



# SAMPLE PAPER

International Olympiad Foundation

EXCELLENCE IN EDUCATION

International Olympiad Foundation

14+

OLYMPIADS

MCQ

FORMAT

0

NEGATIVE MARKS

OLYMPIAD

## Cyber Olympiad

International Olympiad Foundation (IOF) · www.iof.education

CLASS / GRADE

Class 10

SUBJECT

IFCO

DURATION

60 Min

MAX MARKS

50

GENERAL INSTRUCTIONS

- All questions are Multiple Choice Questions (MCQs) with options A, B, C, D, E
- Each correct answer carries 1 mark. No negative marking for wrong answers.
- Rough work should be done separately. Do not write on question paper.

PAPER HIGHLIGHTS

• Multiple Choice Questions (MCQ)

Five options per question (A, B, C, D, E). Select the single most appropriate answer.

• No Negative Marking

1 mark per correct answer. Zero deductions — attempt every question.

• Conducted by IOF

International Olympiad Foundation — fostering excellence among students across India.

SUBJECTS

Cyber

English

Entrepreneurship

Mathematics

Commerce

Economics

GK & Current Affairs

Science

Western Music

Sanskrit

Indian Music

Hindi

Reasoning & Aptitude

Spell Talent

ALL IOF OLYMPIAD PROGRAMMES

<b>IFCO</b> International Foundation Cyber Olympiad	<b>IFEOL</b> International Foundation English Olympiad	<b>IFEnO</b> International Foundation Entrepreneurship Olympiad	<b>IFMO</b> International Foundation Mathematics Olympiad	<b>ICS</b> Institute of Company Secretaries of India Commerce Olympiad	<b>IFEcO</b> International Foundation Economics Olympiad	<b>IFGCO</b> International Foundation General Knowledge & Current Affairs Olympiad
<b>IFSO</b> International Foundation Science Olympiad	<b>IFWMuO</b> International Foundation Western Music Olympiad	<b>IFSaO</b> International Foundation Sanskrit Olympiad	<b>IFIMuO</b> International Foundation Indian Music Olympiad	<b>IFHO</b> International Foundation Hindi Olympiad	<b>IFRAO</b> International Foundation Reasoning & Aptitude Olympiad	<b>IFSTO</b> International Foundation Spell Talent Olympiad

Q1. Find the wrong term in the letter cluster series given below:

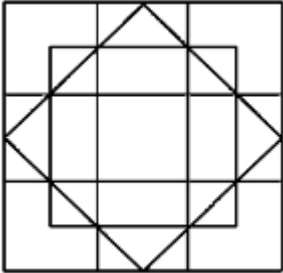
[+1]  
[-0]

**DRTO , JXZU , GUWR , MAOX**

- A. MAOX
- B. JXZU
- C. DRTO
- D. GUWR
- E. None of the option is correct

Q2. How many squares are present in figure ?

[+1]  
[-0]



- A. 22
- B. 24
- C. 26
- D. 28
- E. None of the option is correct

Q3. Take the given statements as true and decide which of the conclusion logically follows from the statements

[+1]  
[-0]

**Statements:**

- All taps are mats.
- All cats are rats
- All mats are rats.

**Conclusions:**

- I. All cats are mats.
- II. Some rats are taps.
- III. Some taps are cats is not a possibility.
- IV. All taps are rats.

- A. Only IV follow
- B. Only II and IV follow
- C. Only I, III and IV follow
- D. All follow
- E. None of the option is correct

Q4. In a certain code, if:

[+1]  
[-0]

J@K means j is K's daughter.

J%K means j is K's wife.

J + K means K is j's father.

J / K means K is J's mother.

F@R%/E%N

How is R related to N in the given expression?

- A. Mother-in-law
- B. Son-in-law
- C. Daughter-in-law
- D. Mother
- E. None of the option is correct

Q5. If "FRANCE" is written as EPXJXZ, then how "GERMANY" will be written?

[+1]  
[-0]

- A. FCOIVHR
- B. FDOIVHR
- C. FDOLYMX
- D. FDSLVMX
- E. None of the option is correct

Q6. Choose the correct option.

