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<b>ICO</b> INTERNATIONAL CYBER OLYMPIAD	<b>NISO</b> NATIONAL INTERACTIVE SCIENCE OLYMPIAD	<b>NIMO</b> NATIONAL INTERACTIVE MATHS OLYMPIAD	<b>NBTO</b> NATIONAL BIOTECHNOLOGY OLYMPIAD	<b>IEO</b> INTERNATIONAL ENGLISH OLYMPIAD	<b>IGO</b> INTERNATIONAL G.K. OLYMPIAD	<b>BIFO</b> BSE INTERNATIONAL FINANCE OLYMPIAD
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## INTERNATIONAL CYBER OLYMPIAD

### ICO

**12**  
Class

**A1**  
Paper  
Code

LEVEL - 1



Google  
Science  
Fair



**Level - 1** : All Level-1 successful\* participants will get certificate, aptitude report and online subscription, and school toppers will be eligible for school hero medals.

**Level - 2** : School toppers\* will be selected for level-2-National level - online computer based interactive test held at exam centres all over India. Besides selection for level-3, winner will get merit certificate, medals, educational CDs, laptop, scholarship and other prizes. There is no level 2 in G.K. and Biotech.

**Level - 3** : Toppers will qualify\* for level 3-International level-where you will compete with students globally. Get selected for EHF's International Olympiad training camp. Only Indian organization giving students exposure to global competitions. Represent India & win laurels. Guidance by top scientists. Prizes ranges from cash (millions of \$), gadgets, foreign trips, publicity, fame, scholarships, Internships, conference participation and more. Level 3 is in Maths, Science & Cyber only.

\*# See prospectus/website for details

- You are allowed additional 10 minutes to fill the required details in the **RESPONSE SHEET (OMR)**. **STUDENTS OF CLASS 1 & 2 HAVE TO UNDERLINE** THE CORRECT ANSWER IN THE QUESTION PAPER ITSELF. THEY ARE NOT REQUIRED TO USE THE RESPONSE SHEET (OMR). THEY HAVE TO FILL THEIR NAME, ROLL NUMBER, CLASS, SCHOOL NAME IN THE SPACE PROVIDED IN THE QUESTION PAPER.
- The question paper is made as per syllabus guidelines & pattern given in the information Booklet. The Question Paper for Classes 1 to 6 contains 25 Questions each to be answered in 40 minutes. The Question paper for classes 7 to 12 contains 50 Questions each to be answered in 60 minutes. All questions are compulsory. Further instructions are given in the instruction letter to the teacher.
- Use the response sheet to mark your responses by darkening the required circle. The response sheet has to be returned to the foundation, duly filled in. The student can retain the Question Paper except for classes 1 and 2.

### SECTION -A : MENTAL ABILITY

- A number of children are standing in a circle. They are evenly spaced and the 7<sup>th</sup> child is directly opposite the 18<sup>th</sup> child. How many children are there altogether?
  - 21
  - 22
  - 23
  - None of these
- What is at the beginning of eternity, end of space and time, beginning to every end and the end to every place?
  - The letter b
  - The letter i
  - The letter e
  - None of these
- Asha is twice as old as her sister and half as old as her mother. And in 22 years, her sister will be half as old as the mother. How old do you think Asha is now?
  - 22
  - 25
  - 28
  - None of these
- If the difference between a number and its three-fourth is 60, what will be the number ?
  - 360
  - 320
  - 240
  - None of these
- A + B means A is the son of B; A - B means A is the wife of B; A × B means A is the brother of B; A ÷ B means A is the mother of B and A = B means A is the sister of B. What does P + R - Q mean ?
  - Q is the father of P
  - Q is the son of P
  - Q is the uncle of P
  - None of these
- If the numbers which are divisible by 4, from 4 to 84 are written in reverse order then which number will be at the 7th place ?
  - 60
  - 28
  - 20
  - 32
- A bus for Bombay leaves after every forty minutes from a bus stand. An enquiry clerk told a passenger that the bus had already left ten minutes ago and the next bus will leave at 10.45 am. At what time did the enquiry clerk give this information to the passenger ?
  - 360
  - 320
  - 240
  - None of these

