

**AGA KHAN UNIVERSITY EXAMINATION BOARD  
SECONDARY SCHOOL CERTIFICATE**

**CLASS IX**

**ANNUAL EXAMINATIONS 2022**

**Computer Science**

**Total Time: 1 hour 40 minutes**

**Total Marks: 50 (40-Theory & 10-Alternate to Practical)**

**INSTRUCTIONS**

1. Read each question carefully.
2. Answer the questions on the separate answer sheet provided. DO NOT write your answers on the question paper.
3. There are 100 answer numbers on the answer sheet. Use answer numbers 1 to 50 only.
4. Question Distribution

Theory	Alternate to Practical (ATP)
40 MCQs	10 MCQs

5. In each question, there are four choices A, B, C, D. Choose ONE. On the answer grid, black out the circle for your choice with a pencil as shown below.

Correct Way	Incorrect Ways
1 (A) (B) (C) (D)	1 (A) (B) (C) (D)
	2 (A) (B) (C) (D)
	3 (A) (B) (C) (D)
	4 (A) (B) (C) (D)

Candidate's Signature

6. If you want to change your answer, ERASE the first answer completely with a rubber, before blacking out a new circle.
7. DO NOT write anything in the answer grid. The computer only records what is in the circles.
8. The marks obtained on the 40 MCQs will be equated to the total marks of 65 for the theory examination results.
9. You may use a simple calculator if you wish.

**THEORY (Questions 1-40)**

1. A software that loads programs into the memory and then executes them is called
  - A. device driver.
  - B. utility software.
  - C. flight simulator.
  - D. operating system.
  
2. An example of application software is
  - A. device driver.
  - B. utility software.
  - C. flight simulator.
  - D. operating system.
  
3. In contrast to serial ports, parallel ports transmit
  - A. data at low speed.
  - B. single stream of data at a time.
  - C. multiple streams of data at a time.
  - D. data between processor and memory.
  
4. Which of the following statement is FALSE about the hard disk drive?
  - A. It is a secondary storage device.
  - B. It uses optical disks to store data.
  - C. It is a non-volatile storage device.
  - D. It uses random access method to access the data.
  
5. Which of the following statements is FALSE about the cache memory levels?
  - A. Level 2 cache memory is located on the motherboard.
  - B. Level 1 cache memory is located on the microprocessor.
  - C. Level 3 cache memory is slower than level 1 cache memory.
  - D. Level 3 cache memory is smaller in storage capacity than other two levels.
  
6. Which of the following statements is FALSE about ROM?
  - A. It is a non-volatile memory.
  - B. It allows to perform read operation.
  - C. It stores the program to start-up a computer.
  - D. It allows to perform write operation several times.
  
7. The TWO most common output devices in an ATM machine are
  - A. printer and keypad.
  - B. printer and speaker.
  - C. keypad and speaker.
  - D. monitor and scanner.

8. A CPU contains all of the following components EXCEPT
- A. registers.
  - B. input unit.
  - C. control unit.
  - D. arithmetic logic unit.
9. A device is used to check whether meat is cooked from inside or not. The MOST appropriate sensor used in this device could be a
- A. gas sensor.
  - B. pressure sensor.
  - C. moisture sensor.
  - D. temperature sensor.
10. Some devices are essential to perform specific tasks on a computer.
- Two essential devices to make a video call are
- A. webcam and printer.
  - B. monitor and scanner.
  - C. headphone and scanner.
  - D. webcam and headphones.
11. Sara has distributed brochures of her home-based business.
- Three of the essential devices that should be used in developing softcopy and obtaining hardcopy of these brochures are
- A. mouse, keyboard and printer.
  - B. mouse, speaker and monitor.
  - C. webcam, monitor and mouse.
  - D. printer, keyboard and headphones.
12. A device which is used to capture the product information is
- A. monitor.
  - B. light pen.
  - C. barcode reader.
  - D. magnetic ink character reader.
13. The CORRECT pair of a device and its characteristic is

	Device	Characteristic
A	Digital Camera	Adjusting Resolution
B	Joystick	Pointing Device in Laptop
C	Barcode Reader	Checking Originality of Cheques
D	Magnetic Ink Character Reader	Capturing Product Information

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14. A signal that causes data transfer from main memory to a CPU register is sent from
- A. input unit.
  - B. output unit.
  - C. control unit.
  - D. arithmetic logic unit.

