AGA KHAN UNIVERSITY EXAMINATION BOARD

SECONDARY SCHOOL CERTIFICATE

CLASS IX

MODEL EXAMINATION PAPER 2020

Computer Science Paper I

Time: 45 minutes   Marks: 30

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 30 only.

4. 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.

Candidate's Signature

5. If you want to change your answer, ERASE the first answer completely with a rubber, before blacking out a new circle.

6. DO NOT write anything in the answer grid. The computer only records what is in the circles.

1. Which is the CORRECT categorisation of features for the generations of computers in the given table?

	Second Generation	**Third Generation**	**Fourth Generation**
A	Assembly Language	Integrated Circuits	Punch Cards
B	Graphical User Interface	Punch Cards	Assembly Language
C	Punch Cards	Graphical User Interface	Integrated Circuits
D	Assembly Language	Integrated Circuits	Graphical User Interface

2. In an automatic irrigation system, moisture sensors are used to check the moisture level in the soil. When the moisture level is lower than the desired level, then a signal is sent to the valve to turn on the water sprinkler. In this scenario, the valve will be turned on by a/ an

   A. cutter.
   B. sensor.
   C. plotter.
   D. actuator.

3. How many input devices are shown in this image of computer system?

   A. Three
   B. Four
   C. Five
   D. Six

4. Which of the following is the MOST suitable device to read shaded circles of the given image of MCQ sheet?


    A. Magnetic Ink Character Reader
    B. Optical Character Reader
    C. Optical Mark Reader
    D. Barcode Reader

5. As compared to hard disk drives, the universal serial bus (USB) flash drives

    A. have moving parts inside them.
    B. have high power consumption.
    C. rely on magnetic properties.
    D. are lighter in weight.

6. A computer component that checks whether a number is greater or lesser than another is the

    A. arithmetic logic unit.
    B. memory unit.
    C. control unit.
    D. output unit.

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7.   Aleena downloads a word processing software from the internet. She can use limited features of the software for a month. After one month, the following message appears on her computer screen.
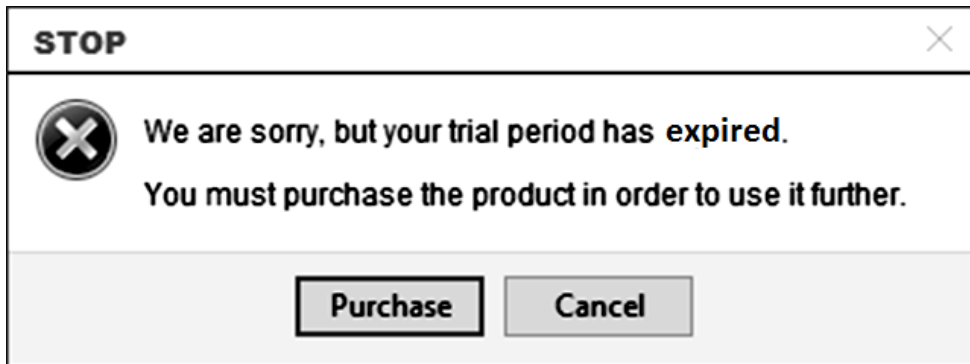
This software is an example of

A.   freeware.
B.   shareware.
C.   system software.
D.   open source software.

8.   An operating system that offers only command line interface is

A.   Unix.
B.   Linux.
C.   Windows.
D.   Macintosh.

9.   Single user operating systems are used in

I.   minicomputers
II.   microcomputers
III.   mainframe computers

A.   I only.
B.   II only.
C.   I and III.
D.   II and III.

10.   Keyboard shortcut to save a MS Word file is

A.   Alt + S
B.   Tab + S
C.   Ctrl + S
D.   Shift + S

11. Keyboard shortcut to copy text in a MS Word file is

    A.   Alt + C
    B.   Tab + C
    C.   Ctrl + C
    D.   Shift + C

12. Omar is preparing his assignment that should not exceed 3,000 words.

He can easily check the total word count quickly through

    A.   title bar.
    B.   scroll bar.
    C.   status bar.
    D.   quick access toolbar.

13. A technology that is MOSTLY used in television remote controls is

    A.   radio waves.
    B.   microwave.
    C.   bluetooth.
    D.   infra-red.

14. Read the given characteristics.

- It has maximum speed of 56 kilobits per second.
- It provides the internet connection through telephone line.
- It converts digital signals into analog signals at sender side.
- It converts analog signals into digital at receiver side.

