## Grade 9



## CREST Cyber Olympiad (CCO) Sample Paper

## Pattern and Marking Scheme

| Grade | Topic/Section | No. of <br> Questions | Marks per <br> Question | Total <br> Marks |
| :---: | :---: | :---: | :---: | :---: |
| Grade 9 | Computer \& IT | 40 | 1 | 40 |
|  | Achiever's Section | 10 | 2 | 20 |
| Grand Total |  | $\mathbf{5 0}$ |  | $\mathbf{6 0}$ |

The total duration of the exam is 60 minutes.

## Syllabus

Section 1: Algorithms and Flowcharts in Programming, Visual Basic, Animations, HTML (Links, Anchors and Table tags), MS Word, MS Excel (Formula Auditing, Data Tools, Protecting and Sharing Workbooks/Worksheets, Working with Cell Range), MS PowerPoint, Hardware, Software, Input \& Output Devices, Memory \& Storage Devices, Flash CS6, Communication Technology (Networking, Internet and Multimedia), Operating Systems (Types-Interactive (GUI based), Real Time and Distributed, Commonly used OS), Windows, Latest Developments in the Field of IT.

Achievers Section: Higher Order Thinking Questions - Syllabus as per Section 1. Questions are based on Windows 11 and MS Office 2016.

For more details, visit https://www.crestolympiads.com/cyber-olympiad-cco

## Computers \& IT (Each Question is 1 Mark)

1. In MS Word, what will happen if you press the F8 key three times?
a. A word is selected
b. A sentence is selected
c. A paragraph is selected
d. A page is selected
2. Which out of these options is designed to create a particular look in an animation?
a. Template
b. Presentation
c. Slide
d. Background
3. Complete the sentence given below:

In computer networking, cookies were originally designed for $\qquad$ .
a. Client side programming
b. Server side programming
c. Both Client side programming and Server side programming
d. Web side programming
4. Which one of the following options is not an example of a utility program?
a. Backup software
b. Operating system
c. Antivirus software
d. All of the above are utility programs
5. Look at the symbol given below. For which of the following purpose this symbol is used in Flowcharts?

a. Terminal box-Start/End
b. Input/Output
c. Process/Instruction
d. Decision
6. In Visual Basic, which of the following control doesn't receive the focus and doesn't have a TabIndex property?
a. Picture Box
b. Tabcontrol Control
c. List Box
d. Label Control
7. In Flowchart, diamond shaped symbol is used to represent which of the following options?
a. Decision box
b. Statement box
c. Error box
d. If-statement box
8. Which of the following is a program capable of continually replicating with little or no user intervention?
a. Virus
b. Trojan Horses
c. Rootkit
d. Worms
9. Analyse the images and answer the question given below: Which symbol is used for output/input?
a.

b.

c.

d.

10. Fill in the blank:

In Visual Basic, we can preserve the value of a local variable by making the variable $\qquad$ .
a. private
b. public
c. static
d. implicit
11. In Visual Basic, what do you call the process of hiding variable information in a class that doesn't need to be seen by the rest of the program?
a. Hiding
b. Encapsulation
c. Protecting
d. Covering
12. Which is the last step that is done to verify whether the goals of the project are met?
a. Checking
b. Refining
c. Scripting
d. Deciding
13. Which function in Excel is used to determine the day of the week for a date?
a. $\operatorname{DAY}()$
b. WEEKDAY()
c. WEEK()
d. DAYOFWEEK()
14. In Visual Basic, which one of the following indicates whether a particular condition is on or off?
a. Check box
b. List Box
c. Combo box
d. Function Box
15. Bluetooth was developed by which of the following firm?
a. SONY
b.
c.

## d. SNMSUNG

16. What is a character that is raised smaller below the base line called in MS Word?
a. Outlined
b. Inlined
c. Superscript
d. Subscript
17. Shane is working on excel. She wants to add a pie chart in her sheet. Which of the following steps should she perform to open Chart Wizard?
a. File > Chart
b. Insert > Picture > Chart
c. Insert > Chart
d. Tools > Chart
18. To put your logo on the same position on every slide automatically, which one should you use?
a.

Handout Master
C.

Slide Sorter View
d.

Slide Master
19. Which out of the following you will not find in Paste Special Dialog Box in MS Excel?
a. Add
b. Subtract
c. Divide
d. SQRT
20. Fill in the blank:
$\qquad$ is the viewer of any sort of multimedia project that helps to control what and when the elements within it are delivered.
a. Multiscreen multimedia
b. Interactive multimedia
c. Onscreen multimedia
d. Portable multimedia
21. In windows 11, which one of the following is the shortcut key to minimize all but not the active window?
a. Win + Home
b. Win + End
c. Wind + D
d. $\mathrm{Ctrl}+\mathrm{Home}$
22. Out of the following, choose the operating system that will not allow you to run more than one program at once:
a.

b.

c.

d.

