

AGA KHAN UNIVERSITY EXAMINATION BOARD

SECONDARY SCHOOL CERTIFICATE

CLASS IX

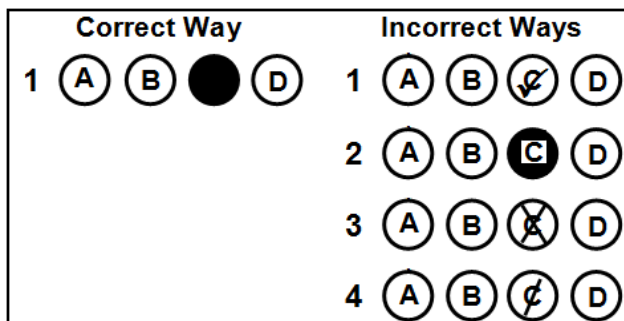
MODEL EXAMINATION PAPER 2023 AND ONWARDS

Computer Science Paper I

Time: 1 hour 10 minutes Marks: 40

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 40 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.
7. You may use a simple calculator if you wish.

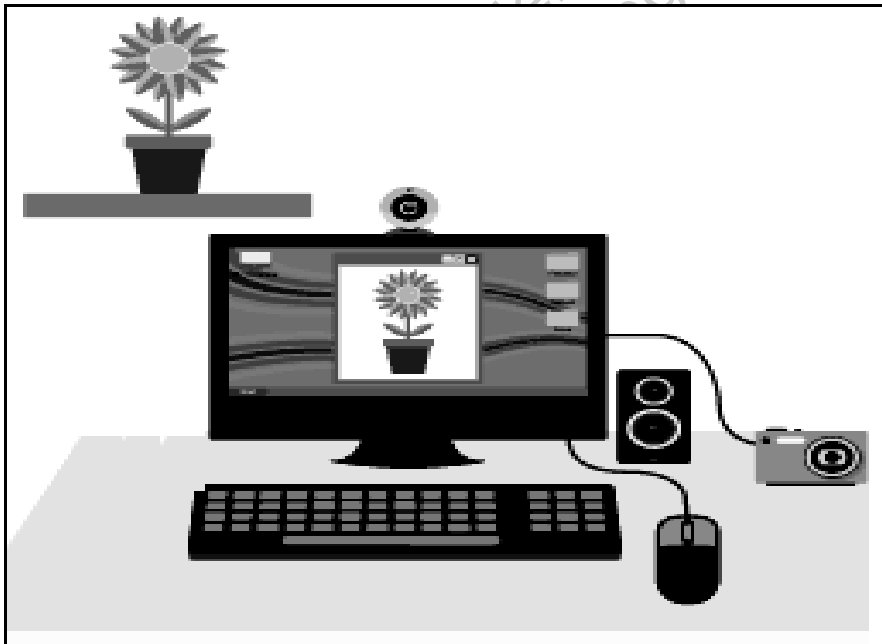
1. Which is the CORRECT categorisation of features for the generations of computers in the given table?

	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, 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 the given image of a computer system?



- A. 3
- B. 4
- C. 5
- D. 6

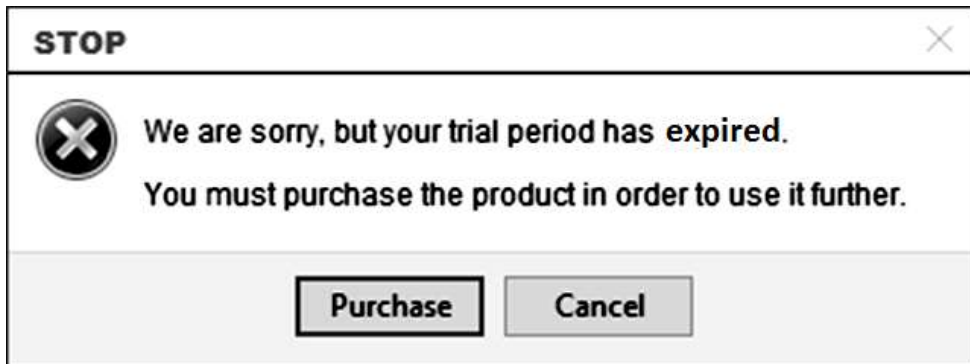
4. Which of the following devices is MOST suitable to read shaded circles of the given image of an MCQ sheet?

Name											
Date					Period						
	A	B	C	D	E		A	B	C	D	E
1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	11	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	12	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	13	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	14	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	15	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	16	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	17	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	18	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	19	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	20	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- 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 number is the
- A. arithmetic logic unit.
B. memory unit.
C. control unit.
D. output unit.

