සියල්ල හිමිකම් ඇවිරිණි/ முழுப் பதிப்புரிமையுடையது/ All Rights Reserved

මධ්‍යම පළාත් අධ්‍යාපන දෙපාර්තමේන්තුව
மத்திய மாகாண கல்வித் திணைக்களம்
DEPARTMENT OF EDUCATION - CENTRAL PROVINCE

G.C.E.(A/L) Practice Test- 2026

Information & Communication technology	20	E	I	Grade 13	2 Hours

Instructions:

- *Answer all the questions*
- *Write your **Index Number** in the space provided in the answer sheet.*
- *Instructions are also given on the back of the answer sheet. Follow those carefully*
- *In each of the questions **1 to 50** pick one of the alternatives from (1), (2), (3), (4), (5) which correct or **most appropriate** and **mark your response on the answer sheet with a cross (X)** in accordance with the instructions given on the back of the answer sheet.*
- *Use of calculators is **not allowed.***

1. Which of the following sequence displays the correct path of data transforming into wisdom?
   (1) Information → Data → Wisdom → Knowledge
   (2) Data → Information → Knowledge → Wisdom
   (3) Data → Knowledge → Information → Wisdom
   (4) Knowledge → Data → Information → Wisdom.
   (5) Wisdom → Knowledge →Information → Data

2. Which of the following is **not** a phase of the data life cycle?
   (1) Data Collection (2) Data Processing (3) Data Visualization
   (4) Data Storage (5) Data Creation

3. Which generation of computers introduced microprocessors?
   (1) First (2) Second (3) Third (4) Fourth (5) Fifth

4. A computer system stores text using character sets. Which of the following statements about ASCII and UNICODE is **true**?
   (1) ASCII can represent all global characters.
   (2) Unicode uses a fixed number of bits for every character.
   (3) ASCII is limited to representing 128 different characters.
   (4) Unicode is older than ASCII.
   (5) ASCII represents decimal numbers only.

5. The binary addition 1101 + 1011 gives:
   (1) 10100 (2) 11000 (3) 11001 (4) 11100 (5) 10000

6. The complement of A·B + C is:
   (1) (A'+B')·C' (2)(A'+B') + C' (3) A'·B' + C'
   (4) (A'·B')·C' (5) A'·B'·C'

7. A logic gate outputs 1 only when both of its two inputs are 1. What is the name of this logic gate?
   (1) NOT (2) OR (3) XOR (4) AND (5) NOR

See page two

8. A Karnaugh map for a function F (A, B, C) is given below:

AB	00	01	11	10
C=0	1	1	1	0
C=1	1	1	1	0

What is the simplest Boolean expression for F?

(1) $F = C + B$ (2) $F = A + \bar{B}$
(3) $F = B + AC$ (4) $F = C + AB$
(5) $F = \bar{A} + B$

9. Which of the following statement/s is/are **incorrect**?
   I. The binary number 1001_2 equals 11 in decimal.
   II. The hexadecimal number A3 represents 244_8.
   III. The octal number 64 equals 53 in decimal.

(1) I only (2) I and II only (3) II and III only
(4) I and III only (5) All I, II, and III

10. During a data entry process for a "Monthly Salary" field, a user accidentally enters "45OO0" (using the letter 'O' instead of zero). The system immediately rejects the entry. Which validation method caught this error?

(1) Range check (2) Presence check (3) Data type check
(4) Batch check (5) Parity check

11. Which of the following is an example of an Open-Source Operating System?

(1) Windows 11 (2) macOS (3)Ubuntu
(4) iOS (5) DOS

12. In process management, what is the state of a process that is waiting for an I/O operation to complete?

(1) New (2) Blocked (3) Ready (4) Running (5)terminated

13. The primary role of the File Allocation Table (FAT) in a file system?
   (1) To encrypt user data for secure storage.
   (2) To keep track of which clusters belong to which files and identify free space.
   (3) To manage the CPU's processing speed during file transfer.
   (4) To provide a graphical interface for the user to browse folders.
   (5) To compress large files automatically to save disk space.

14. A device that converts analog signals to digital signals and vice versa is called

(1) Router (2) Modem (3) Switch (4) Hub (5) Repeater

15. Which memory is non-volatile and can be electrically erased and reprogrammed?

(1) RAM (2) Cache (3) DRAM (4) EEPROM (5) SRAM

16. In networking, collision occurs most often in ..... topology.

(1) Star (2) Mesh (3) Bus (4) Ring (5) Tree

17. A school wants to build a local network that allows all computers to communicate but does not rely on a central device; if one computer fails, the rest of the network continues to function. Which network topology would be the most suitable choice?

