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ICO INTERNATIONAL CYBER OLYMPIAD	NISO NATIONAL INTERACTIVE SCIENCE OLYMPIAD	NIMO NATIONAL INTERACTIVE MATH OLYMPIAD	NBTO NATIONAL BIOTECHNOLOGY OLYMPIAD	IEO INTERNATIONAL ENGLISH OLYMPIAD	IGO INTERNATIONAL G.K. OLYMPIAD	BIFO BSE INTERNATIONAL FINANCE OLYMPIAD	NIPO NATIONAL IIT-PMT OLYMPIAD
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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 Art, Cricket, Cyber, NIPO 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.

* # See prospectus/website for details

1. You are allowed additional 10 minutes to fill the required details in the **RESPONSE SHEET (OMR)**.
2. 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.
3. 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.**

EHF
INTERNATIONAL
CYBER
OLYMPIAD

ICO

12
Class

A1
Paper
Code

LEVEL - 1

MENTAL ABILITY

1. An application was received by inward clerk in the afternoon of a weekday. Next day he forwarded it to the table of the senior clerk, who was on leave that day. The senior clerk next day evening put up the application to the desk officer. Desk officer studied the application and disposed off the matter on the same day i.e. Friday. Which day the application was received by the inward clerk?
 - (1) Tuesday
 - (2) Earlier week's Saturday
 - (3) Wednesday
 - (4) None of these
2. Flight to Mumbai leaves every 5 hours. At the information counter I learnt that the flight took off 25 minutes before. If the time now is 10:45 a.m.,

what is the time for the next flight?

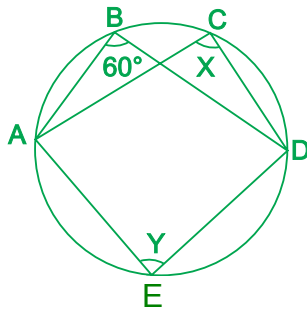
- (1) 2:20 a.m.
 - (2) 3:30 a.m.
 - (3) 3:20 p.m.
 - (4) None of these
3. If EARTHQUAKE is coded as MOGPENJOSM then EQUATE will be coded as —
 - (1) MENOPM
 - (2) MENOMP
 - (3) MNJOPM
 - (4) None of these
 4. Six persons A,B,C,D, E and F are standing in a row. C and D are standing close to each other along side E. B is standing beside A only. A is fourth from F. Who are standing on the extremes?
 - (1) B and F
 - (2) A and F

- (3) B and D (4) None of these

5. In a meeting, the map of a village was placed in such a manner that south-east becomes north, north-east becomes west and so on. What will south become?

- (1) North-East (2) West
(3) North-West (4) None of these

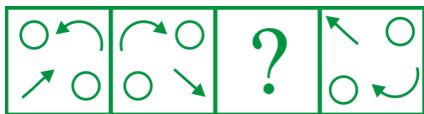
6. Find the measure of $\angle Y$ —



- (1) 60° (2) 120°
(3) 90° (4) None of these

7. Select a suitable figure from the answer set which will substitute the question mark so that a series is formed.

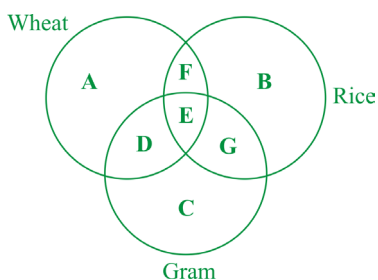
Problem Figures



Answer Figures

- (1) (2)
(3) (4) None of these

Directions:- There are three circles in questions 8-10. First circle indicates the area of wheat, second rice and third indicates the area of gram. See the circle carefully. Find out the correct alternative.



