Time: 90 min
Marks: 60

Objective Part
[40 sample MCQs each of Mark (01)- You need to attempt any 33 questions from these]

Question No. 1   **(Marks: 01) - Please choose the correct option**

What is the difference between HTTPS and HTTP?

A.   HTTPS is a secure version of HTTP

B.   HTTP is a secure version of HTTPS

C.   There is no difference between the two

D.   Both A and B are correct

Question No. 2   **(Marks: 01) - Please choose the correct option**

What is the main goal of algorithm discovery?

A.   To find an optimal solution to a problem

B.   To find a solution to a problem that is not optimal

C.   To find a new way to solve an old problem

D.   To find a problem that can be solved by an existing algorithm

Question No. 3   **(Marks: 01) - Please choose the correct option**

What is the primary goal of an algorithm?

A.   To store data in a specific order

B.   To solve a specific problem or perform a specific task

C.   To communicate information between different computer systems

D.   To create visually appealing graphics

Question No. 4   (Marks: 01) - Please choose the correct option

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Which tool is used to convert codes of assembly language into machine language?

A.   Assembler

B.   Debugger

C.   Compiler

D.   Interpreter

Question No. 5   (Marks: 01) - Please choose the correct option

---

_____ is used for the application of backtracking in computer programs.

A.   Tree

B.   Array

C.   Queue

D.   Stack

Question No. 6   (Marks: 01) - Please choose the correct option

---

Which of the following is a non-linear data structure?

A.   Stack

B.   Queue

C.   Tree

D.   Array

Question No. 7   (Marks: 01) - Please choose the correct option

---

Which of the following is not a software metric?

A.   Complexity

B.   Cost

C.   Design

D.   Efficiency

Question No. 8   (Marks: 01) - Please choose the correct option

---

Which of the following phases of the software development life cycle is about developing a solution to the problem?

A.   Requirement analysis

B.   Design

C.   Implementation

D.   Testing

Question No. 9   (Marks: 01) - Please choose the correct option

---

In which software model, a simplified version of the final product with limited functionality is constructed?

A.   Waterfall model

B.   Incremental model

C.   Prototype model

D.   Integrated Model

Question No. 10   (Marks: 01) - Please choose the correct option

---

Which software testing methodology ensures that each instruction in the software is executed at least once?

A.   Basic path testing

B.   Black box testing

C.   Beta testing

D.   Alpha testing

Question No. 11   (Marks: 01) - Please choose the correct option

---

Which of the following is used for the repetitive execution of instruction?

A.   List

B.   Loop

C.   If-Else Statement

D.   Variable initialization

Question No. 12   (Marks: 01) - Please choose the correct option

---

Repetitive control of loop consists of following three activities:

A.   Initialize, execute, test,

B.   Modify, execute, test

C.   Initialize, test, modify

D.   Test, modify, compare

Question No. 13   (Marks: 01) - Please choose the correct option

---

In which iterative structure of loop, test for termination will perform after the body is executed.

A.   Pretest loop

B.   Posttest loop

C.   While loop

D.   For loop

Question No. 14   (Marks: 01) - Please choose the correct option

---

Recursive system depends on_____ for fulfill terminating condition.

A.   Initialization

B.   Testing

C.   Execution

D.   Modification

Question No. 15   (Marks: 01) - Please choose the correct option

---

A two-dimensional array named "marks" having 4 rows and 5 columns can be declared as.

A.   int marks [5][4]

B.   int marks [4][5]

C.   int marks [4][4]

D.   int marks [5][5]

Question No. 16   (Marks: 01) - Please choose the correct option

---

Array is a block of elements of the type.

A.   Particular

B.   Same

C.   Non-linear

D.   Heterogeneous

Question No. 17   (Marks: 01) - Please choose the correct option

---

11%3 will be equal to:

A.   1

B.   0

C.   3

D.   2

Question No. 18   (Marks: 01) - Please choose the correct option

---

The sign of division operator is _____.

A.   \

B.   /

C.   %

D.   !

Question No. 19   (Marks: 01) - Please choose the correct option

---

Which of the following software is used for making resume?

A.   MS Excel

B.   MS Word

C.   Dev C

D.   Java

Question No. 20   (Marks: 01) - Please choose the correct option

---

Which of the following is an example of page orientation?

A. Landscape

B. Subscript

C. Superscript

D. A4

Question No. 21   (Marks: 01) - Please choose the correct option

---

In MS Word, Zoom in and out button is available on _____.

A.   Scroll bar

B.   Home tab

C.   Page layout tab

D.   View option toolbar

_____

Question No. 22   (Marks: 01) - Please choose the correct option

_____

Microsoft word is a/an _____ software.

A.   Application

B.   Compiler

C.   System

D.   Programming

_____

Question No. 23   (Marks: 01) - Please choose the correct option

_____

In Microsoft Word, Thesaurus tool is used for the_____.

A.   Grammar options

B.   Spelling suggestions

C.   Synonyms and Antonyms words

D.   Comments

_____

Question No. 24   (Marks: 01) - Please choose the correct option

_____

In Microsoft PowerPoint, which option on the custom animation task pane allows you to

apply a preset or custom motion path?

A. Add effect.

B. Emphasis

C. Animate now.

D. On Mouse Click

Question No. 25   (Marks: 01) - Please choose the correct option

---

In Microsoft PowerPoint, which of the following options is not available in the Transition timing group?

A.   Sound

B.   Duration

C.   On Mouse Click

D.   Add effect

Question No. 26   (Marks: 01) - Please choose the correct option

---

Which of the following sign is used to specify the range of the cell on which you want to apply the formula in MS Excel.

