

Do not start attempting the test paper until you are asked to do so.

ENROLLMENT NUMBER:

STUDENT NAME:

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Class **9**

Maximum Marks : 100  
Duration : 60 Minutes  
Total Questions : 50

Test Paper Type

**BB**

**iiO** **16<sup>th</sup>**  
**INTERNATIONAL  
INFORMATICS  
OLYMPIAD  
2019-2020**

**Instructions for the Candidates**

1. Write your 12 digit Enrollment Number and your name on top of the Question Paper in the given space.
2. Keep the OMR Sheet in good/neat condition. Do not fold/damage the OMR Sheet.
3. Do not forget to sign the OMR sheet.
4. The Question Paper Booklet consists of 50 questions, divided into three sections.
5. Section-A: Computer Science (30 questions); Section-B: Reasoning and Aptitude (10 questions); Section-C: Scholar's Zone (10 questions).
6. Each question of Section-A carries 2 marks, Section-B carries 1.5 marks and that of Scholar's Zone carries 2.5 marks.
7. All the questions are compulsory and there is no negative marking.
8. Use of calculator or any other devices in the examination is strictly prohibited.
9. Choose only ONE OPTION as an answer.
10. BLUE/BLACK ball pen is preferred to darken the circle, however, in case of non-availability an HB pencil can be used. Mark your choice of answer in the OMR sheet, by darkening a circle as shown below.  
 A  B  C  D
11. Rough work should be done on the blank sheet/space provided in the Question Paper Booklet.

## Section-A (Computer Science)

1. Which of the following is an environment in which programs of the computer system are executed?  
A. Operating system B. Nodes  
C. Clustered system D. Both A and B
2. Which one of the following is not a multitasking operating system?  
A. DOS B. Windows  
C. Unix D. Linux
3. Binary numbers need more places for counting because:  
A. they are always big numbers.  
B. any number of 0s can be added in front of them.  
C. binary base is small.  
D. 0s and 1s have to be properly spaced apart.
4. In css what does h1 can be called?  
A. Selector B. Attribute  
C. Value D. Tag
5. The resource management in operating system can be done via:  
A. time division multiplexing  
B. space division multiplexing  
C. virtual machine  
D. Both A and B
6. Where in an HTML document is the correct place to refer to an external style sheet?  
A. At the end of the document  
B. In the <head> section  
C. At the top of the document  
D. In the <body> section
7. The output of an AND gate with three inputs, A, B and C, is HIGH when \_\_\_\_\_.  
A. A = 1, B = 1, C = 0  
B. A = 0, B = 0, C = 0  
C. A = 1, B = 1, C = 1  
D. A = 1, B = 0, C = 1
8. What program runs first after computer is booted and loading GUI?  
A. Desktop Manager  
B. File Manager  
C. Windows Explorer  
D. Authentication
9. What is a stub network?  
A. A network that has only one entry and exit point  
B. A network with only one entry and no exit point  
C. A network with more than one exit point  
D. A network with more than one exit and entry point
10. How do you insert a comment in a CSS file?  
A. // this is a comment //  
B. /\* this is a comment \*/  
C. 'this is a comment'  
D. // this is a comment
11. How do you add a background color for all <h1> elements in CSS?  
A. all.h1 {background-color:#FFFFFF}  
B. h1.all {background-color:#FFFFFF}  
C. h1 {background-color:#FFFFFF}  
D. None of these
12. A NAND gate has \_\_\_\_\_ inputs and \_\_\_\_\_ output.  
A. LOW inputs and LOW outputs  
B. HIGH inputs and HIGH outputs  
C. LOW inputs and HIGH outputs  
D. None of these
13. The HTML <div> element is a(n):  
A. Inline Element  
B. Outline Element  
C. Block Level Element  
D. All of these

- 
14. What is the use of print manage window?
- A. To check status of files in the print queue
  - B. To cancel the print job
  - C. To interrupt printing
  - D. All of these
- 

15. Which of the following is a technique which enables a big program to run on available memory?
- A. Multitasking
  - B. Multiprogramming
  - C. Virtual memory
  - D. Memory management
- 

16. Which HTML attribute is used to define inline styles?
- A. font
  - B. class
  - C. styles
  - D. style
- 

17. For which of the following logic gates output will be a low for any case when one or more inputs are zero for a(n):
- A. OR gate
  - B. NOT gate
  - C. AND gate
  - D. NOR gate
- 

