

**KABGAYI DIOCESE  
COLLEGE SAINTE MARIE REINE KABGAYI**

**1<sup>st</sup> TERM EXAM**

**SUBJECT:** COMPUTER SCIENCE

**CLASS:** SENIOR 6

**COMBINATIONS:** MATHS-COMPUTER SCIENCE-ECONOMICS: **MCE**

**DATE/TIME:** 09-Dec-2025 8.30-11.30 AM

**MARKS:** 100

**DURATION:** 3HOURS

**Instructions:** You have 3 sections, answer all questions; choose the best answer on MCQ



**Names:** .....

**SECTION A: ATTEMPT ALL QUESTIONS. (55 Marks)**

1. Which of the following is not an input device? **(2Marks)**  
a) Keyboard      b) Mouse      c) Monitor      d) Scanner
2. "Garbage In Garbage Out(GIGO)" means: **(2 Marks)**  
a. Computers produce perfect results  
b. Incorrect input leads to incorrect output  
c. Computers clean up bad data automatically  
d. Computers cannot process data
3. Which of the following is a network topology? **(2 Marks)**  
a) Bus      b) Switch      c) Modem      d) Firewall
4. Match **COLUMN A** to **COLUMN B**. **(5 Marks)**

<b>Column A (Concepts)</b>	<b>Column B (Descriptions)</b>
1. Router	a) Temporary memory used while computer runs
2. SQL <b>UPDATE</b>	b) Device that connects different networks
3. RAM	c) Algorithm where shortest job runs first
4. Flowchart	d) Command used to modify existing records
5. SJF Scheduling	e) Diagrammatic representation of an algorithm
6. Switch	f) Device that forwards data based on MAC address
7. ROM	g) Permanent memory storing firmware
8. Round Robin	h) Scheduling algorithm with fixed time slice
9. Starvation	i) Process waits indefinitely due to higher priorities
10. SQL <b>DELETE</b>	j) Command used to remove records from a table

5. **Which** of the following is designed to control the operations of a computer? Explain it. **(4 Marks)**  
a) Application Software  
b) System Software  
c) Utility Software  
d) User
6. What is the 2's complement of 00110101 1001 1100 number? **(2 Marks)**  
A. 1100 1010 1100 1011  
B. 1100 1010 0110 0011  
C. 1100 1010 0110 0100  
D. 1100 1010 1111 1111  
E. None of the above
7. Write **T** if the statement is correct and **F** otherwise **(5 Marks)**  
a) An AND gate produces a True output if and only if all inputs are True. .... ....  
b) A NOT gate produces a False output when the input was also False. .... ....  
c) X-NOR gate produces a True output from Different inputs. ....  
d) OR gate produces a True output from False inputs. ....  
e) A NAND gate produces a True output if one of the inputs is False or all input are false....
8. Complete the following sentences.
- A. Pascal and FORTRAN are examples of \_\_\_\_\_ generation programming languages.
- B. Procedural languages make it possible to break down a program into components known as \_\_\_\_\_ or \_\_\_\_\_.
- C. A programming paradigm in which a program is executed in sequenced order is known as \_\_\_\_\_. **(4 Marks)**
9. What is the output : **(2 Marks)**
- ```
using namespace std;
int main(){
    int x = 7, y=5;
    cout<<(x>y)<<endl; .....
    cout<< (x!=y)<<endl; .....
    cout<<x%y<<endl; .....
    cout<<"y="<<(y+=x)<<endl; .....
    cout<<(y>x? 4:8)<<endl; .....
    return 0;}
```
10. Which of the following correctly describes the structure of an HTML document? **(2 Marks)**
- A) <head>followed by <body>  
B) <body>followed by <head>  
C) <title> inside <body>  
D) <footer> outside <body>
11. Which HTML tag is used to link an external CSS file? **(2 Marks)**
- a) <style>    b) <link>    c) <css>    d) <external>
12. What should you do first before cleaning a laptop? **(2 Marks)**
- a. Remove the hard disk