[+1]  
[-0]

If 64 (28) 42 and 74 (29) 53, then what is the value of 'A' in 62 (A) 43?

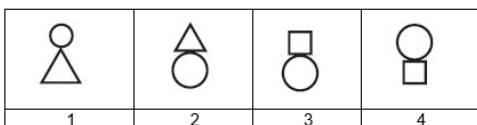
- A. 42
- B. 26
- C. 19
- D. 34
- E. None of the option is correct

Q7. Identify the next symbol in the following series of the symbols

[+1]  
[-0]



Answer Set



- A. 2
- B. 3
- C. 1
- D. 4
- E. None of the option is correct

Q8. Study the series given below carefully and answer the following question:

[+1]  
[-0]

Q 2 P 4 \* \$ E K + D 5 1 F & R \$ O ^ C

If all the symbols in the series are removed, and the remaining series is then reversed, which Number will come first after the middle of the new series?

- A. 1
- B. 2
- C. 4
- D. 5
- E. None of the option is correct

Q9. Complete the series, 2, 6, 30, 260, (?)

[+1]  
[-0]

- A. 3130
- B. 3125
- C. 630
- D. 1625
- E. None of the option is correct

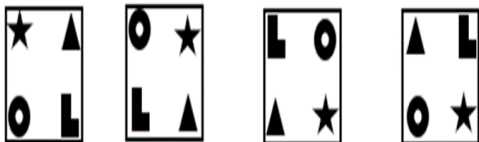
Q10. If 'DIPLOMA' is coded as 'HETHSIE', then how is 'TEACHER' coded ?

[+1]  
[-0]

- A. XAEVLAY
- B. XAEYLAV
- C. XAYELAV
- D. XEYALAV
- E. None of the option is correct

Q11. Choose the figure which is different from the rest?

[+1]  
[-0]



(A) (B) (C) (D)

- A. (B)
- B. (C)
- C. (D)
- D. (A)
- E. None of the option is correct

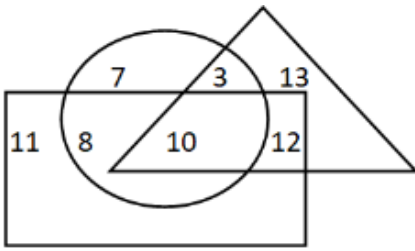
Q12. In a certain code "M0B1L3" is written as "P3E4O6". How is "1NT3RNE7" written in that code?

[+1]  
[-0]

- A. 4HFID8E8
- B. 4QW6UQH10
- C. 5KF2E4R4
- D. 5R9X8KV8
- E. None of the option is correct

**Q13.** If triangle represents Women, rectangle represents Author and circle represents Millionaire. Then which number represents Women that are both Author and Millionaire?

[+1]  
[-0]



- A. 3
- B. 13
- C. 12
- D. 10
- E. None of the option is correct

**Q14.** Find the odd one out from the given data.

[+1]  
[-0]

ZCA, WFD, UHF, SJH, PKG

- A. WFD
- B. PKG
- C. UHF
- D. ZCA
- E. None of the option is correct

**Q15.** Ram started to walk from a point A. After moving 12m towards North he turned right and moved 10m. Again he turned right and walked 12m, then turning left walked 5m. So far what distance has he travelled and which direction is he facing now ?

[+1]  
[-0]

- A. 40m , West
- B. 39m , East
- C. 29m , South
- D. 35m , North
- E. None of the option is correct

**Q16.** Which of the following is NOT a valid characteristic of the Linux operating system?

[+1]  
[-0]

- A. Multiprogramming
- B. Real-time
- C. Multiuser
- D. Multitasking
- E. None of the option is correct

**Q17.** Which of the following is/are cross-platform browser(s)?

[+1]  
[-0]

(i) Chrome      (ii) Edge      (iii) Safari

- A. Only (i) and (iii)
- B. Only (ii) and (iii)
- C. Only (ii)
- D. Only (i)
- E. None of the option is correct