(1) Bus (2) Star (3) ring (4) Tree (5) Mesh

See page three

18. Which of the following is a legal risk associated with using 'Unlicensed' or pirated software?
    A. Enhanced data privacy for the user.
    B. Increased performance.
    C. Heavy fines
    (1) A only. (2) B only (3) C only.
    (4) A and B only. (5) A and C only

19. Which of the following correctly lists components of a data communication system?
    (1) message, sender, receiver, transmission medium, protocol
    (2) message, sender, receiver, internet, transmission medium
    (3) message, server, sender, receiver, transmission medium
    (4) message, modem, sender, receiver, protocol
    (5) client, sender, transmission medium, protocol

20. Which of the following statement is **false** regarding IP addresses?
    (1) 255.255.0.0. is the default subnet mask for a Class B IP address.
    (2) 1.0.0.0 – 126.255.255.255 ranges belong to Class A.
    (3) Class E is reserved for experimental and future use.
    (4) 192.168.1.1 is a valid Class B IP address
    (5) Class D is reserved for multicast groups.

21. Which of the following is NOT a standard phase in the Systems Development Life Cycle?
    (1) System Analysis (2) System Design (3) Maintenance
    (4) System Marketing (5) Implementation

22. Agile methodology emphasizes
    (1) Rigid planning and documentation (2) Fixed requirements from the start
    (3) Incremental development (4) initial customer collaboration
    (5) Sequential phases with no overlap

23. In a relational database, a primary key must be
    (1) Numeric only (2) Unique and not null
    (3) The first column of the table (4) A foreign key in another table
    (5) Null

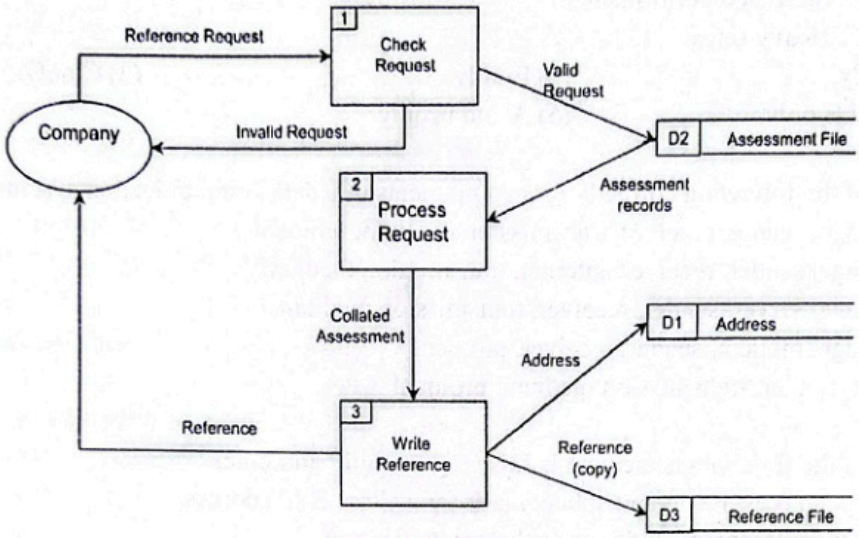
24. The SQL command to remove a table from a database is
    (1) DELETE TABLE (2) REMOVE TABLE
    (3) DROP TABLE (4) ERASE TABLE
    (5) TRUNCATE TABLE

25. Which normal form eliminates partial dependencies?
    (1) 1NF (2) 2NF (3) 3NF (4) BCNF (5)4NF

26. The phase of the SDLC where the actual software and hardware are purchased or built, and the system is put into use is called
    (1) Planning (2) Analysis (3) Design
    (4) Maintenance (5) Implementation

See page four

The following questions from 27 to 30 are based on the given data flow diagram below.



27. Which of the following is an external entity in the DFD?
(1) Process Request (2) Company (3) Collated Assessment
(4) D3 Reference File (5) Write Reference

28. What happens to an invalid request?
(1) It goes to Process Request (2) It goes to Company
(3) It goes to Address data store (4) It goes to Collated Assessment
(5) It goes to Check Request

29. Which of the following statement/s is/are **true** about the above DFD?
D. There are three data stores.
E. There are three external entities.
F. There are three processes.
(2) A only. (2) B only (3) C only.
(4) A and B only. (5) A and C only

30. The data flow "Valid Request" moves from
(1) Company to Process 1 (2) Process 1 to Process 2
(3) Process 2 to Process 3 (4) Process 3 to Company
(5) Process 3 to Process 1

31. A database administrator is designing a new database and wants to remove redundant data and improve data integrity. This process is known as
(1) Normalization (2) Data Encryption (3) Data Duplication
(4) Data Aggregation (5) Indexing

32. A company uses a system that allows customers to browse products, select them, and pay online without any human interaction. This business model is best described as
(1) E-Government (2) E-Learning (3)B2B
(4) C2C (5) B2C