- (1) 10.05 am                      (2) 9.55 am  
 (3) 10.35 am                      (4) 10.15 am
8. Two number A and B are such that the sum of 5% of A and 4% of B is two-third of the sum of 6% of A and 8% of B. Find the ratio of A:B.  
 (1) 2:3                                      (2) 1:1  
 (3) 3:4                                      (4) 4:3
9. Kamini says, "Rajeev's grand father is the only son of my father". How is Kamini related to Rajeev ?  
 (1) Daughter                              (2) Sister  
 (3) Niece                                      (4) Grand mother
10. If STRAY is coded as TUSBZ then how will MOURN be coded ?  
 (1) LPVSO                                      (2) NPVSO  
 (3) NVPSO                                      (4) NPSVO

### SECTION B : COMPUTER

11. A computer derives its basic strength from  
 (1) Speed                                      (2) Accuracy  
 (3) Memory                                      (4) All of the above
12. Modern computers compared to earlier computers are  
 (1) Faster and larger  
 (2) Less reliable  
 (3) Slower but more reliable  
 (4) Faster and smaller
13. The use of computer for business applications is attractive because of its  
 (1) Accuracy  
 (2) Reliability  
 (3) Secret code facility  
 (4) All of the above
14. A computer is capable of performing almost any task, provided that it can be  
 (1) Coded  
 (2) Memorized  
 (3) Reduced to a series of logical steps  
 (4) Changed top mathematics equation
15. A BIT represents a  
 (1) Decimal digit                              (2) Octal digit  
 (3) Binary digit                                      (4) Hexadecimal digit
16. A computer has very high speed, accuracy and reliability. Its intelligence quotient could be of the order of  
 (1) 100                                      (2) 0

- (3) 50                                      (4) 200
17. Computer cannot do anything without a  
 (1) Chip                                      (2) Memory  
 (3) Output device                              (4) Program
18. A computer possesses information  
 (1) As directed by the operator  
 (2) Automatically  
 (3) At once  
 (4) Gradually and eventually
19. Pick up the false statement  
 (1) Computer can manipulate both numeric and non-numeric symbols  
 (2) Computer errors can usually be traced to faulty programs or inaccurate input data  
 (3) The facts or informational raw materials represented by numeric and non-numeric symbols are called information  
 (4) The space in the primary storage section is divided into four areas: input, working, storage, output and program storage
20. Processors of all computers, whether micro, mini or mainframe must have  
 (1) ALU                                      (2) Primary storage  
 (3) Control Unit                                      (4) All of the above
21. Pick up the correct statement about computers  
 (1) Computers process data with human intervention after the program has been fed  
 (2) The arithmetic-logic section of the CPU selects, interprets and executes the program steps.  
 (3) The secondary storage devices are usually connected on line to the CPU but for accepting data from them or returning data to them, human intervention is required.  
 (4) Computers have the built-in ability to obey different types of instructions.
22. Real time computing is possible because of the following characteristic of computer  
 (1) Storage capability  
 (2) High speed  
 (3) Accuracy  
 (4) Versatility
23. Pick out the wrong statement about modern computer systems.  
 (1) These are simple and easy to take care of  
 (2) Even beginners, untrained persons can safely handle them  
 (3) They require a highly disciplined approach

- (4) It is important to understand the proper handling of each element and proper overall procedures must be followed
24. A collection of eight bits is called:  
 (1) Byte (2) Word  
 (3) Record (4) file
25. Choose the incorrect statement about micro computers, mini-computers, etc.  
 (1) A microcomputer can be placed on a single silicon chip  
 (2) A minicomputer can have more processing capability than a mainframe model  
 (3) ROM chips may be used in micros to permanently store program instruction  
 (4) Most micros use rigid disk storage devices rather than floppy disk drives.
26. Can getch() be used to echo the input  
 (1) Yes (2) No  
 (3) Both (1) and (2) (4) None of these
27. What is the use of Bridge in Network?  
 (1) To connect LANs  
 (2) To control Network Speed  
 (3) To separate LANs  
 (4) None of these
28. MAC Address is the example of  
 (1) Transport Layer  
 (2) Data Link Layer  
 (3) Physical Layer  
 (4) None of these
29. NOT, AND, OR and NOR are  
 (1) Logical operators  
 (2) Arithmetic operators  
 (3) Relational operators  
 (4) None of these
30. What is a Firewall in Computer Network?  
 (1) An operating System of Computer Network  
 (2) The physical boundary of Network  
 (3) A system designed to prevent unauthorized access  
 (4) None of these
31. A function inside another function is called \_\_\_\_\_  
 (1) Nested function (2) Round function  
 (3) Sum function (4) None of these
32. What is the only function all C++ programs must contain?  
 (1) Start() (2) Program()  
 (3) Main() (4) None of these
33. Most suitable option for "C" literal is:  
 (1) A string (2) A string constant  
 (3) A character (4) None of these
34. Which is valid statement  
 (1) 1 KB = 1024 Bytes  
 (2) 1 MB = 1024 Bytes  
 (3) 1 KB = 1000 Bytes  
 (4) None of these
35. Which of the following word processors came first?  
 (1) WordStar (2) Lotus Notes  
 (3) WordPerfect (4) None of these
36. A scheduler which selects processes from secondary storage device is called  
 (1) Short term scheduler  
 (2) Term scheduler  
 (3) Medium term scheduler  
 (4) None of these
37. Which amongst the following is not an advantage of Distributed systems?  
 (1) Reliability  
 (2) Incremental growth  
 (3) Resource sharing  
 (4) None of these
38. A program in execution is called  
 (1) Process  
 (2) Function  
 (3) Coding  
 (4) None of these
39. ATM is an example of  
 (1) Ring topology  
 (2) Star topology  
 (3) Bus topology  
 (4) None of these
40. SRS is also known as specification of  
 (1) White box testing  
 (2) Black box testing  
 (3) Stress testing  
 (4) None of these

