


OBJECTIVE

NOTE: You have four choices for each objective type question as A , B , C and D . The choice which you think is correct , fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero marks in that question.

QUESTION NO. 1

MS-ACCESS	
1	The output of the query is in the form of a (A) Table ● (B) Form (C) Report (D) List
2	How many table views are available in Microsoft Access (A) 1 (B) 2 ● (C) 3 (D) 4
3	A collection of related fields is called (A) Character (B) File (C) Database (D) Record ●
4	Which of the following is not a type of database key ? (A) Public ● (B) Primary (C) Foreign (D) Secondary
5	In an ER diagram , a diamond represents (A) Attribute (B) Relationship ● (C) Entity (D) File
6	Which form of dependency is removed in 3NF ? (A) Full (B) Functional (C) Transitive ● (D) Partial



<u>C-LANGUAGE</u>	OR	<u>VISUAL BASIC</u>
7		7
What will be the value of y after executing the following statement $y = (5 < 10) ? 5 : 10 ;$ (A) 5 ● (B) 10 (C) 510 (D) 15		Image control holds a graphic that is assigned to property (A) Caption (B) Auto size (C) Picture (D) Text
8		8
All of the followings are control statements except (A) Sequential (B) Repetition (C) Selection (D) Float ●		All items in a list box can be cleared at once using method (A) Remove item (B) Delete (C) Finish (D) Clear
9		9
Which of the following symbol is used at the end of case statement (A) ; (B) endl (C) : ● (D) <		You can enter data in a control only when it has (A) Control (B) Focus (C) Mask (D) Tab order
10		10
The first line of function definition is known as (A) Arguments (B) Function body (C) Return type (D) Function header ●		Forms and controls are collectively recognized as (A) Properties (B) Method (C) Object (D) Events
11		11
An array subscript should be (A) float ● (B) int (C) double (D) string		The naming prefix for a label control is (A) lable (B) la (C) lb (D) lbl
12		12
.exe is produced by (A) Loader (B) Interpreter (C) Linker ● (D) Debugger		Variables name cannot begin with (A) Number (B) Uppercase (C) Lowercase (D) Underscore
13		13
The number of bytes used by float data type in C-language is (A) 1 (B) 2 (C) 3 (D) 4 ●		The long data type in VB occupies bytes (A) 1 (B) 2 (C) 4 (D) 8
14		14
Which of the following operator has lowest precedence ? (A) = ● (B) + (C) * (D) ()		A loop within a loop is called (A) Nested (B) Complex (C) Outer (D) Sentinel
15		15
If int a = 5 , then the statement printf (" % 4 d " , a) will display (A) 5 (B) 5 (C) 5 (D) " 5 " ●	 is an example of post test loop (A) Do while (B) While wend (C) Do until (D) Do loop while

DG Khan Board-2024

12th CLASS – 1st Annual 2024

COMPUTER SCIENCE

SUBJECTIVE

SECTION-I

TIME : 2.10 HOURS

MARKS : 60

MS ACCESS

QUESTION NO. 2 Write short answers to any Six (6) of the following parts

6 x 2 = 12

- (i) Define record with example
- (ii) What is Alternate key ?
- (iii) How many attributes and records are contained in the following relation ?

Stud. No	Stud. Name	Gender	DOB
641	Ali	Male	12/01/2005
642	Taha	Male	29/05/2007

- (iv) Define relationship
- (v) What is the purpose of database design process ?
- (vi) What is homonym ?
- (vii) What is MS Access ?
- (viii) Write the use of input mask ?
- (ix) Why are sub form used ?

QUESTION NO. 3 Write short answers to any Six (6) of the following questions

6 x 2 = 12

C-Language

- (i) What are standard identifiers ?
- (ii) Convert the expression $A = \pi R^2$ in C-language expression
- (iii) If $x = 2$ give output of following statement
Printf (" % d " , ++ x) ;
Printf (" \n % d " , x ++) ;
- (iv) Write syntax of printf () function
- (v) Indicate the errors in following code ;

```
int main (void) {  
    const int pi = 3.1415 ;  
    int R ;  
    PRINTF( " % f " , pi * R * R ) ;  
}
```
- (vi) What is the output of following code

```
int x = 32 ;  
int y = 4 ;  
printf ( " % d and % d is % d " , x , y , x % y ) ;
```
- (vii) Indicate errors in the following code ;


```
int x , y ;  
0 = x = y ;  
x + + + ;  
printf ( ' % d ' , x + y ) ;
```
- (viii) Define a stream in C-Language
- (ix) Differentiate between " w " and " w + " modes to open a file in C-Language

OR

Visual Basic

- (i) Write the purpose of project explorer window
- (ii) Visual basic is known as event driven programming language , why ?
- (iii) What is the purpose of option explicit statement ?
- (iv) Differentiate between modal and modeless form in visual basic
- (v) What are intrinsic controls ?
- (vi) Why we use a label control ?
- (vii) What is difference between linking and embedding ?
- (viii) Write the purpose of " Large change " and " Small change " properties of scroll bar
- (ix) What is the purpose of " passwordchar " property of text box ?