A device that has all these characteristics is

    A.   router.
    B.   dial-up modem.
    C.   switch/ access point.
    D.   network interface card.

15. An internet connection has maximum data rate of 2 mebibits per second.

Time required to download a video file of 70 mebibytes using this connection would be

    A.   17.5 seconds.
    B.   35 seconds.
    C.   140 seconds.
    D.   280 seconds.

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16.   The CORRECT categorisation of examples of transmission modes in the given table is

	Simplex	**Half Duplex**	**Full Duplex**
A	TV Broadcast	Walkie-Talkie	Mobile Phone
B	Mobile Phone	Walkie-Talkie	TV Broadcast
C	TV Broadcast	Mobile Phone	Walkie-Talkie
D	Walkie-Talkie	TV Broadcast	Mobile Phone

17.   The peer-to-peer network architecture would be the MOST suitable for a network

   A.   in which data is stored in a central storage.
   B.   of five computers at an office with centralised network security.
   C.   of ten computers at a shop without centralised network security.
   D.   where a powerful computer serves other computers in the network.

18.   The number of links required among four nodes in mesh topology is

   A.   4
   B.   6
   C.   8
   D.   12

19.   In terms of cost, which of the following arrangement of data communication lines is CORRECT?

   (**Note**: DSL is Digital Subscriber Line and ISDN is Integrated Services Digital Network.)

	Cheap ⟶		**Costly**
A	ISDN	Dial-up Line	DSL
B	Dial-up Line	DSL	ISDN
C	DSL	ISDN	Dial-up Line
D	Dial-up Line	ISDN	DSL

20.   A network that requires pairing of nodes before start of the data communication
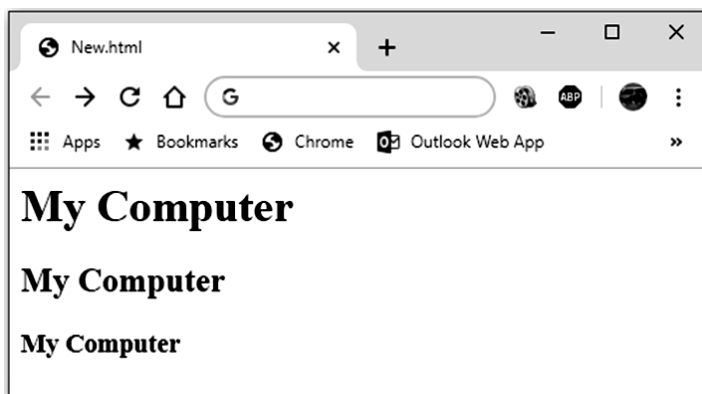
   A.   bluetooth network.
   B.   wide area network.
   C.   local area network.
   D.   metropolitan area network.

21.   A type of media that offers highest data rate is

   A.   optical fibre cable.
   B.   coaxial cable.
   C.   bluetooth.
   D.   infra-red.

22. Ali reads news on his computer from a website. This website is actually stored in

   A. web browser.
   B. his computer.
   C. web server.
   D. router.

23. The HTML (Hyper Text Mark-up Language) code that would give the output as shown in the given image is

   (**Note**: This text is shown using largest three heading tags in HTML.)

|	
<html> <head> </head> <body> My Computer My Computer My Computer </body> </html>	<html> <head> </head> <body> My Computer My Computer My Computer </body> </html>
A	B
<html> <head> </head> <body> My Computer My Computer My Computer </body> </html>	<html> <head> </head> <body> My Computer My Computer My Computer </body> </html>
C	D

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24. Shahid wants that whenever his website is accessed then 'Shahid's Pakistan' should appear in the tab as shown in the given image.
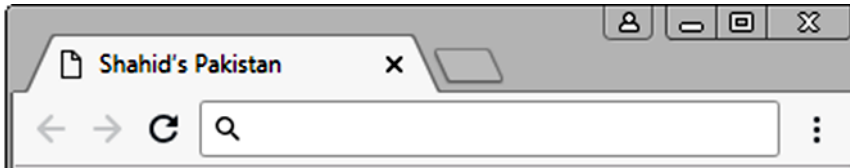
The code that would complete the following HTML program to do this task is

```
<html>
<head>

</head>
<body>
</body>
</html>
```

    A.   <h1> Shahid's Pakistan </h1>
    B.   <title> Shahid's Pakistan </title>
    C.   <head> Shahid's Pakistan </head>
    D.   <body> Shahid's Pakistan </body>

25. The HTML code for the formula $(a + b)^2 = a^2 + b^2 + 2ab$ is

    A.   (a + b)
2 = a
2 + b
2 + 2ab
    B.   (a + b)
2 = a
2 + b
2 + 2ab
    C.   (a + b)<sub>2</sub> = a<sub>2</sub> + b<sub>2</sub> + 2ab
    D.   (a + b)<sup>2</sup> = a<sup>2</sup> + b<sup>2</sup> + 2ab