- b. Remove the battery
  - c. Turn it off and disconnect from power
  - d. Install antivirus software
  - e. Open the display
13. What is the MAIN role of a network administrator in managing data and device sharing? **(2 Marks)**
- a) Providing technical support to users
  - b) Monitoring network performance and activity
  - c) Creating and distributing marketing materials
  - d) Organizing social events for network users
14. The part of the database architecture that deals with physical storage is: **(2 Marks)**
- A. Conceptual level
  - B. External level
  - C. Internal level
  - D. Abstract level
15. Answer by true or false **( 5 marks)**
- a) The \* operator in pointers is called dereference operator.
  - b) The & operator gives the content of a variable.
  - c) A pointer can point to another pointer.
  - d) Memory allocated using **new** must be released using **delete**.
  - e) The arrow operator (->) can be used only with structure variables
16. Which keyword is used to declare a variable in Visual Basic? **(1 Marks)**
- a) dim
  - b) variable
  - c) declare
  - d) var
17. Which command is used to run a compiled Java program? **(1 Marks)**
- A) java
  - B) javac
  - C) javaw
  - D) java -jar
18. Match the column A to column B **(4Marks)**

| <b>Column A (Networking Devices/Media)</b> | <b>Column B (Descriptions)</b>                                                       |
|--------------------------------------------|--------------------------------------------------------------------------------------|
| 1. Hub                                     | a) Device that connects different networks and directs packets based on IP addresses |
| 2. Switch                                  | b) Transmission medium that uses glass/plastic to carry light signals                |
| 3. Router                                  | c) Device that forwards data based on MAC addresses                                  |
| 4. Modem                                   | d) Transmission medium made of copper pairs twisted together                         |
| 5. Fiber Optic Cable                       | e) Device that broadcasts data to all connected computers                            |
| 6. Coaxial Cable                           | f) Transmission medium with a central conductor and shielding                        |
| 7. Twisted Pair Cable                      | g) Device that converts digital signals to analog and vice versa                     |
| 8. Access Point                            | h) Device that allows wireless devices to connect to a wired network                 |

19. What does the Java compiler produce as output when compiling a Java source code file? **(2 Marks)**  
A) Source code      B) Bytecode      C) Executable file      D) Machine code
20. What is the purpose of the **main ()** method in a Java program? **(2 Marks)**  
A) To compile the program      B) To run the program  
C) To initialize variables      D) To serve as the entry point for the program
21. When is the "**this**" keyword used in Java? **(2 Marks)**  
A) To define a new class.  
B) To access static variables and methods.  
C) To refer to the current instance of a class.  
D) To declare local variables within a method.

**SECTION B: ATTEMPT ANY (3) THREE QUESTIONS FROM THIS SECTION (30 marks)**

22. Write a VB program to display the multiple of 6 numbers from 1 to 360 and the corresponding square root. **(10 Marks)**

Answer:

23. Write a program which has a class called base and its two derived classes called derived1 and derived2. The base class has a function `getdata ()` which allows the user to enter two numbers. Derived1 class has a function called `sum ()`

which adds two numbers and display the result. Derived2 class has a function called product () which computes the product of 2 numbers and display the result. **(10Marks)**

Answer:

24. Develop html code to produce the following page: **(10 Marks)**

**FILL THE BELOW INFO**

first name:

Answer:

second name:

username:

Your password:

choose your interested subjects:

- Computer Science
- Mathematics
- Economics
- Others

Select your sex:

- Male
- Female

SELECT YOUR COMBINATION:

Comments:

If you have provided all required information click

If you want to reset your form click

**SECTION C: ATTEMPT ANY (1) ONE QUESTION FROM THIS SECTION (15 marks)**

25. Develop a java Program to implement the following Scenario:

**The Shape class** contains attributes length and width, and a method setValue() to initialize these values. **The Circle class** extends Shape and contains methods calculateArea() and calculatePerimeter() to compute and display the area and perimeter of a circle, respectively. **The Rectangle class** extends Shape and contains similar methods to calculate the area and perimeter of a rectangle. In the main() method, user input is taken to set the dimensions of the circle and rectangle, and their respective area and perimeter are calculated and displayed. **(15 Marks)**

Answer:

**END**