DG Khan Board-2024

QUESTION NO. 4 Write short answers to any Six (6) of the following parts		6 x 2 = 12
<u>C-Language</u>	OR <u>Visual Basic</u>	
<p>(i) How are instructions executed in sequential structure ?</p> <p>(ii) Predict the output of the following</p> <pre>int price = 19 ; if (price != 10) printf (" price ") ;</pre> <p>(iii) Define loop</p> <p>(iv) Convert the following do while loop into for loop</p> <pre>int c = 2 ; do printf (" % d " , c) ; while (c + + <= 5) ;</pre> <p>(v) Predict the output of the following code segment</p> <pre>int x = 5 , y = 3 ; do { x = x * 2 ; y = y + 2 ; } while (y < 10) ; printf (" % d " , x) ;</pre> <p>(vi) List any two benefits of using function</p> <p>(vii) Define function body</p> <p>(viii) How long the global variable exist in a memory ?</p> <p>(ix) Compare local and global variable</p>	<p>(i) Define constant</p> <p>(ii) Write down two rules to give name to the variable</p> <p>(iii) Why is it important to declare variable before use?</p> <p>(iv) Distinguish between IF-Then-Else and Select-Case statement</p> <p>(v) In Visual Basic how select case help you in coding</p> <p>(vi) How nested IF is used in VB</p> <p>(vii) Distinguish between counter control and sentinel control loop</p> <p>(viii) Give an example of nested loop</p> <p>(ix) Distinguish between While-wend and Do-while loop</p>	
 SECTION-II (MS – ACCESS)		
<p>Note: Attempt any one question</p> <p>Q.5. What are database anomalies ? Discuss its three types</p> <p>Q.6. Explain any four data types available in MS-Access</p>		8
SECTION-III		
<p>Note: Attempt any two questions.</p>		(2 x 8) = 16
<u>C-Language</u>	OR <u>Visual Basic</u>	
<p>Q.7. What is programming language ? Discuss two main categories of programming languages</p> <p>Q.8. Write an interactive program that contains an if statement that may be used to compute the area of circle (area = πr^2) or the circumference of circle (circumference = $2 \pi r$) after prompting the user to type the first character of the formula name (A or C)</p> <p>Q.9. Write a program in C-Language that display product of all even numbers between 2 to 20 by using loop</p>	<p>Q.7. What is programming language ? Discuss two main categories of programming languages</p> <p>Q.8. Write an interactive program that contains an if statement that may be used to compute the area of circle (area = πr^2) or the circumference of circle (circumference = $2 \pi r$) after prompting the user to type the first character of the formula name (A or C)</p> <p>Q.9. Write a program in VB that display product of all even numbers between 2 to 20 by using loop</p>	

OBJECTIVE

NOTE: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct; fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question.

QUESTION NO. 1



MS - ACCESS

- 1 The process of arranging data in a logical sequence.
(A) Sorting (B) Summarizing (C) Data computing (D) Classifying
- 2 Database development process involve mapping of conceptual data model into.
(A) Hierarchical data model (B) Implementation model
(C) Network data model (D) Object Oriented data model
- 3 What criteria would you use to find a four characters name that starts with H ?
(A) H * 4 (B) H ? 4 (C) H ??? (D) H ###
- 4 A form that contains a sub-form is called.
(A) Form (B) Main form (C) Query (D) Report
- 5 Which of the following key possess the uniqueness property ?
(A) Foreign key (B) Secondary key (C) Sort key (D) Candidate key
- 6 Which form of dependency is removed in 3NF ?
(A) Function (B) Non function (C) Associative (D) Transitive