- Q18.** Press \_\_\_\_\_ function key to invoke the 'Save As' dialogue box in MS-Word. [+1]  
[-0]
- A. F12
  - B. F9
  - C. F2
  - D. F7
  - E. None of the option is correct
- Q19.** What is the result of the Excel formula " =CEILING(19,4)+FLOOR(19,4) "? [+1]  
[-0]
- A. 36
  - B. 38
  - C. 30
  - D. 25
  - E. None of the option is Correct
- Q20.** If a computer system has a 64-bit architecture, what advantage does it have over a 32-bit system in handling modern applications? [+1]  
[-0]
- A. Faster internet connectivity
  - B. Ability to process larger amounts of RAM and complex computations
  - C. Better compatibility with older software
  - D. Reduced power consumption
  - E. None of the option is Correct
- Q21.** What is the significance of the Metaverse in modern IT trends? [+1]  
[-0]
- A. It is a new programming language
  - B. It creates virtual, shared spaces for social interaction and work
  - C. It is a type of antivirus software
  - D. It reduces internet bandwidth usage
  - E. None of the option is Correct
- Q22.** How does a denial-of-service (DoS) attack disrupt internet services? [+1]  
[-0]
- A. By encrypting user data
  - B. By overwhelming a server with traffic to make it unavailable
  - C. By improving server performance
  - D. By deleting website content
  - E. None of the option is Correct
- Q23.** Why is defragmentation unnecessary for SSDs? [+1]  
[-0]
- A. SSDs use flash memory with no mechanical parts
  - B. SSDs automatically encrypt data
  - C. SSDs have slower access times
  - D. SSDs have higher storage capacity
  - E. None of the option is Correct

- Q24.** What is the correct CSS syntax to change the background color of an anchor element to red when it is actively being clicked? [+1]  
[-0]
- A. `a:active { background-color: red; }`
  - B. `a:hover { background-color: red; }`
  - C. `a:visited { background-color: red; }`
  - D. `a:link { background-color: red; }`
- A. A  
B. B  
C. C  
D. D  
E. None of the option is Correct
- Q25.** In the context of a VPN, how does the implementation of a tunneling protocol like OpenVPN contribute to secure communication? [+1]  
[-0]
- A. It compresses data to improve transmission speed over the network.
  - B. It synchronizes data across multiple devices for real-time updates.
  - C. It caches website data to reduce server load during browsing.
  - D. It encapsulates data packets within a secure tunnel, preventing interception by third parties.
  - E. None of the option is correct
- Q26.** How would the hexadecimal RGB value for black (#000000) change if converted to an RGBA format with 50% opacity? [+1]  
[-0]
- A. `rgba(0, 0, 0, 0.5)`
  - B. `rgba(255, 255, 255, 0.5)`
  - C. `rgba(0, 0, 0, 1.0)`
  - D. `rgba(128, 128, 128, 0.5)`
- A. A  
B. B  
C. C  
D. D  
E. None of the option is correct
- Q27.** What would be the result of modifying the correct query (`SELECT DEPT, AVG(SAL) FROM EMP GROUP BY DEPT HAVING COUNT(*) > 5`) to include departments with exactly 5 employees? [+1]  
[-0]
- A. The query would return no results due to syntax error.
  - B. The query would include departments with 5 or more employees by changing `HAVING COUNT() >= 5`.
  - C. The query would require a `WHERE` clause instead of `HAVING`.
  - D. The query would only return the average salary for departments with fewer than 5 employees.
  - E. None of the option is correct
- Q28.** What is a potential limitation of using a hub instead of a switch in a high-traffic network environment? [+1]  
[-0]
- A. Hubs increase latency by prioritizing certain data packets.
  - B. Hubs require manual configuration for each connected device.
  - C. Hubs cause network collisions due to broadcasting all traffic to all ports.
  - D. Hubs only support wireless connections, limiting compatibility.
  - E. None of the option is correct