26. Consider the given image of a web page.
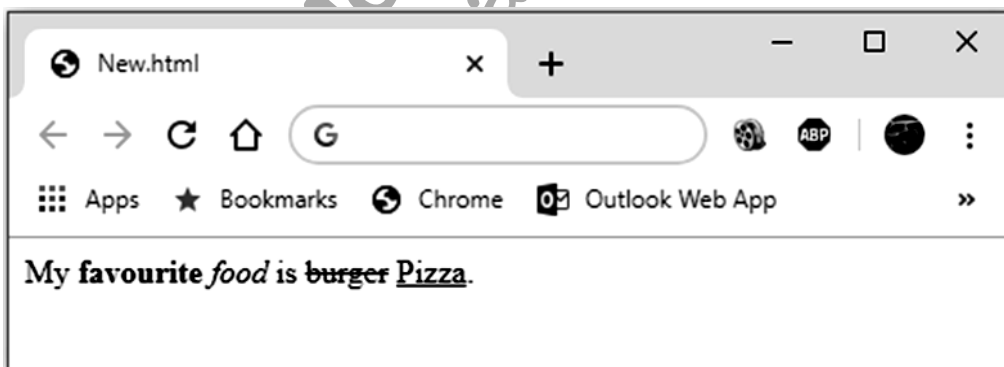
The HTML code that will display the text in the image of the web page is

    A.   My favourite </i>food</i> is <strike>burger</strike> </u>Pizza</u>
    B.   My **favourite** </i>*food*<i> is </strike>~~burger~~</strike> </u><u>Pizza</u></u>
    C.   My favourite <i>food</i> is <strike>burger</strike> <u>Pizza</u>
    D.   My <b>favourite<b> <i>food<i> is <strike>burger</strike> <u>Pizza</u>

27. Consider the given web page.
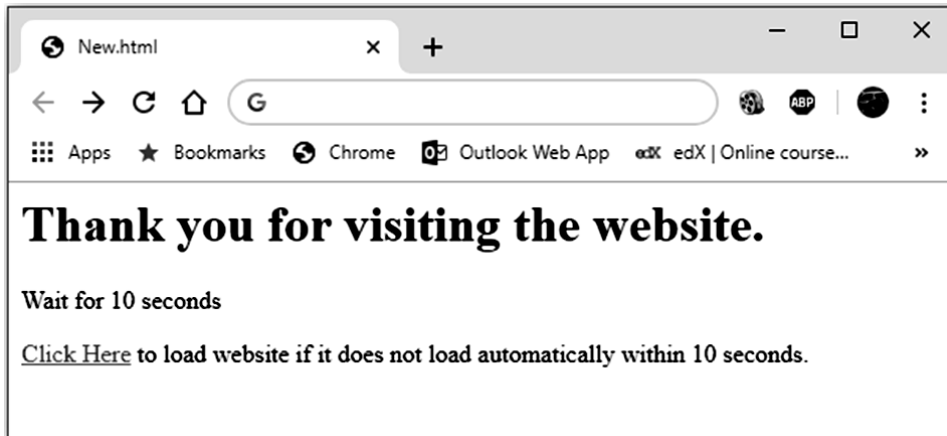
When someone clicks on <u>Click Here</u>, then they should be redirected to website
https://www.testwebsite.com

However, there is some error in the shaded part of HTML code of this webpage due to which the website cannot be accessed.

```
<html>
<head>
<h1> Thank you for visiting the website. </h1>
<p> Wait for 10 seconds</p>
<p> <"https://www.testwebsite.com"> Click Here </a> to load website if
it does not load automatically within 10 seconds.</p>
</head>
<body>
</body>
</html>
```

To CORRECT the given HTML code, the shaded part should be replaced by

A	\<p\> \< Click Here ="https://www.testwebsite.com"\> \</a\> to load website if it does not load automatically within 10 seconds.\</p\>
B	\<p\> \<a href="https://www.testwebsite.com"\> Click Here to load website if it does not load automatically within 10 seconds.\</p\>
C	\<p\> \<a href="https://www.testwebsite.com"\> Click Here \</a\> to load website if it does not load automatically within 10 seconds.\</p\>
D	\<p\> \<a href="https://www.testwebsite.com"\> \</a\> Click Here to load website if it does not load automatically within 10 seconds.\</p\>

