SOF OLYMPIADS

ICSO
SOF INTERNATIONAL COMPUTER SCIENCE OLYMPIAD

Total Questions : 50   Time : 1 hr.

PATTERN & MARKING SCHEME				
Section	(1) Logical Reasoning	(2) Computer Science	(3) AI, Robotics and Information Technology	(4) Achievers Section
No. of Questions	10	30	5	5
Marks per Ques.	1	1	1	3

SYLLABUS

Section – 1 : Verbal and Non-Verbal Reasoning.

Section – 2 : Fundamentals of Computer (Hardware, Software, Algorithms & Flowcharts (Advanced symbols) and Introduction to Number System), Using Windows 11, HTML & CSS (Html Elements: A, Ul and Ol (Attributes: Type, Start), Li and Some More Advanced Tags and Attributes), Programming in Scratch, MS-Access, Networking, MS-Word (Exploring File tab, Language and Translate options, Tracking features -Comments, Reviewing Pane, Tracking Changes, Comparing, Combining and Protecting documents, Working with References), MS-PowerPoint (Exploring File tab and Slide Show tab, Comparing, Combining and Protecting presentations), MS-Excel (Exploring File tab, Useful Formulas and Functions - IF, Even, Odd, LCM, GCD, Power, Product, Round, Sqrt, Sum, Min, Max, Average, Count, Upper, Lower And Replace, Cell referencing, Using Defined Names group), Memory & Storage Devices, Cyber Safety, Operating System (Introduction, Features, Types-single user and multi-user).
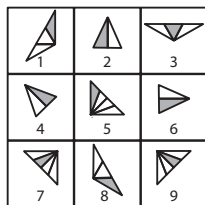
Section – 3 : AI, Robotics, IT Gadgets, Devices, Apps, Computerization, and other Developments in the Field of IT.

Section – 4 : Higher Order Thinking Questions - Syllabus as per Sections 2 and 3.

Questions are based on Windows 11 and MS-Office 2016.

LOGICAL REASONING

1. In a certain code language, if CABLE is written as VHHZQ, then how will MOUSE be written in the same code language?
(A) RJAXZ   (B) GJAZY   (C) JRAZX   (D) XZARJ

2. In a group of 6 persons, Vijay is taller than only three persons. Arun is taller than Dev and Rahul but shorter than Arjun, who is not the tallest. Ajay is taller than Dev. Who among the following is the tallest?
(A) Arun   (B) Ajay   (C) Vijay   (D) Arjun

3. Group the given figures into three classes on the basis of their identical properties using each figure only once.

(A) 1, 3, 8; 2, 4, 6; 5, 7, 9
(B) 1, 2, 8; 3, 4, 6; 5, 7, 9
(C) 1, 3, 8; 2, 5, 7; 4, 6, 9
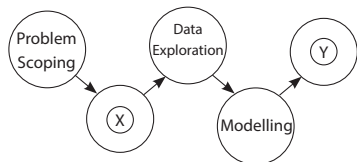(D) 1, 5, 8; 2, 4, 6; 3, 7, 9

4. Which of the following statements hold(s) true about the operating system?

Statement 1: Linux is a family of open-source operating systems, which can be modified and distributed by anyone around the world.

Statement 2: macOS is an operating system designed by Apple.

(A) Only Statement 1   (B) Only Statement 2

(C) Both Statement 1 and Statement 2   (D) Neither Statement 1 nor Statement 2

5. Identify the following.
- It is a physical or a virtual device.
- It is used to send information that is contained in data packets between networks.
- It analyzes data within the packets to identify the best way for the information to reach the destination.

(A) Switch   (B) Router   (C) Hub   (D) Bridge

6. _____ is a graphical representation used to represent the logic.

(A) Pseudocode   (B) Algorithm   (C) Flowchart   (D) Program

AI, ROBOTICS AND INFORMATION TECHNOLOGY

7. What will come in the place of X and Y in the given diagram with respect to project cycle in AI?

	X	Y
(A)	Data Acquisition	Evaluation
(B)	Evaluation	Data Acquisition
(C)	Data System	Evaluation
(D)	Evaluation	Data System

8. Which of the following options does not represent a online money transfer app?

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

ACHIEVERS SECTION

9. Identify the following:
- It is the core part of operating system and it manages the operations of computer and hardware.
- It is responsible to control the devices by using device drivers.

(A) Operating system   (B) Kernel

(C) System call   (D) Process control block

10. Identify the following terms marked as X and Y with respect to transmission media.

X : It is a high frequency radio wave used for communication between devices on a network.

Y : It uses infrared light to transmit data between devices. It is commonly used for short-range communication between devices such as printers and mobile devices.

(A) X - Microwaves, Y - Infrared waves   (B) X - Infrared waves, Y - Microwaves

(C) X - Radio waves, Y - Infrared waves   (D) X - Microwaves, Y - Radio waves

ANSWER KEY

1. (C)   2. (B)   3. (A)   4. (C)   5. (B)   6. (C)   7. (A)   8. (D)   9. (B)   10. (A)