15. Fatima has a handwritten document. She wants to convert the document into editable form in the computer system.

An input device that she should use for this purpose is a/ an

- A. barcode reader.
  - B. optical mark reader.
  - C. magnetic ink character reader.
  - D. optical character reader.
16. A system needs to automatically unlock the main door in a house during the day and lock it at night. The MOST suitable sensor to be used in this system is
- A. light sensor.
  - B. pressure sensor.
  - C. moisture sensor.
  - D. temperature sensor.
17. Which of the following statements is TRUE about star topology?
- A. Detection of fault is difficult
  - B. Easiest network topology to set up
  - C. Lowest cost topology to implement due to short cable length
  - D. Failure of one computer does not stop the functioning of the entire network
18. Which of the following is FALSE about peer-to-peer networks?
- A. It provides centralised security.
  - B. It can be expanded up to thousands of computers.
  - C. It is generally used for long distance communication.
  - D. These networks are considered as wide area networks.
19. A type of communication technology that provides the LOWEST internet connection speed is a/ an
- A. dial-up line.
  - B. digital subscriber line.
  - C. code division multiple access.
  - D. integrated services digital network.

20. Consider the given image.



The type of topology shown in this image is

- A. bus.
  - B. star.
  - C. ring.
  - D. mesh.
21. In contrast to bus topology, the mesh topology
- A. is difficult to implement.
  - B. provides ease in adding new computers.
  - C. uses less cable to connect computers together.
  - D. halts the entire network if any of the computers stops working.
22. A topology which is MOST expensive among other topologies is
- A. bus.
  - B. star.
  - C. ring.
  - D. mesh.
23. In contrast to star topology, the ring topology
- A. makes it difficult to detect faults.
  - B. requires more cables for its implementation.
  - C. makes it easy to connect new devices to the network.
  - D. ensures that failure of one computer does not stop the functioning of the entire network.
24. The purpose of using terminators in the bus topology is to
- A. increase the data rate of the medium.
  - B. stop signals reaching to unauthorised users.
  - C. stop signals from bouncing back to the medium.
  - D. decrease the chances of signals from getting corrupt.

25. A type of network that has the LOWEST data rate when data is transmitted on longer distances is
- A. LAN.
  - B. MAN.
  - C. PAN.
  - D. WAN.
26. The two types of networks in which the transmission medium is owned by the user are
- I. PAN
  - II. WAN
  - III. LAN
  - IV. MAN
- A. I and III.
  - B. I and IV.
  - C. II and IV.
  - D. II and III.
27. In contrast to client-server network, a peer-to-peer network
- I. focuses on sharing the information
  - II. uses centralised server to store data
  - III. is less stable if number of computers increases
  - IV. allows each node to request and respond for the services
- A. I and II.
  - B. I and III.
  - C. II and IV.
  - D. III and IV.
28. A type of communication via telephone network that gives a speed of around 256 Kbps is a/ an
- A. dial-up line.
  - B. digital subscriber line.
  - C. code division multiple access.
  - D. integrated services digital network.
29. Two of the tags that are related to tables in HTML are
- A. `<tr></tr>` and `<th></th>`
  - B. `<br></br>` and `<dt></dt>`
  - C. `<tr></tr>` and `<br></br>`
  - D. `<th></th>` and `<dt></dt>`

30. The attribute that specifies the path to an image in a web page is

- A. img
- B. src
- C. alt
- D. tr

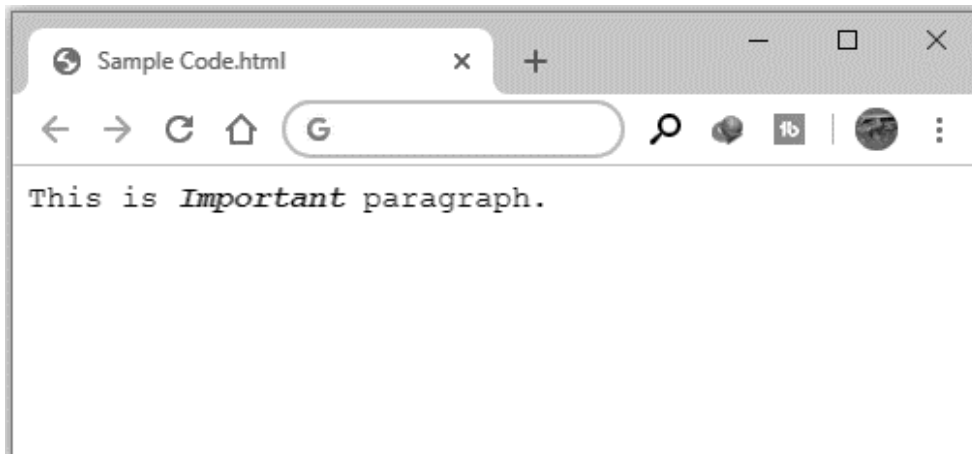
31. An image with the following specifications is to be inserted in a web page.

