
C. Duplicate	3. Removes a Sprite from the project
D. Delete	4. Makes a copy of the Sprite

Codes

	A	B	C	D
(a)	2	1	4	3
(b)	3	4	1	2
(c)	1	2	4	3
(d)	1	2	3	4

5. Adam is searching for the Solver function but cannot find it anywhere, not even under the Data tab on the Ribbon. Where could he find it?
- (a) If it is not on the Ribbon, it has not been activated. He needs to activate it under Add-Ins in the Excel Options dialog box.
- (b) It is not under the Data tab, it is a formula. He needs to look under the Formula tab on the Ribbon in the Add-Ins group.
- (c) It is not a function that is usually displayed on the Ribbon. He can add it to the Ribbon as a macro function.
- (d) Solver is a separate program. He needs to launch it from his operating system's Start menu.