18. Which type of query extracts the data and puts them into separate tables?
- A. A parameter query
  - B. A make-table query
  - C. An update query
  - D. A cross tab query
- 

19. ALINK and VLINK are attributes of which tag?
- A. <HEAD>
  - B. <BODY>
  - C. <HTML>
  - D. <TITLE>
- 

20. Which one of the following is not true?
- A. Kernel is the program that constitutes the central core of the operating system.
  - B. Kernel is the first part of the operating system to load into memory during booting.
  - C. Kernel is made of various modules which can not be loaded in running the operating system.
  - D. Kernel remains in the memory during the entire computer session.
- 

- 
21. Which of the following elements of html contains copyright information?
- A. Header
  - B. Footer
  - C. Paragraph
  - D. Heading
- 

22. A small piece of program that can add interactivity to your website is known as:
- A. Meta
  - B. Script
  - C. Marquee
  - D. All of these
- 

23. Tags that are used to tell meaning of the enclosed text (e.g. <strong></strong>) are called:
- A. Similar tags
  - B. Defined tags
  - C. Physical tags
  - D. Logical tags
- 

24. The gate which is used to reverse the output obtained is \_\_\_\_\_.
- A. NOR
  - B. NAND
  - C. EXOR
  - D. NOT
- 

25. Which of the following database objects produces the final result to present?
- A. Forms
  - B. Reports
  - C. Queries
  - D. Tables
- 

26. Validation rule in a field will:
- A. check the value entered when user leaves the field.
  - B. display the value in a specified format when user leaves the field.
  - C. define the appearance of the text.
  - D. there is no option of Validation Rule.
- 

27. What is buffering?
- A. The process of temporarily storing the data to allow for small variation in device speeds
  - B. A method to reduce cross-talks
  - C. Storage of data within the transmitting medium until the receiver is ready to receive
  - D. A method to reduce the routing overhead
-

28. In computer network, nodes are:
- the computers that starts the data.
  - the computer that routes the data.
  - the computer that terminates the data.
  - All of these
29. The invention of \_\_\_\_\_ gave birth to the much cheaper micro computers.

- Mainframes
- Microcomputers
- Microprocessors
- PDA's

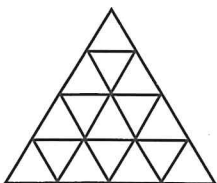
30. \_\_\_\_\_ is a technology that allows telephone calls to be made over computer networks like the Internet.
- VoIP
  - GSM
  - Modem
  - CDMA

## Section-B (Reasoning and Aptitude)

31. Find the missing term.  
323, 316, 308, 296, 257, 202, ?
- 155
  - 96
  - 47
  - 22
32. To establish the same relationship between two pair of terms on either side of '::<' choose the option that will replace the question mark(?).  
*Titan : Saturn :: Deimos : ?*
- Mars
  - Jupiter
  - Saturn
  - Venus

33. In the certain language:
- 'kemp lamp terns' means 'speak the truth';
  - 'bis tim nak' means 'always seek knowledge';
  - 'tim terns sik' means 'knowledge is truth';
  - 'lik bis zap' means 'never seek violence';
- Which letter code stands for 'always'?
- nak
  - tim
  - bis
  - zap

34. How many triangles are there in the following figure?

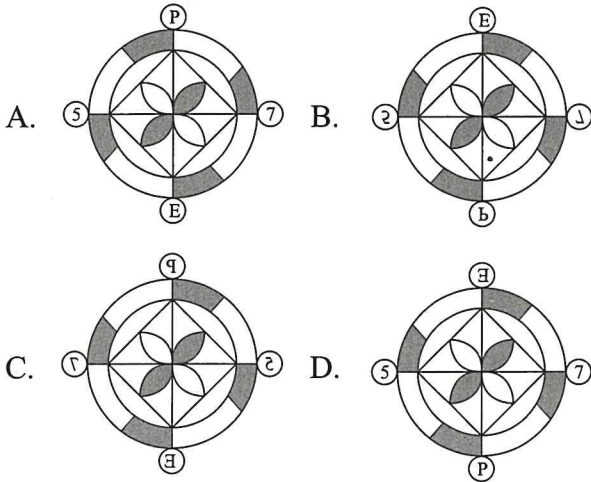
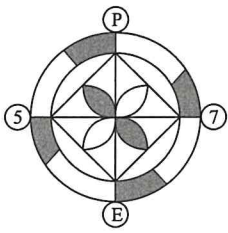