C - LANGUAGE

OR

VISUAL BASIC

- | | |
|---|---|
| <ol style="list-style-type: none"> 7 Which loop structure always executes at once?
(A) do – while loop (B) while loop
(C) do – end loop (D) For loop 8 What does a compound condition use to join two conditions ?
(A) Relational operator (B) Relational result
(C) Logical result (D) Logical operators 9 Which loop is also called ?
(A) Wend loop (B) Counter loop
(C) Conditional loop (D) Continuous loop 10 The output of the compiler is called.
(A) Object Code (B) Source Code
(C) Linked Code (D) Library Code 11 A memory location with same data that can be changed is called as.
(A) Constant (B) Named constant
(C) Address (D) Variable 12 Which of the following format specifier is used for character data type ?
(A) % d (B) % s
(C) % c (D) % o 13 Which keyword is not used in switch statement ?
(A) If (B) Switch (C) Case (D) Default 14 The case block ends with.
(A) End case (B) End select
(C) Break (D) Case end 15 The loop which never ends is called.
(A) Infinite loop (B) Running loop
(C) Continuous loop (D) Nested loop | <ol style="list-style-type: none"> 7 In Visual Basic, the example of post test loop is.
(A) Do – While loop (B) While – loop
(C) Do – end loop (D) For – loop 8 Which control combines the features of a textbox and list box ?
(A) Scrollbar (B) Check box
(C) Radio Button (D) Combo box 9 A loop which never ends is called.
(A) Inner loop (B) Nested loop
(C) Infinite loop (D) Continuous loop 10 The name of program that translates VB code to object code.
(A) Interpreter (B) Assembler
(C) Debugger (D) Error 11 A memory location with same data that can be changed is called as
(A) Constant (B) Named Constant
(C) Address (D) Variable 12 Which of the following is not Visual Basic Control ?
(A) Command Button (B) Forms
(C) Variable (D) Text editor 13 The naming prefix for a label control is.
(A) lbl (B) lah (C) l (D) The 14 The select case end with.
(A) End case (B) Case End
(C) End select (D) Case only 15 The keyword that marks the end of Do – loop structure is.
(A) End - Do (B) Exit – Do
(C) End While (D) Loop |
|---|---|

MS – ACCESS

QUESTION NO. 2 Write short answers any Six (6) of the following

6x2=12

- | | |
|---|---|
| (i) What is the purpose of database integrity ? | (ii) List any two properties of relation |
| (iii) Define composite key | (iv) When is a relation in second normal form ? |
| (v) Define synonym | (vi) What is database wizard ? |
| (vii) What is the use of select query ? | (viii) Define filter . |
| (ix) What is a from ? | |

QUESTION NO. 3 Write short answers any Six (6) of the following

6x2=12

C – LANGUAGE

- (i) Write use of define directive.
- (ii) Why logical error are most difficult to find ?
- (iii) What is assembly language ?
- (iv) Define preprocessor directive.
- (v) Why C is known as strongly typed language ?
- (vi) Write C statement to declare and initialize Character variable ch.
- (vii) Trace error from the following
- ```
#include <stdio.h>
void main () ; {
 int x = 5 ;
 printf (% c , x) ; }
```
- (viii) Trace output
- ```
printf ( " Pakistan \t is \n my \t homeland " ) ;
```
- (ix) Define array in C language .

OR VISUAL BASIC

- (i) Write four advantages of Visual Programming.
- (ii) What is tool box ?
- (iii) Write application development process in VB .
- (iv) What is the use of text box ?
- (v) Differentiate between property and method .
- (vi) Write use of const keyword .
- (vii) What is option explicit ?
- (viii) Write syntax of declaring variable in VB .
- (ix) Differentiate between implicit and explicit declaration .

QUESTION NO. 4 Write short answers any Six (6) of the following

6x2=12

C – LANGUAGE

- (i) Discuss the role of ' \t ' .
- (ii) Write the output of the following code
- ```
float p = 3.1234 ;
printf (" % 15.2 f " , p) ;
```
- (iii) Define " getch " function.
- (iv) Convert the following sentence into C expression.
- " Age is greater than equal to 20 "
- (v) Define conditional operator
- (vi) Write the output of the following code
- ```
if ( 100 > 50 )
    printf ( " ONE " ) ;
else
    printf ( " TWO " ) ;
```
- (vii) What is while loop ?
- (viii) Convert following code into while loop .
- ```
for (i = 10 ; i <= 15 ; i ++)
 printf (" Hello ") ;
```
- (ix) Define Nested loop.

**OR VISUAL BASIC**

- (i) Define keyword .
- (ii) Describe the function of option Explicit .
- (iii) What is string Data type ?
- (iv) Define Literal constant .
- (v) What is Message Box ?
- (vi) Define option Button .
- (vii) Enlist important methods of List Box .
- (viii) Describe Combo Box control .
- (ix) What is Timer control ?