8. The area of only gram indicates—
(1) A (2) B
(3) C (4) None of these
9. The area of gram and rice both indicates—
(1) C (2) G
(3) E (4) None of these
10. The area of wheat and rice both indicates—
(1) F (2) E
(3) D (4) None of these

COMPUTERS

11. Which of the following is not a product matrix?
(1) Reliability (2) Productivity
(3) Functionality (4) None of these

12. SDLC stands for—
(1) Software design life cycle
(2) Software development life cycle
(3) System design life cycle
(4) None of these

13. What does fp point to in the program ?

```
#include<stdio.h>
int main()
{
FILE *fp;
fp=fopen("trial", "r");
return 0;
}
```

- (1) The first character in the file
(2) A structure which contains a char pointer which points to the first character of a file.
(3) The name of the file.
(4) None of these

14. One megabyte is equivalent to

- (1) 2^{10} bytes
(2) 2^{20} bytes
(3) 2^{30} bytes
(4) None of these

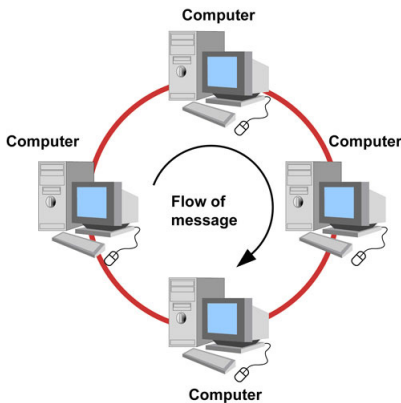
15. Smaller and less expensive PC-based servers are replacing _____ in many businesses.
- (1) Supercomputers
 - (2) Laptops
 - (3) Mainframes
 - (4) None of these
16. Which of the following is correct regarding class B address of IP address
- (1) Network bit-14, Host bit-16
 - (2) Network bit-16, Host bit-14
 - (3) Network bit-18, Host bit-16
 - (4) None of these
17. After the following code fragment, what is the value in fname?
- ```
String str;
int fname;
str= "Foolish boy";
fname = str.index of ("fool");
```
- (1) 0
  - (2) 2
  - (3) -1
  - (4) None of these
18. A communication path way that transfers data from one point to another is called
- (1) Link
  - (2) Node
  - (3) Medium
  - (4) None of these
19. Each LAN type has its own frame
- (1) system
  - (2) links
  - (3) format
  - (4) none of these
20. The term that is used to compose the matrix of pixel is
- (1) Number
  - (2) Image
  - (3) Video
  - (4) None of these
21. Each set of the bit pattern is called
- (1) Code
  - (2) Unicode
  - (3) ASCII
  - (4) None of these
22. ASM chart resembles to
- (1) map
  - (2) data
  - (3) flowchart
  - (4) none of these
23. A Boolean function may be transformed into
- (1) logical diagram
  - (2) logical graph
  - (3) map
  - (4) none of these
24. Which protocol assigns IP address to the client connected in the internet?
- (1) DHCP
  - (2) IP
  - (3) RPC
  - (4) None of these
25. When collection of various computers seems a single coherent system to its client, then it is called
- (1) computer network
  - (2) distributed system
  - (3) both (1) and (2)
  - (4) none of these
26. Different components in the motherboard of a PC unit are linked together by sets of parallel electrical conducting lines. What are these lines called?
- (1) Conductors
  - (2) Buses
  - (3) Connectors
  - (4) None of these
27. Spreadsheet is an example of \_\_\_\_\_ .
- (1) Application Software
  - (2) Utility Software
  - (3) System Software
  - (4) None of these

28. A disadvantage of partitioning is
- (1) Simplicity
  - (2) Extra space and update time
  - (3) Both (1) and (2)
  - (4) None of these
29. In hybrid distribution which kind of fragments are stored at only one site?
- (1) Critical fragments
  - (2) Only large fragments
  - (3) Non critical fragments
  - (4) None of these
30. The diagram that presents conditions and actions to be performed sequentially is
- (1) decision tree
  - (2) binary tree
  - (3) flowchart
  - (4) none of these
31. What comes after the analysis phase in the SDLC?
- (1) Implementation
  - (2) Design
  - (3) Testing
  - (4) None of these
32. This device uses reflected light to determine the location of pencil marks on test answer sheets and similar forms.
- (1) Bar-code reader
  - (2) Optical-mark reader
  - (3) POS terminal
  - (4) None of these
33. Which interface uses icons and windows?
- (1) Windows oriented
  - (2) Graphical user
  - (3) Command driven
  - (4) None of these
34. The extension of MS word file is-
- (1) doc
  - (2) jpg
  - (3) wrd
  - (4) none of these
35. Making illegal copies of copyrighted software is called?
- (1) Browsing
  - (2) Software piracy
  - (3) Both (1) and (2)
  - (4) None of these
36. Which of the following is a kind of software that is distributed & used freely but only for a specified trial period?
- (1) Freeware
  - (2) Shareware
  - (3) OSS
  - (4) None of these
37. Which of the following gets notified regarding the occurrence of events and responds to them?
- (1) Graphical Component
  - (2) Event listener
  - (3) Event handler
  - (4) None of these
38. Which of the following is the name that you give to the programming elements created in a program?
- (1) Keywords
  - (2) Tokens
  - (3) Identifiers
  - (4) None of these
39. In which of the following layouts the components are arranged and filled from left to right in rows?
- (1) Absolute Layout
  - (2) Flow Layout
  - (3) Border Layout
  - (4) None of these
40. Which of the following describes the set of variables that are enclosed within parentheses [ ]?
- (1) Method name
  - (2) Method return type
  - (3) Parameter list
  - (4) None of these