- Q29.** Which IoT protocol is commonly used to enable secure, low-power communication between sensors in a retail store environment? [+1]  
[-0]
- A. MQTT (Message Queuing Telemetry Transport)
  - B. FTP
  - C. SMTP
  - D. HTTP/2
  - E. None of the option is correct
- Q30.** How can Mohan ensure that changes made to the spreadsheet from home are synchronized across all users without data conflicts? [+1]  
[-0]
- A. Use a version control system integrated with the cloud service.
  - B. Save multiple copies of the spreadsheet with timestamps.
  - C. Restrict editing to one user at a time via email sharing.
  - D. Disable cloud syncing to prevent overwrite issues.
  - E. None of the option is correct
- Q31.** Why do SSDs provide faster data access compared to traditional HDDs in modern computing systems? [+1]  
[-0]
- A. SSDs use spinning platters with higher RPM for faster read/write operations.
  - B. SSDs have larger cache memory for storing temporary data.
  - C. SSDs use magnetic tapes for sequential data retrieval.
  - D. SSDs rely on flash memory, eliminating mechanical delays associated with HDDs.
  - E. None of the option is correct
- Q32.** In a webpage with multiple CSS rules, how does the priority of inline styles compare to rules defined in an external stylesheet and the rules from an external stylesheet ? [+1]  
[-0]
- A. Inline styles have the highest priority, followed by <style> tag rules, then external stylesheets.
  - B. External stylesheets override both inline styles and <style> tag rules.
  - C. <style> tag rules take precedence over inline styles but not external stylesheets.
  - D. All three have equal priority, resolved by the order of declaration.
  - E. None of the option is correct
- Q33.** What is the significance of creating a one-to-many relationship between two tables in MS Access using the Relationships window? [+1]  
[-0]
- A. It ensures that both tables have identical primary keys.
  - B. It allows one record in the primary table to link to multiple records in the related table.
  - C. It automatically duplicates data across both tables for redundancy.
  - D. It restricts both tables to have the same number of records.
  - E. None of the option is correct
- Q34.** What is the purpose of using an action query, such as an Update Query, in MS Access? [+1]  
[-0]
- A. To display summarized data in a report format.
  - B. To create a new table from scratch without data.
  - C. To export query results directly to a web server.
  - D. To modify, insert or delete records in a table based on specified criteria.
  - E. None of the option is correct

- Q35.** In a TCP/IP network, how does the combination of IP and TCP ensure successful data transfer between two applications? [+1]  
[-0]
- A. IP routes packets to the correct host, while TCP ensures the packets are delivered to the correct application in the right order.
  - B. IP encrypts the data, while TCP assigns port numbers to devices.
  - C. IP establishes a physical connection, while TCP manages routing tables.
  - D. IP handles application-layer protocols, while TCP manages network-layer protocols.
  - E. None of the option is correct
- Q36.** What is a key benefit of edge computing in IT systems for 2025? [+1]  
[-0]
- A. It stores all data in centralized cloud servers for faster access.
  - B. It processes data closer to the source, reducing latency and improving real-time performance.
  - C. It eliminates the need for internet connectivity in IoT devices.
  - D. It increases energy consumption for better processing power
  - E. None of the option is correct
- Q37.** What is a key feature of Threads, launched by Meta in 2023, that distinguishes it from other platforms in 2025? [+1]  
[-0]
- A. It focuses on professional networking for B2B marketers.
  - B. It is a location-based platform for real-world interactions.
  - C. It restricts content to video-only formats.
  - D. It allows posts up to 500 characters for more expressive content.
  - E. None of the option is correct
- Q38.** Which Microsoft-owned platform is the leading professional networking site with over one billion users in 2025? [+1]  
[-0]
- A. Skype
  - B. LinkedIn
  - C. Teams
  - D. OneDrive
  - E. None of the option is correct
- Q39.** Which OpenAI tool is designed to generate images from text descriptions, such as creating artwork or visualizations? [+1]  
[-0]
- A. DALL·E 3
  - B. Codex
  - C. GPT-4
  - D. Wishper
  - E. None of the option is correct
- Q40.** Why is garbage collection important in memory management for programming languages like Java? [+1]  
[-0]
- A. It manually deletes files from the hard disk.
  - B. It encrypts unused memory to prevent unauthorized access.
  - C. It automatically reclaims memory used by objects no longer needed by the program.
  - D. It restricts memory usage to improve processing speed.
  - E. None of the option is correct