**SECTION – II ( MS – ACCESS )**

**Note : Attempt any one question.**

Q.5 . Define database model. Describe different types of database models .

Q.6 . Explain different components of logical model .



**1x8=8**

**SECTION – III**

**Note : Attempt any two question**

**2x8=16**

**C – LANGUAGE**

- Q. 7. What is control structure ? Briefly describe the basic control structures for writing programs .
- Q. 8 Write a program to display the following series using loop . 1 4 9 16 25
- Q. 9 Describe the process of writing of function with example .

**OR VISUAL BASIC**

- Q. 7. What is control structure ? Briefly describe the basic control structures for writing programs .
- Q. 8 Write a program to display the following series using loop . 1 4 9 16 25
- Q. 9 Describe the process of writing of function with example .



**OBJECTIVE**

**NOTE:** You have four choices for each objective type question as A , B , C and D . The choice which you think is correct , fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question.

**QUESTION NO.1**



**MS-ACCESS**

- 1 Which of the following type of file require largest process time ?  
(A) Sequential file (B) Random file (C) Indexed sequential file (D) Direct access file
- 2 CREATE command is used to create a.  
(A) Table (B) View (C) Report (D) Query
- 3 Database development process involve mapping of conceptual data model into.  
(A) Object oriented data model (B) Network data model  
(C) Implementation model (D) Hierarchical data model
- 4 In relational database, a table is also called a.  
(A) tuple (B) relation (C) file (D) schema
- 5 A database consists of various components called the.  
(A) Tool (B) Properties (C) Entities (D) Object
- 6 The data in table is entered in.  
(A) Design view (B) Normal view (C) Datasheet view (D) Layout view

**C-LANGUAGE**

**OR**

**VISUAL BASIC**

- |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"> <li>7 C is a<br/>(A) High level language (B) Low level language<br/>(C) Assembly language (D) Machine language</li> <li>8 Void occupy how many bytes in memory ?<br/>(A) Zero (B) One<br/>(C) Two (D) Three</li> <li>9 Variables are created in.<br/>(A) RAM (B) ROM<br/>(C) Hard Disk (D) Cache</li> <li>10 Which of the following data type offers the highest precision ?<br/>(A) Float (B) Long int<br/>(C) Long double (D) Unsigned long int.</li> <li>11 The function getche ( ) is defined in.<br/>(A) Stdio.h (B) String.h<br/>(C) Math.h (D) Conio.h</li> <li>12 In if statement, false is represented by.<br/>(A) 0 (B) 1<br/>(C) 2 (D) 3</li> <li>13 One execution of a loop is known as a (n)<br/>(A) Cycle (B) Duration<br/>(C) Iteration (D) Test</li> <li>14 Function prototypes for built-in functions are specified in.<br/>(A) Source files (B) Header files<br/>(C) Object files (D) Image files</li> <li>15 A file is stored in.<br/>(A) RAM (B) Hard disk<br/>(C) ROM (D) Cache</li> </ol> | <ol style="list-style-type: none"> <li>7 VB is a.<br/>(A) High level language (B) Low level language<br/>(C) Assembly language (D) Machine language</li> <li>8 The output of the Compiler is called.<br/>(A) Object code (B) Source code<br/>(C) Direct code (D) Staged code</li> <li>9 Variables are created in.<br/>(A) RAM (B) ROM<br/>(C) Hard Disk (D) Cache</li> <li>10 The diamond in a flow chart.<br/>(A) Progress (B) Input<br/>(C) Condition (D) Output</li> <li>11 Writing programs in Machine language is.<br/>(A) Time consuming (B) Easy<br/>(C) Complex (D) Complex and time consuming</li> <li>12 In if statement, false is<br/>(A) 0 (B) 1<br/>(C) 2 (D) 3</li> <li>13 One execution of a loop is known as a (n)<br/>(A) Cycle (B) Duration<br/>(C) Iteration (D) Test</li> <li>14 In Visual Basic, a form is another name for a (n)<br/>(A) Object (B) Window<br/>(C) Property (D) Label</li> <li>15 A file is stored in.<br/>(A) RAM (B) Hard disk<br/>(C) ROM (D) Cache</li> </ol> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



**QUESTION NO. 2 Write short answers any Eight (8) parts of the following** **DG Khan Board-2022** **16**

- Write any two properties of Normal Distribution
- If in normal distribution  $\sigma = 2$  find  $\mu_4$
- Why normal distribution is called symmetrical distribution ?
- In normal distribution  $N(15, 4)$  what will be value of its median and why ?
- What is the role of  $\sigma$  in normal distribution ?
- Define statistical estimation
- What is meant by unbiasedness ?
- Define Null hypothesis
- Give two examples of Type II-Error
- If  $\bar{x} = 50$   $\mu = 40$   $\sigma = 5$   $n = 10$  find  $Z$
- Differentiate between Hardware and Software
- What are two main parts of CPU ?