See page five

33. Consider the following relational schema:
Student (StudentID, Name, Address, City)
Course (CourseCode, Title, Credits)
Enroll (StudentID, CourseCode, Grade)
Which of the following is the correct SQL statement to find the names of students who have enrolled in the course titled "Database Systems"?
(1) SELECT S.Name FROM Student S JOIN Enroll E ON S.StudentID = E.StudentID JOIN Course C ON E.CourseCode = C.CourseCode WHERE C.Title = 'Database Systems';
(2) SELECT Name FROM Student, Course WHERE Title = 'Database Systems';
(3) SELECT Name FROM Student JOIN Enroll E ON StudentID = E.StudentID JOIN Course C ON E.CourseCode = C.CourseCode WHERE Course.title = "Database Systems";
(4) Select name FROM Student, Title from Course where Course.Title ="Database Systems" AND Course.CourseCode=Enroll.CourseCode;
(5) SELECT Name FROM Student, Enroll WHERE Student.StudentID = Enroll.StudentID AND CourseCode = 'Database Systems';

34. Which of the following is an example of C2C e-commerce?
(1) Amazon selling books
(2) eBay auctions between individuals
(3) Government tax payment website
(4) Company buying raw materials online
(5) A student buying a laptop from Dell

35. Which of the following HTML code segment correctly creates a table with two rows and two columns, with the first row containing headers "Name" and "Age"?

(1)
```
<table>
<tr><th>Name</th><th>Age</th></tr>
<tr><td>John</td><td>25</td></tr>
</table>
```

(2)
```
<table>
<thead>Name</thead>
<thead>Age</thead>
<tr>John</tr>
<tr>25</tr>
</table>
```

(3)
```
<table>
<td>Name</td>
<td>Age</td>
<tr>John</tr>
<tr>25</tr>
</table>
```

(4)
```
<table>
<tr><td>Name</td><td>Age</td></tr>
<tr><th>John</th><th>25</th></tr>
</table>
```

(5)
```
<table>
<th><td>Name</td><td>Age</td></th>
<tr><th>John</th><th>25</th></tr>
</table>
```

36. Which of the following CSS selectors has the highest priority?
(1) div p (2) .class1 .class2 (3) #id1 (4) [type="text"] (5) div > p:first-child

See page six

37. What will be the output of the following Python code? print(type(10 / 2))
(1) <class 'int'> (2)<class 'float'> (3)<class 'complex'>
(4) <class 'str'> (5) <class 'decimal'>

38. What does the len() function return when called on a dictionary?
(1) Number of key-value pairs (2) Number of unique keys
(3) Number of unique values (4) Total memory size of the dictionary
(5) Number of keys plus number of values

39. What is the default data type of the value returned when input () function is used?
(1) Boolean (2) List (3) Float (4) Integer (5)String

40. Which operator is used to check if two values are NOT equal in Python?
(1) <> (2) == (3) ! (4) ! = (5)not =

41. What is the correct way to open a file and ensure it is properly closed even if an error occurs?
(1) file = open("data.txt", "r") (2) open("data.txt", "r").close()
(3) with open("data.txt", "r") as file: (4) file = open("data.txt", "r"); file.close()
(5) try: file = open(...) finally: file.close()

42. What is the output of print (2 ** 3 ** 2)?
(1) 64 (2) 512 (3) 12 (4) 36 (5) 8

43. What output does the following Python code produce?

```
a = [1, 2, 3]
b = a
b.append(4)
print(a)
```

(1) [1,2,3] (2) [1,2,3,4] (3) None
(4) [4] (5) [1,2,3][4]

44. Which of the following statement/s is are **true**?
A. A program is a passive collection of instructions stored on a disk.
B. A process is an active entity.
C. A single process can have multiple programs running at the same time.
(1) A only (2) B only (3) C only
(4) A and B only (5) A, B and C

45. Which of the following is a green computing practice?
(1) Leaving computers on 24/7 (2) Printing every document
(3) Using energy-efficient hardware (4) Increasing monitor brightness
(5) Disposing of batteries in regular trash

46. Which of the following is an example of an emerging trend in ICT?
(1) Analog Telephones (2) Blockchain Technology
(3) Manual Filing Systems (4) Floppy Disks
(5) World wide web

See page seven

47. What happens when a user clicks a reset button in a form?
    (1) All form fields are cleared or restored to their original default values.
    (2) The browser reloads the entire webpage.
    (3) The user is redirected back to the previous page in their history.
    (4) The computer's cache is cleared for security purposes.
    (5) The form data is submitted to the URL specified in the action attribute

48. Which statement about the 'POST' method is TRUE?
    A. It has no limit on the amount of data that can be sent.
    B. It displays the form data in the address bar of the browser.
    C. It is less secure than the GET method.
    (1) A only (2) B only (3) C only
    (4) A and B only (5) A, B and C

49. When taking a user's age as input, which is the most robust way to store it for future calculations?
    (1) age = str(input()) (2) age = input() (3)age = int(input())
    (4) age = float(input()) (5) age = bool(input())

50. The "Internet of Things" refers to
    (1) A single global network that connects all personal computers.
    (2) The network of physical objects and software to connect and exchange data.
    (3) A virtual reality headset used for gaming.
    (4) The security protocols used to protect online banking.
    (5) The main server that hosts all websites on the internet.

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