23. What will the function given below return in MS Excel 2010?
$=\operatorname{MATCH}(12,\{10,13,30,40,60\}, 1)$
a. 0
b. 1
c. 2
d. 3
24. In a worksheet in MS Excel, what is the shortcut key to hide the entire row?
a. $\mathrm{Ctrl}+2$
b. $\mathrm{Ctrl}+9$
c. $\mathrm{Ctrl}+\mathrm{N}$
d. $\mathrm{Ctrl}+-$
25. What do we call a network whose elements may be separated by some distance? It usually involves two or more networks and dedicated high-speed telephone lines.
a. LAN
b. WAN
c. URL
d. Server
26. Fill in the blank:

A $\qquad$ is an agreement between the communication parties on how communication is to proceed.
a. Path
b. SLA
c. Bond
d. Protocol
27. Fill in the blank:

A processor that collects the transmission from several communication media and send them over a single line that operates at a higher capacity is called $\qquad$ .
a. multiplexer
b. bridge
c. hub
d. router
28. Which of the following refers to dangerous programs that can be 'caught' on opening E-mail attachments and downloading software from the Internet?
a. Utility
b. Virus
c. Honey Pot
d. Spam
29. All the following statements are true about variable names except one. Identify it:
a. The first character of a variable name must be a letter
b. They may include letters, numbers and underscore ( $\_$)
c. There is no upper limit for the length of a variable name
d. You cannot use a reserved word
30. Which type of animation is best for developing characters that would showcase depth and realism?
a. 3D animation
b. 2D animation
c. Vector
d. Alpha
31. Complete the sentence given below:

In an SQL SELECT querying a single table, the asterisk ( ${ }^{*}$ ) means that $\qquad$ -
a. all column of the table are to be returned
b. all records meeting the full criteria are to be returned
c. all records with even partial criteria met are to be returned
d. all records of the table are to be returned
32. Which of the following device takes data sent from one network device and forwards it to all devices on the network regardless of the intended recipient?
a. DNS server
b. Switch
c. Hub
d. Gateway
33. Which one of the following provides the ability to query information from the database, to insert tuples into the database, delete tuples from the database and modify tuples in the database?
a. DML (Data Manipulation Language)
b. DDL (Data Definition Language)
c. Query
d. Relational Schema
34. Sajal created a PowerPoint presentation on his Physics project which he wants to present to his class. Sajal wants to add some additional point (not present in the slides) to help him
remember what he wants to say in each slide. Which PowerPoint feature is best suited for this purpose?
a. Master Slides
b. Comments
c. Notes
d. Track Changes
35. Which of the following statement is TRUE in context with MS Excel 2016 ?
a. Excel does not support pie charts.
b. Once a bar chart is inserted in an Excel sheet, the colour of its bars cannot be changed.
c. Excel does not allow the editing of chart titles after insertion.
d. Excel chart type can be modified even after the chart is inserted in excel.
36. Fill in the blank:

Someone who seeks to break the defence of a computer or a computer network for a variety of reasons such as profit, protest, information gathering or recreation is called a
$\qquad$ .
a. breaker
b. burglar
c. intruder
d. hacker
37. Fill in the blank:

Exchange of text messages and computer files over network either local network as LAN or over internet as WAN is called as $\qquad$ .
a. Chatting
b. FTP
c. Download
d. TCP
38. < SCRIPT > ... </SCRIPT > tag can be placed within which of the following HTML tag?
a. Header
b. Body
c. Header and Body
d. Footer
39. Which of the following tags are related to Table in HTML?
a. <table > < row > < column>
b. <table > <tr > <td>
c. < table < head > < body >
d. < table > < header > < footer >
40. Which of the following is correct to change font face in Web Page using HTML?
a. < font = "font name" > ... </font >
b. < font name = "font name" > ...</font>
c. < font face = "font name" > ... </font >
d. Font Face cannot be changed using HTML

## Achiever's Section (Each Question is 2 Marks)

41. Which of the following is FALSE with reference to cell editing in MS Excel?
a. Edit the cell by double clicking the cell where the content is located
b. Select the cell and press the F2 function key on the keyboard to edit the content of the cell
c. Select the cell, click on the formula bar and edit the content
d. Click the cell and press the F5 function key on the keyboard to edit the content of the cell
42. Observe the flowcharts given below and identify the one that is used to represent the main segments of the program: What is the value of the following MS Excel formula?
$=\operatorname{MOD}(11,3) \& 32 / 4 / 2$
a. 2,4
b. 3,4
c. 4,5
d. 3,4
43. Which was the first company that worked to mass-market a microcomputer and change it to a personal computer?
a.

RadioShack
b.

c.

d.