- The name of the image is flower.jpg
- The alternative text for image is "Flower Picture"
- The width and height of the image are to be 100 pixels
- A solid black border having thickness of 3 pixels surrounds the picture

The HTML code to insert these specifications in a web page is

A	<code>&lt;img src="flower" alt="Flower Picture" width="100" height="100" style="border:3px solid black"&gt;</code>
B	<code>&lt;alt="Flower Picture" img src="flower.jpg" width="100" height="100" style="border:3px solid black"&gt;</code>
C	<code>&lt;img src="flower.jpg" alt="Flower Picture" width="100" height="100" style="border:3px solid black"&gt;</code>
D	<code>&lt;style="border:3px solid black" img src="flower.jpg" alt="Flower Picture" width="100" height="100"/&gt;</code>

32. Consider the given image of a web page showing a sentence. The font style of sentence is **Courier New**.

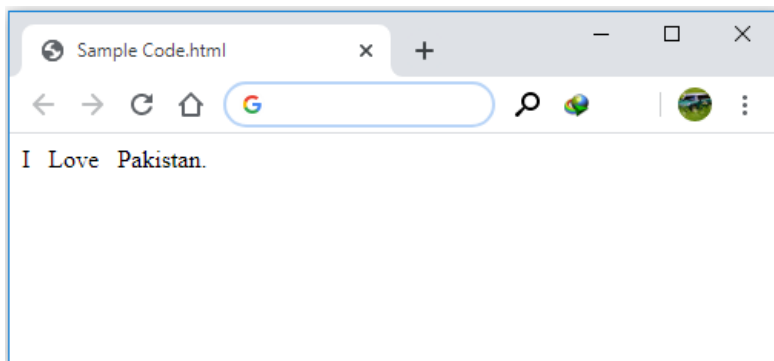


The HTML code to show this sentence is

A	<code>&lt;p This is &lt;b&gt;&lt;I&gt;Important&lt;/I&gt;&lt;/b&gt; paragraph&lt;/p&gt; style="font-family:'Courier New' "&gt;</code>
B	<code>&lt;p style="font-family:'Courier New' "&gt;This is &lt;b&gt;&lt;I&gt;Important&lt;/I&gt;&lt;/b&gt; paragraph.&lt;/p&gt;</code>
C	<code>&lt;p style="font-family:'Courier New' "&gt;This is &lt;b&gt;&lt;I&gt;Important&lt;/I&gt; paragraph.&lt;/p&gt;</code>
D	<code>&lt;p style="font-family='Courier New' "&gt;This is &lt;b&gt;&lt;I&gt;Important&lt;/I&gt;&lt;/b&gt; paragraph.&lt;/p&gt;</code>

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33. Given is the image of a webpage showing a sentence.



The HTML code for displaying the sentence is

A	I<p><p><p>Love<p><p><p>Pakistan.
B	I   Love   Pakistan.
C	I&href;&href;&href;Love&href;&href;&href;Pakistan.
D	I&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;Love&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;Pakistan.

34. Which of the following statements is FALSE about HTML?

- A. It is a markup language.
- B. It is used for creating software.
- C. Its code is usually written in notepad.
- D. It does not need a compiler for execution.

35. Web crawler and database are two basic components of a

- A. web server.
- B. web browser.
- C. search engine.
- D. uniform resource locator.

36. Which of the following HTML tags does not need a closing tag?

- A. <title>
- B. <head>
- C. <br>
- D. <p>

37. An image can be set as background of a web page by using the

- A. background attribute in the body tag.
- B. body attribute in the background tag.
- C. href attribute in the background tag.
- D. body attribute in the href tag.