- Q41.** Which of the following is an example of a Software as a Service (SaaS) cloud computing model? [+1]  
[-0]
- A. Amazon EC2
  - B. Microsoft 365
  - C. Google Compute Engine
  - D. Azure Virtual Machine
  - E. None of the option is correct
- Q42.** What is the nickname of the AI supercomputer in the movie 2001: A Space Odyssey, often referenced in IT culture? [+1]  
[-0]
- A. HAL
  - B. WOPR
  - C. JARVIS
  - D. Deep Thought
  - E. None of the option is correct
- Q43.** Which Android version, released in 2024, is known for enhancing AI integration and privacy features? [+1]  
[-0]
- A. Tiramisu
  - B. Upside Down Cake
  - C. Vanilla Ice Cream
  - D. Snow Cone
  - E. None of the option is correct
- Q44.** What does the acronym PUMA stand for in robotics? [+1]  
[-0]
- A. Programmable Universal Machine for Assembly
  - B. Portable Utility Machine for Automation
  - C. Precise Universal Manipulator Arm
  - D. Programmed Unit for Mechanical Actions
  - E. None of the option is correct
- Q45.** IP is responsible for \_\_\_\_\_ communication, whereas, TCP is responsible for \_\_\_\_\_ Communication. [+1]  
[-0]
- A. host-to-host, process-to process
  - B. process-to-process, host-to-host
  - C. process-to-process, process-to-process
  - D. node-to-node, node-to-node
  - E. None of the option is correct
- Q46.** This device connects multiple devices in a local area network (LAN) and uses MAC addresses to forward data only to the intended recipient. What is it? [+1]  
[-0]
- A. Gateway
  - B. Bridge
  - C. Router
  - D. Switch
  - E. None of the option is correct

**Q47.** Which of the following best describes the design characteristics of the Neumorphism GUI trend ?

[+1]  
[-0]

- A. It uses subtle shadows and highlights to give UI elements a soft, extruded, almost 3D look.
- B. It is a design style that mimics real-world objects exactly.
- C. It creates a frosted glass effect, adding depth and hierarchy to UI elements.
- D. It involves using extremely bright and contrasting colors.
- E. None of the option is correct

**Q48.** DigiLocker is a significant e-governance initiative in India. What is its primary function?

[+1]  
[-0]

- A. It is a system for online payment of utility bills only.
- B. It provides access to various central and state government services through a single mobile application.
- C. It is a platform for direct cash transfers to citizens.
- D. It is a secure cloud-based platform for storing and accessing digital documents issued by government agencies.
- E. None of the option is correct

**Q49.** In Microsoft Teams, what are 'channels' primarily used for?

[+1]  
[-0]

- A. Dedicated sections within a team for organizing conversations, files, and apps around specific topics or projects.
- B. A personal calendar for scheduling meetings.
- C. Individual direct messages to a single person.
- D. Folders where only files can be stored, without conversations.
- E. None of the option is correct

**Q50.** Which attribute specifies the page that handles the input from the user ?

[+1]  
[-0]

- A. method
- B. frame
- C. target
- D. action
- E. None of the option is correct



CLASS / GRADE

Class 10

SUBJECT

IFCO

TOTAL QUESTIONS

50

MAX MARKS

50

ANSWER SHEET — 50 QUESTIONS

Q#	ANS	Q#	ANS	Q#	ANS	Q#	ANS	Q#	ANS
Q01	A	Q11	C	Q21	B	Q31	D	Q41	B
Q02	B	Q12	B	Q22	B	Q32	A	Q42	A
Q03	B	Q13	D	Q23	A	Q33	B	Q43	C
Q04	C	Q14	B	Q24	A	Q34	D	Q44	A
Q05	A	Q15	B	Q25	D	Q35	A	Q45	A
Q06	B	Q16	B	Q26	A	Q36	B	Q46	D
Q07	B	Q17	E	Q27	B	Q37	D	Q47	A
Q08	C	Q18	A	Q28	C	Q38	B	Q48	D
Q09	A	Q19	A	Q29	A	Q39	A	Q49	A
Q10	B	Q20	B	Q30	A	Q40	C	Q50	D

## ◆ ALL IOF OLYMPIAD PROGRAMMES ◆