PLEASE TURN OVER THE PAGE

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/ an

- A. freeware.
 - B. shareware.
 - C. system software.
 - D. open source software.
8. The computer memory that has the LEAST access time is called a
- A. register.
 - B. hard disk.
 - C. main memory.
 - D. cache memory.
9. A computer processor directly writes data to the
- A. RAM.
 - B. ROM.
 - C. hard disk.
 - D. optical disk.
10. Linux is an example of a/ an
- A. device driver.
 - B. utility program.
 - C. operating system.
 - D. language processor.

11. Consider the given picture.



The number of input and output devices shown in the picture is

	Input Devices	Output Devices
A	5	0
B	2	3
C	3	2
D	0	5

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

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

13. 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.

14. Consider the following functions.

- File Management
- Memory Management
- Processor Management
- Input/ Output Device Management

All of the given functions are performed by the

- A. utility software.
- B. operating system.
- C. application software.
- D. compiler and interpreter.

15. When compared to graphical user interface, the command line interface

- A. contains menus for selection purpose.
- B. requires less memory space.
- C. is more user friendly.
- D. is easier to learn.

16. The CORRECT set of characteristics of command line interface (CLI) is

<ul style="list-style-type: none"> • It requires less memory. • It performs a single task for a single user. • The user needs a keyboard to use this interface. 	<ul style="list-style-type: none"> • It is easy to learn. • It shows menus and icons. • It performs a single task for a single user.
A	B
<ul style="list-style-type: none"> • It shows menus and icons. • It performs multiple tasks for a single user. • It can switch back and forth between different applications. 	<ul style="list-style-type: none"> • It is user friendly. • It performs multiple tasks for a single user. • The user mostly needs a mouse to use this interface.
C	D

17. The keyboard shortcut to save an MS Word file is

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

18. The keyboard shortcut to copy text in an MS Word file is

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

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

He can easily check the total word count quickly through the

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

20. Ahmed wanted to reduce the font size of a text from 14 to 10 in MS Word. The keyboard shortcuts he should apply on the text are

- A. Ctrl + [
- B. Ctrl +]
- C. Alt + [
- D. Alt +]

21. The technology MOSTLY used in television remote controls is

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

22. Read the given characteristics.

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

A device that has all of the given characteristics is a

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

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

The 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.

24. A type of media that offers the highest data rate is the
- A. optical fibre cable.
 - B. coaxial cable.
 - C. bluetooth.
 - D. infra-red.
25. Which of the following statements is FALSE for unguided media?
- A. Air is used as medium to carry signals from the sender to the receiver.
 - B. It provides direction to signals from the sender to the receiver.
 - C. It is also known as wireless communication media.
 - D. Bluetooth uses unguided media to transfer data.
26. The component of a fibre optic cable that protects it from physical damage is the
- A. core.
 - B. jacket.
 - C. buffer.
 - D. cladding.
27. When compared with synchronous transmission, which of the following statements is TRUE about asynchronous transmission?
- A. There are no gaps in transmission.
 - B. It is essential to maintain the timing.
 - C. Each data group has a start and stop bit.
 - D. The receiver counts the bits and reconstructs the bytes.
28. 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

29. The peer-to-peer network architecture would be 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.

30. The number of links required among four nodes in mesh topology is
- A. 4
 - B. 6
 - C. 8
 - D. 12
31. In terms of cost, which of the following arrangements of data communication lines is CORRECT?

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

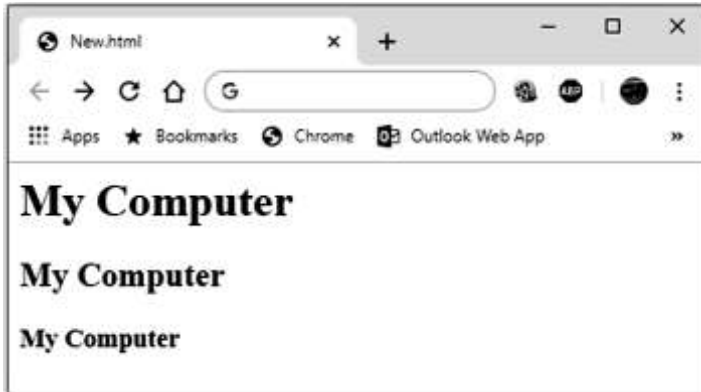
	Cheap → Costly		
A	ISDN	Dial-up Line	DSL
B	Dial-up Line	DSL	ISDN
C	DSL	ISDN	Dial-up Line
D	Dial-up Line	ISDN	DSL

32. A network that requires pairing of nodes before start of the data communication is a
- A. bluetooth network.
 - B. wide area network.
 - C. local area network.
 - D. metropolitan area network.
33. The types of networks that use leased lines are
- A. LAN and PAN.
 - B. PAN and MAN.
 - C. LAN and WAN.
 - D. WAN and MAN.
34. A technology that offers the second highest 'maximum data rate' is a/ an
- A. dial-up line.
 - B. digital subscriber line.
 - C. code division multiple access.
 - D. integrated services digital network.
35. Aliya reads news on her computer from a website. The website is actually stored in the
- A. web browser.
 - B. web server.
 - C. computer.
 - D. router.