**QUESTION NO. 3 Write short answers any Eight (8) parts of the following****16**

- Define sample design
- What is meant by sampling frame ?
- Differentiate between sampling and non-sampling errors
- Define non-probability sampling
- If  $\mu = 5$ ,  $\sigma = 2.4$ ,  $n = 2$  and  $\mu = 4$ . Find  $\mu_{\bar{x}}$  and  $\sigma_{\bar{x}}$  for sampling without replacement
- Compare sampling with and without replacement
- Define the term 'residual'
- Define the method of least squares
- In regression line  $y$  on  $x$ , if  $a = 130$  and  $b = 3.956$ , calculate the estimate of  $y$  for  $x = 12$
- Define the term 'correlation'
- State any two properties of correlation coefficient
- Discuss the measuring of  $r = 0$

**QUESTION NO. 4 Write short answers any Six (6) parts of the following****12**

- For two attributes A and B, describe the Yule's co-efficient of association
- Define negative association
- Given that  $(AB) = 55$ ,  $(A) = 144$  and  $(B) = 384$ , find the value of  $n$  if the attributes A and B are independent
- Write down the formula of Pearson's co-efficient of mean square contingency
- Define histogram
- Give an example of seasonal variations
- What are the four phases of a business cycle?
- How the normal equations of straight line  $y = a + bx$  are obtained ?
- What is a time series ? Give an example

**SECTION-II****Note: Attempt any Three questions from this section****8×3 = 24**

- Q. 5(a)** Let  $X \sim N(20, 25)$ , find the area under the normal curve (i) below 30 (ii) above 28
- (b)** Suppose that  $x$  is normally distributed with  $\mu = 25$  and  $\sigma = 5$  Find (i) The lower and upper quartiles (ii) The mean deviation
- Q. 6(a)** Draw all possible samples of size 2 with replacement from the population 1, 4, 6, 8. Find Mean and Standard deviation of the sampling distribution of means
- (b)** A random sample of 100 is taken from a population with mean 30 and standard deviation 5. The probability distribution of the parent population is unknown. Find the mean and standard error of the sampling distribution of  $\bar{x}$
- Q. 7(a)** If the two sided  $100(1 - \alpha)\%$  confidence interval based on random sample taken from  $X \sim N(\mu, \sigma^2)$  is  $12.18 < \mu < 20.56$  Find  $\bar{x}$  and standard error of  $\bar{x}$
- (b)** The records of certain hospital showed that the birth of 723 males and 617 females in a certain week. Do these figures conform to the hypothesis that the sexes are born in equal proportions ? use  $\alpha = 0.02$
- Q. 8(a)** Fit a straight line  $Y$  on  $X$  on the following data

|   |    |    |    |    |    |    |
|---|----|----|----|----|----|----|
| X | 12 | 14 | 16 | 18 | 20 | 22 |
| Y | 6  | 9  | 11 | 8  | 10 | 12 |

Also show that  $\Sigma(y - \hat{y}) = 0$ 

- (b)** From the information given below  $\Sigma(x - \bar{x})(y - \bar{y}) = 150$   $S_x^2 = 64$   $S_y^2 = 260$   $n = 16$

Calculate  $b_{yx}$ ,  $b_{xy}$  and  $r_{xy}$  Show that  $r_{xy} = \sqrt{b_{yx} \times b_{xy}}$ 

- Q. 9(a)** Find the value of  $\chi^2$  (Chi-Square) from the following data

| Social Status | Brilliant | Intelligent | Dull |
|---------------|-----------|-------------|------|
| Upper middle  | 20        | 20          | 60   |
| Middle        | 32        | 70          | 38   |
| Lower Middle  | 23        | 35          | 22   |

- (b)** Compute 3-year moving average from the following data

| Year   | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 |
|--------|------|------|------|------|------|------|------|------|
| Values | 6.2  | 7.8  | 8.3  | 9.3  | 8.6  | 7.8  | 8.1  | 7.9  |





OBJECTIVE

NOTE: You have four choices for each objective type question as A , B , C and D . The choice which you think is correct , fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question.