44. Observe the images given below and identify the fastest transmission media among the following:
a.

b.

c.

d.

45. Consider the following code segment:
if $(Y<0)$
$\{X=-X: Y=-Y\} ; Z=0$;
while $(Y>0)$
$\{Z=Z+X: Y+Y-1 ;\}$
Assume that $X, Y$ and $Z$ are inter variables, and that $X$ and $Y$ have be initialised. Which of the following best describes what these code segment does?
a. Sets $Z$ to be the product $X$ * $Y$
b. Sets $Z$ to be the sum $X+Y$
c. Sets $Z$ to be the absolute value of $Y$
d. Sets to be value of $Y$
46. Which of the following is the correct way of assigning value "centerscreen" for form's start position property?
a. Startposition.Form_1 = Formstartposition.CenterScreen
b. Form_1.Startposition = CenteScreen.FromStartPosition
c. Form_1.StartPosition = FormStartPosition.CenterScreen
d. Form_1.StartPosition = FormStartPosition.Location.CenterScreen
47. Match the following MS PowerPoint components in Column A with their description in Column B:

| Column A |  | Column B |  |
| :--- | :--- | :--- | :--- |
| a. | Slide Design | i. | are the dotted-line containers on slide layouts that hold <br> such content as titles, body text, tables, charts, <br> SmartArt graphics, pictures, clip art, videos, and <br> sounds |
| b. | Auto Content Wizard | ii. | These are the templates for Microsoft Office and <br> PowerPoint that you can use to enhance your <br> presentations |
| c. | Place Holder | iii. | is a feature available in some programs, usually found <br> on the left side of the window. It displays thumbnails of <br> files or features available in the program |
| d. | Slide Pane | iv. | It leads you through a series of questions so you can <br> choose the best layout for your presentation |

a. (a) - (ii), (b) - (iv), (c) - (i), (d) - (iii)
b. (a) - (i), (b) - (iv), (c) - (ii), (d) - (iii)
c. (a) - (iii), (b) - (i), (c) - (iv), (d) - (ii)
d. (a) - (iv), (b) - (iii), (c) - (i), (d) - (ii)
48. Match the following type of multimedia in Column A with their description in Column B:

| Column A |  | Column B |  |
| :--- | :---: | :---: | :---: |
| a. | Interactive Multimedia | i. | In this, you can use images to link to your <br> information and also bars and charts to make the <br> viewer of the presentation understand more clearly |
| b. | On-Screen Multimedia | ii. | It is a portable consumer electronics device capable <br> of storing and playing digital media such as audio, <br> images, and video files |
| C. | Portable Multimedia | iii. | refers to products and services on digital computer- <br> based systems which respond to the user's actions <br> by presenting content such as text, moving image, <br> animation, video, audio, and video games |

a. (a) - (i), (b) - (iii), (c) - (ii)
b. (a) - (iii), (b) - (i), (c) - (ii)
c. (a) - (ii), (b) - (iii), (c) - (i)
d. (a) - (iii), (b) - (ii), (c) - (i)
49. Identify the term with the help of the description given below:

1. It is the maximum rate of data transfer across a given path
2. This is computed by taking the number of bits - in a Gigabit network, that would be 1 billion and dividing that by eight to determine the bytes
3. It is the capacity of a wired or wireless network communications link to transmit the maximum amount of data from one point to another over a computer network or internet connection in a given amount of time, usually one second
a. Network
b. Bridge
c. Bandwidth
d. Access time
4. Identify category of Operating System with the help of the description given below:
5. It is an operating system that guarantees a certain capability within a specified time constraint
6. It is an operating system intended to serve real-time applications that process data as it comes in, typically without buffer delays
7. In this type of Operating System, the response is guaranteed within a specified timing constraint
a. Mac Operating System
b. Real Time Operating System
c. Distributed Operating System
d. Open Source Operating System

## Answer Key

| 1. | b | 2. | a | 3. | b | 4. | b | 5. | a | 6. | a | 7. | a |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 8. | a | 9. | d | 10. | c | 11. | b | 12. | a | 13. | b | 14. | a |  |  |  |  |
| 15. | b | 16. | d | 17. | c | 18. | d | 19. | d | 20. | b | 21. | a |  |  |  |  |
| 22. | d | 23. | b | 24. | b | 25. | b | 26. | d | 27. | a | 28. | b |  |  |  |  |
| 29. | c | 30. | a | 31. | a | 32. | c | 33. | a | 34. | c | 35. | d |  |  |  |  |
| 36. | d | 37. | a | 38. | c | 39. | b | 40. | c | 41. | b | 42. | a |  |  |  |  |
| 43. | a | 44. | b | 45. | c | 46. | c | 47. | a | 48. | b | 49. | c |  |  |  |  |
| 50. | b |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