38. The types of tags that are essential to create a definition list are

- A. 2
- B. 3
- C. 4
- D. 5

39. Consider the given text.

How are you?

The HTML code to show this text in white color over the magenta background is

<pre>&lt;style:"background-color magenta;"&gt; &lt;p style:"color white"&gt;How are you?&lt;/p&gt;</pre>	<pre>&lt;style="background color&lt;magenta&gt;";"&gt; &lt;p style="color&lt;white&gt;"&gt;How are you?&lt;/p&gt;</pre>
A	B
<pre>&lt;style="background color=magenta;"&gt; &lt;p style="color=white"&gt;How are you?&lt;/p&gt;</pre>	<pre>&lt;style="background-color:magenta;"&gt; &lt;p style="color:white"&gt;How are you?&lt;/p&gt;</pre>
C	D

40. The bold code line in the given HTML code is INCORRECT.

```
<html>
<body style = "background-color:Burly Wood;"/body>
<h1>This is a heading</h1>
<p>This is a paragraph.</p>
</body>
</html>
```

The CORRECT code line to show Burly Wood color in the background of a web page is

A	<body style="background-color:BurlyWood;">
B	<body style="background-color=Burly Wood;">
C	<body style="background-color<BurlyWood;>">
D	<body style="background-color=BurlyWood;"/body>

**ALTERNATE TO PRACTICAL (ATP: Questions 41-50)**

41. Which of the following are used as a hyperlink to link a web page to another web page or another section of the same page when user clicks on it?

- A. Text and Video
- B. Text and Image
- C. Video and Document
- D. Image and Document

42. Which of the following HTML codes should be used to display white text on a background having black color?

A	<code>&lt;body bgcolor=black text=white&gt;</code>
B	<code>&lt;body bgcolor=black fgcolor=white&gt;</code>
C	<code>&lt;body backgroundcolor=black text=white&gt;</code>
D	<code>&lt;body bgcolor=black foregroundcolor=white&gt;</code>

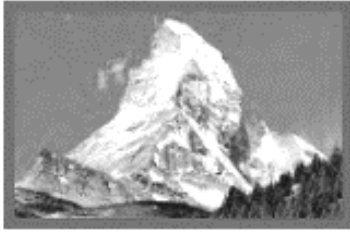
43. Consider the given incomplete code. This code is supposed to right align the heading of a table.

th
{
<input type="text"/>
}

Which of the following HTML statement lines should go in the empty box to complete the code?

- A. `text align: right;`
- B. `text-align: right;`
- C. `right: text-align;`
- D. `right text align;`

44. Consider the given image.



The HTML code to add a red colored, 7 pixels-thick border around the image is

A	<code>&lt;style&gt;img{border:7px solid red;}&lt;/style&gt;</code>
B	<code>&lt;/style&gt;img{border:7px solid red;}&lt;style&gt;</code>
C	<code>&lt;style&gt;&lt;img&gt;{border:7px solid red;}&lt;/style&gt;</code>
D	<code>&lt;/style&gt;&lt;img&gt;{border:7px solid red;}&lt;style&gt;</code>

45. Consider the given image showing a hyperlink added to a webpage.

[Click Here for ZOOM](#)

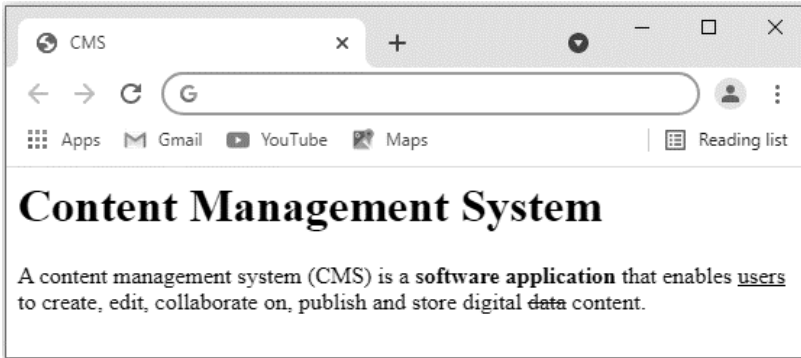
When someone clicks on Click Here for Zoom, then the Zoom website with the following address will be opened.