41. What gets printed? `d = lambda p: p * 2`  
`t = lambda p: p * 3`  
`x = 2`  
`x = d(x)`  
`x = t(x)`  
`x = d(x)`  
`print x`  
 (1) 7 (2) 12  
 (3) 24 (4) 36
42. What gets printed? `x = True`  
`y = False`  
`z = False`  
 if `x` or `y` and `z`:  
     `print "yes"`  
 else:  
     `print "no"`  
 (1) Yes (2) No  
 (3) Fails to compile (4) None of these
43. What gets printed? `x = True`  
`y = False`  
`z = False`  
 if not `x` or `y`:  
     `print 1`  
 elif not `x` or not `y` and `z`:  
     `print 2`  
 elif not `x` or `y` or not `y` and `x`:  
     `print 3`  
 else:  
     `print 4`  
 (1) 1 (2) 2  
 (3) 3 (4) 4
44. If `PYTHONPATH` is set in the environment, which directories are searched for modules? A) `PYTHONPATH` directory  
 B) Current directory  
 C) Home directory  
 D) Installation dependent default path  
 (1) A only (2) A and D  
 (3) A, B, and C (4) A, B, and D
45. In python 2.6 or earlier, the code will print error type 1 if `accessSecureSystem` raises an exception of either `AccessError` type or `SecurityError` type try:

- ```

accessSecureSystem()
except AccessError, SecurityError:
    print "error type 1"
continueWork()
    
```
- (1) True (2) False  
 (3) Both (1) and (2) (4) None of these
46. The following code will successfully print the days and then the months `daysOfWeek = ['Monday', 'Tuesday', 'Wednesday', 'Thursday', 'Friday', 'Saturday', 'Sunday']`  
`months = ['Jan', \`  
     `'Feb', \`  
     `'Mar', \`  
     `'Apr', \`  
     `'May', \`  
     `'Jun', \`  
     `'Jul', \`  
     `'Aug', \`  
     `'Sep', \`  
     `'Oct', \`  
     `'Nov', \`  
     `'Dec']`  
`print "DAYS: %s, MONTHS %s" %`  
     `(daysOfWeek, months)`  
 (1) True (2) False  
 (3) Both (1) and (2) (4) None of these
47. Assuming python 2.6 what gets printed? `f = None` for `i` in `range(5)`:  
     with `open("data.txt", "w")` as `f`:  
         if `i > 2`:  
             `break`  
     `print f.closed`  
 (1) True (2) False  
 (3) Both (1) and (2) (4) None of these

48. What gets printed? counter = 1

```
def doLotsOfStuff():
    global counter
    for i in (1, 2, 3):
        counter += 1
doLotsOfStuff()
print counter
```

- (1) 1                      (2) 2  
(3) 3                      (4) 4

49. What gets printed? class parent:

```
def __init__(self, param):
    self.v1 = param
class child(parent):
    def __init__(self, param):
        self.v2 = param
obj = child(11)
print "%d %d" % (obj.v1, obj.v2)
```

(1) None None

(2) None 11

(3) 11 11

(4) Error is generated by program

50. What gets printed? class Account:

```
def __init__(self, id):
    self.id = id
    id = 666
```

acc = Account(123)

print acc.id

(1) None

(2) 123

(3) 666

(4) SyntaxError, this program will not run



**END OF THE EXAM**