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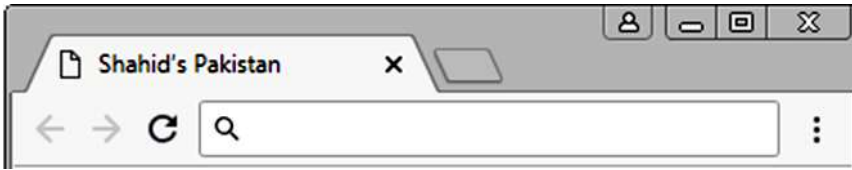
36. The HTML (Hyper Text Mark-up Language) code that would give the output as shown in the given image is

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



<pre><html> <head> </head> <body> <h1> My Computer </h1> <h2> My Computer </h2> <h3> My Computer </h3> </body> </html></pre>	<pre><html> <head> </head> <body> <h3> My Computer </h3> <h2> My Computer </h2> <h1> My Computer </h1> </body> </html></pre>
A	B
<pre><html> <head> </head> <body> <h6> My Computer </h6> <h5> My Computer </h5> <h4> My Computer </h4> </body> </html></pre>	<pre><html> <head> </head> <body> <h4> My Computer </h4> <h5> My Computer </h5> <h6> My Computer </h6> </body> </html></pre>
C	D

37. Shan wants that whenever his website is accessed, then 'Shan'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

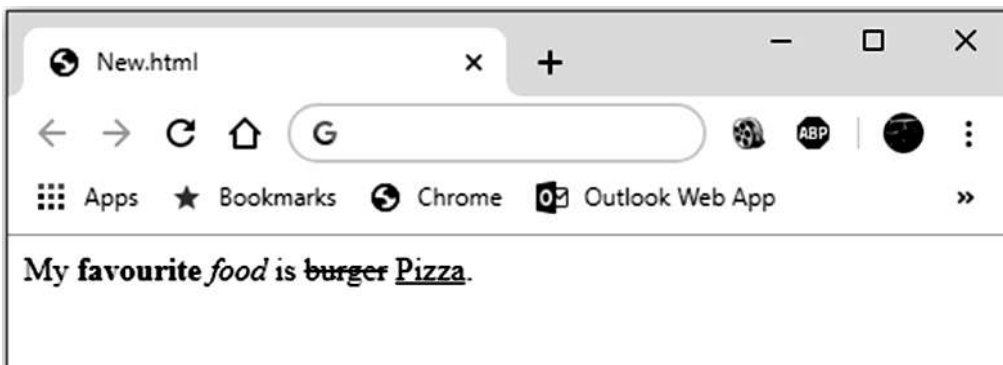
```
<html>
<head>

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

- A. `<h1> Shan's Pakistan </h1>`
 B. `<title> Shan's Pakistan </title>`
 C. `<head> Shan's Pakistan </head>`
 D. `<body> Shan's Pakistan </body>`
38. The HTML code for the formula $(a + b)^2 = a^2 + b^2 + 2ab$ is

- A. `(a + b)2 = a2 + b2 + 2ab`
 B. `(a + b)2 = a2 + b2 + 2ab`
 C. `(a + b)₂ = a₂ + b₂ + 2ab`
 D. `(a + b)² = a² + b² + 2ab`

39. Consider the given image of a web page.



The HTML code that will display the text in the given 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>Pizza</u>`
 C. `My favourite <i>food</i> is <strike>burger</strike> <u>Pizza</u>`
 D. `My favourite <i>food</i> is <strike>burger</strike> <u>Pizza</u>`

40. Consider the given web page.



In the given web page, when someone clicks on Click Here, then he/ she should be redirected to the website: **https://www.testwebsite.com**

However, there is some error in the shaded part of HTML code of the 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	<code><p> < Click Here = "https://www.testwebsite.com"> to load website if it does not load automatically within 10 seconds.</p></code>
B	<code><p> Click Here to load website if it does not load automatically within 10 seconds.</p></code>
C	<code><p> Click Here to load website if it does not load automatically within 10 seconds.</p></code>
D	<code><p> Click Here to load website if it does not load automatically within 10 seconds.</p></code>

Please use this page for rough work

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