

**AGA KHAN UNIVERSITY EXAMINATION BOARD**

**SECONDARY SCHOOL CERTIFICATE**

**CLASS IX**

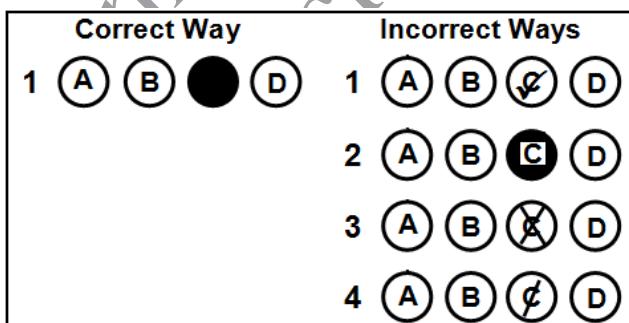
**ANNUAL EXAMINATIONS (THEORY) 2023**

**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 of the following generation of computers uses modern programming languages like Python and Java?
  - A. First generation
  - B. Second generation
  - C. Third generation
  - D. Fourth generation
2. Examples of volatile memory are
  - A. CD and RAM.
  - B. RAM and cache.
  - C. hard disk and CD.
  - D. hard disk and cache.
3. Which of the following is NOT a pointing device?
  - A. Mouse
  - B. Light pen
  - C. Joy stick
  - D. Barcode reader
4. Consider the following properties.
  - Introduced in 1960s
  - Executes billions of instructions per second
  - Used in the organisations that has hundreds of users

The type of digital computer that has the given properties is

- A. minicomputer.
  - B. supercomputer.
  - C. microcomputer.
  - D. mainframe computer.
5. Consider the following properties.
    - Faster than other levels of cache memory.
    - Present inside the microprocessor.

Which of the following level(s) of cache memory BEST describe(s) the given properties?

- I. Level 1
  - II. Level 2
  - III. Level 3
- A. I only
  - B. III only
  - C. I and II
  - D. II and III

6. McAfee, Norton, Avira are softwares used to detect and remove errors.

The given softwares are examples of

- A. device drivers.
- B. utility programs.
- C. operating system.
- D. language processors.

7. Fatima has started an online business and she wants to start a social media marketing campaign for her business.

THREE of the essential devices that she should use for this purpose are

- A. mouse, keyboard and printer.
- B. speakers, camera and printer.
- C. mouse, keyboard and camera.
- D. mouse, keyboard and speakers.

8. Two essential devices to record a video lecture are

- A. monitor and microphone.
- B. camera and microphone.
- C. monitor and speaker.
- D. camera and monitor.

9. Areej has the syllabi in hardcopy which she has to send to her friend via email. To do this, Areej needs to convert the hardcopy of the syllabi into softcopy.

The device Areej will use for this purpose will be

- A. plotter.
- B. scanner.
- C. optical mark reader.
- D. magnetic ink character reader.

10. The sensor that is MOST LIKELY to be used in nuclear plants is

- A. pH sensor.
- B. gas sensor.
- C. moisture sensor.
- D. infra-red sensor.

11. Consider the given responsibilities.

- I. Write programs to solve problems
- II. Analyse the data processing requirements
- III. Investigate the problem and plan the solution

The given responsibility(ies) is/ are of a system analyst EXCEPT

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

12. All of the following operations are included in file management EXCEPT

- A. creating files.
- B. opening files.
- C. searching files.
- D. translating files.

13. In terms of user management, which of the following is TRUE about an operating system (OS)?

- A. It allows a user to install programs.
- B. It allows a user to create new users.
- C. It allows a user to run pre-installed programs.
- D. It allows a user to login without username and password.

14. How many classification(s) of operating system are there?

- A. One
- B. Two
- C. Three
- D. Four

15. All of the following are graphical user interface (GUI) EXCEPT

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

16. A type of an operating system that is used in oil refinery for indicating that temperature is getting too high is

- A. real time system.
- B. multi-user system.
- C. time sharing system.
- D. batch processing system.

17. Which of the following are the features of a word processor?
- I. Spell check of words
  - II. Inserting pictures and tables
  - III. Changing the page orientation
  - IV. Data filtering and visualisation
- A. I and IV
  - B. II and IV
  - C. I, II and III
  - D. II, III and IV
18. The shortcut key used to move the cursor at the top of the document is
- A. Home.
  - B. Page up.
  - C. Ctrl+Home.
  - D. Ctrl+Page up.
19. The MOST suitable page orientation for making a certificate is
- A. legal.
  - B. letter.
  - C. portrait.
  - D. landscape.
20. Which of the following tabs contain the options for setting the line spacing of a document?
- A. Home
  - B. Insert
  - C. Design
  - D. Layout
21. If the bit rate of the signal is 2000 bps and each signal unit carries 2 bits, then the baud rate of the signal will be
- A. 1000
  - B. 2000
  - C. 4000
  - D. 8000
22. 1 MiB (Mebibyte) is equal to
- A. 1000 bytes.
  - B. 1024 bytes.
  - C. 1000000 bytes.
  - D. 1048576 bytes.