- 29
- 27
- 23
- 30

35. The questions is based on the following information:
- $A \% B$  means  $A$  is 2m west of  $B$ .
  - $A @ B$  means  $A$  is 5m east of  $B$ .
  - $A \$ B$  means  $A$  is 1m north of  $B$ .
  - $A * B$  means  $A$  is 3m south of  $B$ .
- If the expression ' $C \% L * A \% S * M \% R$ ' is true, what is the shortest distance between  $C$  and  $R$ ?
- 2m
  - $\sqrt{72}$ m
  - $\sqrt{32}$ m
  - $\sqrt{36}$ m

36. This question is based on the following information:
- $P \% Q$  means  $P$  is the father of  $Q$ .
  - $P @ Q$  means  $P$  is the brother of  $Q$ .
  - $P \$ Q$  means  $P$  is the daughter of  $Q$ .
  - $P * Q$  means  $P$  is the son of  $Q$ .
  - $P \textcircled{C} Q$  means  $P$  is mother of  $Q$
  - $P \& Q$  means  $P$  is wife of  $Q$
- If the expression ' $J @ K \& L @ M \$ O$ ' is true, then which of the following is definitely true?
- $O$  is mother of  $M$
  - $J$  is brother of  $L$
  - $K$  is sister in law of  $M$
  - $O$  is mother in law of  $K$

37. Find the water image



38. What comes next in the following pattern.

5	15	3	7
7	12	19	18
6	18	3	15
11	3	21	?

- A. 55                      B. 67  
C. 81                      D. 97

**Directions (39-40):** Study the information carefully and answer the question given below.

Eight persons sitting in a circular table, some are facing center while some facing outside the center. D sits third to the left G. Only two persons sit between F and H. C sits second to the left of the A who sits third to the left of B. C is not an immediate neighbour of G. E sits second to the right of H but not immediate neighbour of F. H face outside. F is second to the left of G. B is not immediate neighbor of E. D and F face opposite direction to each other. D faces same direction as G. A and C face inside. Immediate neighbor of G face opposite direction to each other. F does not face inside.

39. Three of the following four are alike in certain way from a group. Find the one that does not belong to that group?

- A. A  
B. D  
C. C  
D. E

40. If A and B interchange their positions, then who sits second to the left of A?

- A. C                      B. F  
C. E                      D. D

Space for Rough Work

## Section-C (Scholar's Zone)

41. In HTML, a color can be specified using a hexadecimal value in the form of:

- A. #000000                      B. #0 - #255  
C. #RRGGBB                     D. None of these

42. The universal gate that can be used to implement any boolean expression is \_\_\_\_\_.

- A. NAND                         B. EXOR  
C. OR                             D. AND

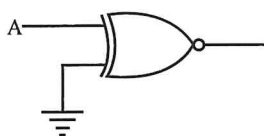
43. What happens when we format a floppy disk?

- A. Identification information is written on all tracks and sectors.  
B. The system area is deleted.  
C. Data is written.  
D. Data is arranged on the disk in a contiguous fashion.

44. If a 3-input NOR gate has eight input possibilities, then how many of those possibilities will result in a high output?

- A. 1                                 B. 2  
C. 7                                 D. 8

45. For the gate in the given picture, the output will be \_\_\_\_\_.



- A. 0                                 B. 1  
C. A                                 D.  $\bar{A}$

46. A referential integrity in MS-Access:

- A. do not enter a value in the foreign key field of a child table if that value does not exist in the primary key of the parent table.  
B. do not enter a value in the primary key field of child table if that value does not exist in the primary key of the parent table.  
C. do not enter a value in the foreign key field of a parent table if that value does not exist in the primary key of the child table.  
D. All of these

47. Which one of the following extends a private network across public networks?

- A. Local Area Network  
B. Virtual Private Network  
C. Enterprise Private Network  
D. Storage Area Network

48. Which of the following elements is used by the filter property to blur the images?

- A. opaque()                        B. scatter()  
C. scatter                         D. All of these

49. Junk e-mail is also called \_\_\_\_\_.

- A. spam                             B. spoof  
C. sniffer script                   D. spool

50. What are the two examples of freeware?

- A. WinZip and Linux  
B. Shareware and file sharing  
C. Microsoft Word and the Google toolbar  
D. Instant messaging and the Google toolbar

Space for Rough Work