A.   =

B.   %

C.   ^

D.   :

Question No. 27   (Marks: 01) - Please choose the correct option

---

Which of the following data structure is known to be a FIFO.

A. Array

B. Queue

C. Stack

D. Tree

Question No. 28   (Marks: 01) - Please choose the correct option

---

In _____, the data entries are inserted and removed at the head.

A. Array

B. List

C. Queue

D. Stack

Question No. 29   (Marks: 01) - Please choose the correct option

---

Block of data items with different data types called

A. Aggregates

B. Array

C. Pointer

D. Integer

Question No. 30   (Marks: 01) - Please choose the correct option

---

What is an indexed file?

A. A file where records are stored in random order

B. A file where records are stored in sorted order and an index is used to access the data quickly

C.   A file where records are stored one after another, in the order they were added

D.   A file where records are stored in the reverse order they were added

---

Question No. 31   (Marks: 01) - Please choose the correct option

---

What is a sequential file?

A.   A file where records are stored in random order

B.   A file where records are stored in sorted order and an index is used to access the data quickly

C.   A file where records are stored one after another, in the order they were added

D.   A file where records are stored in the reverse order they were added

---

Question No. 32   (Marks: 01) - Please choose the correct option

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What are the advantages of using an indexed file over a sequential file?

A.   Indexed files allow for faster access to data

B.   Sequential files use less storage space

C.   Both A and B

D.   Indexed files are large

Question No. 33   (Marks: 01) - Please choose the correct option

---

When would you use a sequential file over an indexed file?

A.   When you need to write data quickly

B.   When you don't need to access data frequently or quickly

C.   When you need to store a small amount of data

D.   When you need to access data according to requirement

Question No. 34   (Marks: 01) - Please choose the correct option

_____

Length of Logical addressing used in the computer networking is _____ bits.

A.   10

B.   32

C.   50

D.   64

_____

Question No. 35   (Marks: 01) - Please choose the correct option

_____

EPIC stands for _____.

A.   Electronic Privacy Information Center

B.   Electrical Private Information Center

C.   Electricity Privacy Incoming Chamber

D.   Electricity Public Information Center

_____

Question No. 36   (Marks: 01) - Please choose the correct option

_____

_____ is used to exploit secret information over the internet.

A.   Antivirus

B.   Spam email

C.   Client

D.   Firewall

Question No. 37   (Marks: 01) - Please choose the correct option

Content risk involves _____

A.   Online Harassment

B.   Spamming

C.   Unsuitable products

D.   Harmful Advice

Question No. 38   (Marks: 01) - Please choose the correct option

Sorting is used for _____ in MS Excel.

A.   Arrange data

B.   Remove data

C.   Add data

D.   Hide data

Question No. 39   (Marks: 01) - Please choose the correct option

Database Relation is also referred to as_____.

A.   Column

B.   Rows

C.   Table

D. Cells

Question No. 40   (Marks: 01) - Please choose the correct option

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The extension of the web page document is _____.

A.   .html

B.   .mtl

C.   .css

D.   .doc

Subjective Part

[06 Short questions of 3 Marks each- You need to attempt any 04 questions from these]

Question No. 41   **(Marks: 03)**

What is the difference between a While-Structure and Function-Structure in Algorithms?

Question No. 42   **(Marks: 03)**

What will be the Output of the following code?

```cpp
#include<iostream>
using namespace std;
void main()
{
        int a = 3, b = 7, c = 5, d = 9;

        if ( a > b && a > c)
                cout<<" a is larger than both b and c"<<endl;
        else
                cout<<" a is not larger than both b and c"<<endl;

        if (a < d && a > c))
                cout<<"a is between d and c"<<endl;
        else
                cout<<"a is between d and c"<<endl;
        Return 0;
}
```

Question No. 43   **(Marks 03)**

Write down the Excel formulas for each cell in column "E" to compute the remaining amount after subtracting the expenses from salary.

	A	B	C	D	E
1	name	position	salary	expense	remaining
2	adeel	scale 14	89220	13672	?
3	sidra	scale 8	67781	13457	?
4	amir	scale 15	129782	98367	?

Question No. 44   **(Marks 03)**

Write down the steps to insert a new page in an MS Word document using the Insert ribbon.

Question No. 45   **(Marks 03)**

How can you insert footnotes and endnotes in MS Word? Write down the steps.

Question No. 46   **(Marks 03)**

Write down the names of at least three programming language that belongs to the Object-Oriented programming paradigm.

[04 Descriptive questions of 5 Marks each- You need to attempt any 03 questions from these]

Question No. 47   **(Marks 05)**

Define pretest and posttest loops and also show the concepts of both loops with flow diagrams.

Question No. 48   **(Marks: 05)**

What is 'Data Abstraction'? Provide the name of at least three data structures that come under data abstraction.

Question No. 49   **(Marks: 05)**

Differentiate between the following areas of Engineering:

1- Ergonomics

2- Cognetics

Question No. 50   (Marks: 05)

A database relation named "CANDIDATE" is given as:

CANDIDATES						
CandID	FirstName	LastName	City	Age	Degree	Experience
1	Ali	Umar	Lahore	22	BSCS	0
2	Aslam	Iqbal	Karachi	27	MBA	5
3	Adnan	Ahmed	Multan	24	BBA	2
4	Bilal	Khan	Okara	23	BSIT	1
5	Burhan	Idrees	Lahore	20	MSc GIS	1
…	…	…	…	…	…	…
…	…	…	…	…	…	…

You are required to define relational database operations (queries) to extract the following information for this table.

1. Write a relational query to extract all the candidates with a degree of BSIT from the relation 'CANDIDATES'.

2. Write a relational query to extract all the information in columns 'FirstName', 'LastName', and 'Age' from the relation 'CANDIDATES'.