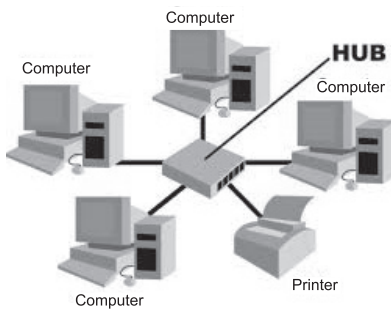
## INTERACTIVE SECTION

41. In which topology, terminators are required at the end of the lines:

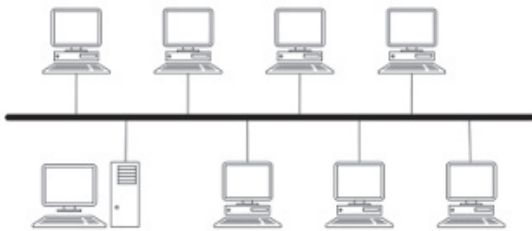
(1)



(2)



(3)

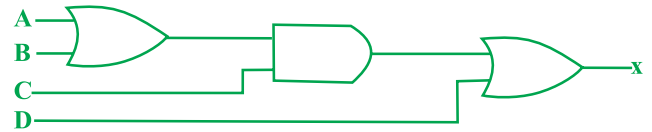


(4) None of these

42. As a technician you are confronted with a TTL circuit board containing dozens of IC chips. You have taken several readings at numerous IC chips, but the readings are inconclusive because of their erratic nature. Of the possible faults listed, select the one that most probably is causing the problem.

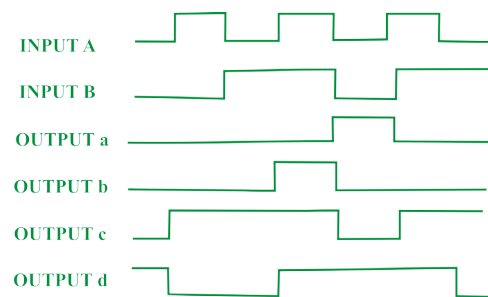
- (1) A defective IC chip that is drawing excessive current from the power supply
- (2) A solar bridge between the inputs on the first IC chip on the board
- (3) An open input on the first IC chip on the board
- (4) None of these

43. Solve the network in Figure for X.



- (1)  $A + BC + D$
- (2)  $((A + B) C) + D$
- (3)  $D (A + B + C)$
- (4) None of these

44. For a two-input XNOR gate, with the input wave forms as shown in fig., which output waveform is correct?



- (1) a
- (2) b
- (3) d
- (4) none of these

45. Match the following:

|     | Column-A |       | Column-B                                                         |
|-----|----------|-------|------------------------------------------------------------------|
| (1) | Bridge   | (i)   | Device that works like bridge but can handle different protocols |
| (2) | Gateway  | (ii)  | Device that connects dissimilar networks                         |
| (3) | Repeater | (iii) | Device that links two networks together                          |
| (4) | Router   | (iv)  | Device that amplifies a signal being transmitted on a network    |

- (1) A-3, B-2, C-4, D-1
- (2) A-2, B-3, C-1, D-4
- (3) A-2, B-3, C-4, D-1
- (4) None of these