23. If two devices are connected but they are not able to communicate with each other, then the missing component of communication system is the
- sender.
  - receiver.
  - protocol.
  - transmission medium.
24. An artificial satellite is precisely positioned in the space with an orbit speed that
- is more than the rotational speed of the Earth.
  - is more than the rotational speed of the Moon.
  - matches with the rotational speed of the Earth.
  - matches with the rotational speed of the Moon.
25. If the strength of a signal falls off when the distance increases, then the type of transmission impairment will be
- cross talk.
  - distortion.
  - attenuation.
  - amplification.
26. Which of the following communication devices is the BEST alternative of a hub?
- Router
  - Switch
  - Dial-up Modem
  - Network Interface Card
27. The type of transmission in which start/ stop bits are used is
- satellite transmission.
  - microwave transmission.
  - synchronous transmission.
  - asynchronous transmission.
28. Radio broadcasting and transmission of data from a computer to a printer are examples of
- simplex transmission.
  - full-duplex transmission.
  - half-duplex and simplex transmission respectively.
  - half-duplex and full-duplex transmission respectively.
29. Which of the following statements is FALSE about client/ server networks?
- It does not provide centralised security.
  - It can be expanded up to thousands of computers.
  - It is generally used for long distance communication.
  - These networks are considered as wide area networks.

30. A student wrote the following four statements about computer networks in an exam.

- I. It allows internet sharing.
- II. It allows software sharing.
- III. It allows file management.
- IV. It allows memory management.

Which of these statements are TRUE?

- A. I and II
- B. I and III
- C. II and IV
- D. III and IV

31. If a telephone company is providing high speed Digital Subscriber Line (DSL) to the customers in a city, then the type of network it must be using is

- A. local area network (LAN).
- B. wide area network (WAN).
- C. personal area network (PAN).
- D. metropolitan area network (MAN).

32. Consider the given properties.

- Every node is connected with other nodes.
- It is the most reliable network topology.
- It is the most expensive topology.

Based on the given properties, the network topology is identified as

- A. bus topology.
- B. star topology.
- C. ring topology.
- D. mesh topology.

33. ISDN provides a maximum speed of 128 kbps which is

	<b>More than</b>	<b>Less than</b>
A	DSL	Dial-up
B	DSL	CDMA
C	CDMA	Dial-up
D	Dial-up	CDMA

34. Consider the given characteristics of a telephone network.

- It is a wireless cellular communication technology.
- Transmission speed is up-to several Mbps.
- It provides improved voice quality.

Based on the given characteristics, the technology is identified as

- A. dial-up.
- B. digital subscriber line (DSL).
- C. code-division multiple access (CDMA).
- D. integrated service digital network (ISDN).

35. In a Uniform Resource Locator (URL), .co and .gov are examples of

- A. file path.
- B. domain name.
- C. resource name.
- D. top level domain.

36. The type of website that provides the information about current events and opinions is

- A. web portal.
- B. news website.
- C. educational website.
- D. informational website.

37. The HTML code to show  $X^2 + Y^2$  on a webpage is

- A.  $X<sup>2</sup> + Y<sub>2</sub>$
- B.  $X<sub>2</sub> + Y<sup>2</sup>$
- C.  $<sub>X</sub>^2 + <sup>Y</sup>^2$
- D.  $<sup>X</sup>^2 + <sub>Y</sub>^2$

38. Following line is written in a webpage.

Visit BBC News Urdu for latest news in Urdu.

When someone clicks hyperlink BBC News Urdu, then <https://www.bbc.com/urdu> is opened. The HTML code for this line is

<code>&lt;p&gt;Visit&lt;"BBC News Urdu"&gt;a href=https://www.bbc.com/urdu&lt;/a&gt;for latest news in Urdu.&lt;/p&gt;</code>	<code>&lt;p&gt;Visit &lt;"https://www.bbc.com/urdu"&gt; a href=BBC News Urdu&lt;/a&gt; for latest news in Urdu.&lt;/p&gt;</code>
A	B
<code>&lt;p&gt;Visit &lt;a href = "BBC News Urdu"&gt; https://www.bbc.com/urdu &lt;/a&gt; for latest news in Urdu.&lt;/p&gt;</code>	<code>&lt;p&gt;Visit &lt;a href = "https://www.bbc.com/urdu"&gt;BBC News Urdu&lt;/a&gt; for latest news in Urdu.&lt;/p&gt;</code>
C	D

39. Consider the given text.

Click here to open google

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

<code>&lt;style:"background-color black;"&gt; &lt;p style:"color white"&gt;Click here to open google&lt;/p&gt;</code>	<code>&lt;style="background color&lt;black;&gt;"&gt; &lt;p style="color&lt;white&gt;"&gt; Click here to open google &lt;/p&gt;</code>
A	B
<code>&lt;style="background color=black;"&gt; &lt;p style="color=white"&gt; Click here to open google &lt;/p&gt;</code>	<code>&lt;body style="background-color:black;"&gt; &lt;p style="color:white;"&gt;Click here to open google&lt;/p&gt;</code>
C	D

40. Which of the following is/ are the character entity(ies) in HTML?

- I. p
  - II. br
  - III. &nbsps
- A. I only
  - B. III only
  - C. I and II
  - D. II and III

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