**`https://zoom.us/`**

The CORRECT HTML code for this purpose is

A	<code>&lt;a href="https://zoom.us/"&gt;Click Here for ZOOM&lt;/a&gt;</code>
B	<code>&lt;a href="https://zoom.us/"&gt;Click Here for ZOOM&lt;/a&gt;</code>
C	<code>&lt;a Click Here for ZOOM href="https://zoom.us/"&gt;&lt;/a&gt;</code>
D	<code>&lt;a&gt;Click Here for ZOOM href="https://zoom.us/"&lt;/a&gt;</code>

Use the given image to answer Q.46, Q.47, Q.48 and Q.49.



46. The following changes need to be made in the heading:

- Font style: Calibri
- Font color: Blue
- Font size: 35 pixels

The replaced HTML code will be

A	<code>&lt;p style="font-family:Calibri; font-color:Blue; font-size:35px;"&gt;Content Management System&lt;/p&gt;</code>
B	<code>&lt;p style="font:Calibri; font-color:Blue; font-size:35px;"&gt;Content Management System&lt;/p&gt;</code>
C	<code>&lt;p style="font-family:Calibri; color:Blue; font-size:35px;"&gt;Content Management System&lt;/p&gt;</code>
D	<code>&lt;p style="font:Calibri; color:Blue; font-size:35px;"&gt;Content Management System&lt;/p&gt;</code>

47. The HTML code to display the text below the heading is

A	<code>&lt;p&gt;A content management system (CMS) is a &lt;b&gt;software application&lt;/b&gt; that enables &lt;u&gt;users&lt;/u&gt; to create, edit, collaborate on, publish and store digital &lt;del&gt;data&lt;/del&gt; content.&lt;/p&gt;</code>
B	<code>&lt;p&gt;A content management system (CMS) is a &lt;b&gt;software application&lt;/b&gt; that enables &lt;u&gt;users&lt;/u&gt; to create, edit, collaborate on, publish and store digital &lt;del&gt;data&lt;/del&gt; content.&lt;/p&gt;</code>
C	<code>&lt;p&gt;A content management system (CMS) is a &lt;u&gt;software application&lt;/u&gt; that enables &lt;b&gt;users&lt;/b&gt; to create, edit, collaborate on, publish and store digital &lt;del&gt;data&lt;/del&gt; content.&lt;/p&gt;</code>
D	<code>&lt;p&gt;A content management system (CMS) is a &lt;u&gt;software application&lt;/b&gt; that enables &lt;b&gt;users&lt;/u&gt; to create, edit, collaborate on, publish and store digital &lt;del&gt;data&lt;/del&gt; content.&lt;/p&gt;</code>

48. The HTML code to display the heading shown in this image is

- A. `<h1>Content Management System</h1>`
- B. `<h6>Content Management System</h6>`
- C. `<b>Content Management System</b>`
- D. `<title>Content Management System</title>`

49. The HTML code to show the text on the image of tab is

- A. `<h4>CMS</h4>`
- B. `<title>CMS</title>`
- C. `<html>CMS</html>`
- D. `<head>CMS</head>`

50. Consider the given image showing the text displayed on a web page

**List of Science Subjects**

- Physics
- Chemistry
- Biology

The HTML code that would display the list shown in the web page is

A	<code>&lt;li&gt; &lt;ul&gt;Physics&lt;/ul&gt; &lt;ul&gt;Chemistry&lt;/ul&gt; &lt;ul&gt;Biology&lt;/ul&gt; &lt;/li&gt;</code>
B	<code>&lt;li&gt; &lt;ol&gt;Physics&lt;/ol&gt; &lt;ol&gt;Chemistry&lt;/ol&gt; &lt;ol&gt;Biology&lt;/ol&gt; &lt;/li&gt;</code>
C	<code>&lt;ul&gt; &lt;li&gt;Physics&lt;/li&gt; &lt;li&gt;Chemistry&lt;/li&gt; &lt;li&gt;Biology&lt;/li&gt; &lt;/ul&gt;</code>
D	<code>&lt;ol&gt; &lt;li&gt;Physics&lt;/li&gt; &lt;li&gt;Chemistry&lt;/li&gt; &lt;li&gt;Biology&lt;/li&gt; &lt;/ol&gt;</code>

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