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28.   Consider the given image of a web page and its incomplete HTML code.

```
<html>
<body>
<h2>Basic HTML Table</h2>
<table style="width:100%">




</table>
</body>
</html>
```
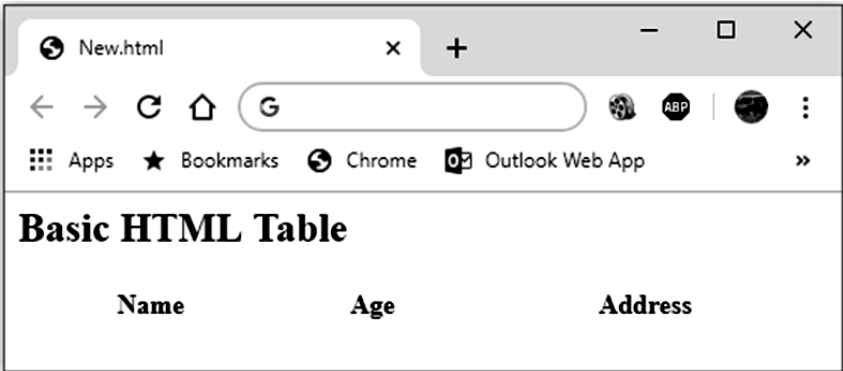
The HTML code that should be placed in the shaded box to display the web page is

<th> Name Age Address </th>	<th> <tr>Name</tr> <tr>Age</tr> <tr>Address</tr> </th>
A	B
<tr> Name Age Address </tr>	<tr> <th>Name</th> <th>Age</th> <th>Address</th> </tr>
C	D

29. A web page contains an image. The name and path of the image is as follows:

   **D:\HTMLCodes\Sample-Building.jpg**

    The width and height of the image is 460 and 345 pixels respectively.

    If the web browser is not able to find this image, then the text 'Image of Sample Building' should appear in the place of image.

    The HTML code that should be used for this purpose is

A	<img src="D:\HTMLCodes\Sample-Building.jpg" alt="Picture of Sample Building" width="460" height="345">
B	<img src="D:\HTMLCodes\Sample-Building" alt="Picture of Sample Building" width="460" height="345">
C	< width="460" height="345" alt="Picture of Sample Building" img src = "D:\HTMLCodes\Sample-Building.jpg" >
D	< width="460" height="345" alt="Picture of Sample Building" img src = "D:\HTMLCodes\Sample-Building" >

30. Consider the given webpage with four frames. The HTML codes for frame 1, frame 2, frame 3 and frame 4 are stored in frame1.html, frame2.html, frame3.html and frame4.html files respectively.
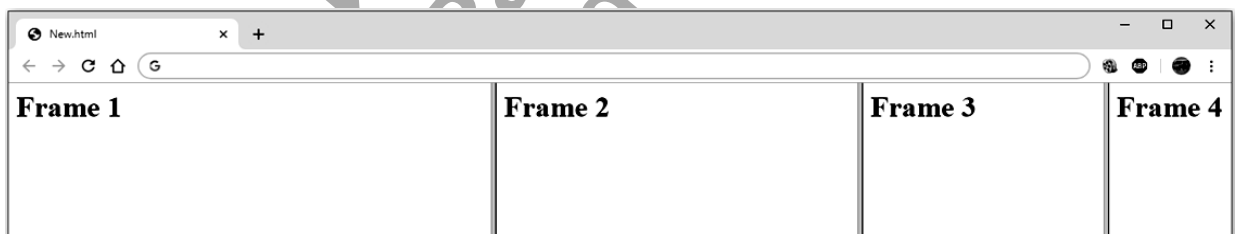
    Which of the following HTML codes would CORRECTLY show the frames of this web page?

<frameset cols = "10%, 20%, 30%, 40%"> <frame src = "frame4.html"/> <frame src = "frame3.html"/> <frame src = "frame2.html"/> <frame src = "frame1.html"/></frameset>	<frameset cols = "10%, 20%, 30%, 40%"> <frame src = "frame1.html"/> <frame src = "frame2.html"/> <frame src = "frame3.html"/> <frame src = "frame4.html"/></frameset>
A	B
<frameset cols = "40%, 30%, 20%, 10%"> <frame src = "frame4.html"/> <frame src = "frame3.html"/> <frame src = "frame2.html"/> <frame src = "frame1.html"/></frameset>	<frameset cols = "40%, 30%, 20%, 10%"> <frame src = "frame1.html"/> <frame src = "frame2.html"/> <frame src = "frame3.html"/> <frame src = "frame4.html"/></frameset>
C	D

END OF PAPER

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Please use this page for rough work