**QUESTION NO. 1****MS-ACCESS**

- 1 In ERD model , the relationship between two entities is represented by  
(A) Diamond symbol (B) Rectangular box (C) Oval symbol (D) Line
- 2 Different attributes in two different tables having same name are referred to as  
(A) Acronym (B) Homonym (C) Mutually exclusive (D) Synonym
- 3 A database consists of various components called  
(A) Tools (B) Object (C) Entities (D) Properties
- 4 The data in table is entered in  
(A) Design view (B) Normal view (C) Datasheet view (D) Layout view
- 5 Which of the following data is least flexible ?  
(A) Network data model (B) Hierarchical data model (C) Relational data model (D) Object data model
- 6 A table must have  
(A) Primary key (B) Secondary key (C) Composite key (D) Sort key

**C - Language**

- 7  $a + = b$  is equivalent to  
(A)  $b + = a$  (B)  $a = + b$  (C)  $a = a + b$  (D)  $b = b + a$
- 8 The escape sequence for tab is  
(A) \ (B) \b (C) \n (D) \t
- 9 The format specifier %f is used for  
(A) Integer (B) Unsigned short (C) Float (D) Unsigned long int
- 10 Select the programming structure that executes program statements in order  
(A) Decision (B) Repetition (C) Sequence (D) Iteration
- 11 A loop within another loop is called  
(A) Double loop (B) Dual loop (C) Complete loop (D) Nested loop
- 12 Global variables are created in  
(A) Hard disk (B) RAM (C) ROM (D) Cache
- 13 Void occupy how many bytes in memory  
(A) Zero (B) One (C) Two (D) Four
- 14 Which language requires no translator program ?  
(A) Assembly language (B) C (C) Machine language (D) C++
- 15 Which of the following operators has the lowest precedence ?  
(A) ! (B) = (C) == (D) +



**QUESTION NO. 2 Write short answers any Six (6) parts of the following**

12

MS-ACCESS

|   |                             |   |                                               |
|---|-----------------------------|---|-----------------------------------------------|
| 1 | What is entity ?            | 2 | Who is the user or end user ?                 |
| 3 | Define cardinality          | 4 | What is the primary objective of ER-diagram ? |
| 5 | What are reports ?          | 6 | Define database object                        |
| 7 | What are relationships ?    | 8 | What do you mean by join ?                    |
| 9 | How is a form constructed ? |   |                                               |

**QUESTION NO. 3 Write short answers any Six (6) parts of the following**

12

C-LANGUAGE

|   |                                                                                                                                          |   |                                                                    |
|---|------------------------------------------------------------------------------------------------------------------------------------------|---|--------------------------------------------------------------------|
| 1 | Differentiate between preprocessor directives and header file                                                                            | 2 | Why the source code cannot be executed directly ?                  |
| 3 | What is assembly language ?                                                                                                              | 4 | Write down the names of logical operators available in C- language |
| 5 | List any two data types in C                                                                                                             | 6 | What is keyword ? Give an example                                  |
| 7 | Predict the output of the following code segment<br><pre>int price = 30 ; if (price != 15) printf ( " Price " );</pre>                   |   |                                                                    |
| 8 | Predict the output of the following code segment<br><pre>int a = 9 ; if (a % 2 == 0) printf ( " EVEN " ); else printf ( " Odd " );</pre> |   |                                                                    |
| 9 | Find errors in the following code segment<br><pre>int a = 20 if (a = 10) ; printf ( " OK " ); else printf ( " cancel " );</pre>          |   |                                                                    |

**QUESTION NO. 4 Write short answers any Six (6) parts of the following**

12

C-LANGUAGE

|   |                                                                                                                              |   |                                              |
|---|------------------------------------------------------------------------------------------------------------------------------|---|----------------------------------------------|
| 1 | What is use of printf function ?                                                                                             | 2 | List four types of format specifier          |
| 3 | Define standard input                                                                                                        | 4 | List different types of functions            |
| 5 | Define global variable                                                                                                       | 6 | Write down types of streams in life handling |
| 7 | Write output of following code<br><pre>int x ; x = 1 ; for (x = 10 ; x &lt;= 100 ; x = x + 10) printf ( " % d " , x );</pre> |   |                                              |
| 8 | Write output of following code<br><pre>int n = 10 ; while (n &gt;= 1) { printf ( " Value = % d \n " , n ); }</pre>           |   |                                              |
| 9 | Trace out errors from following code<br><pre>int k for (k = 0 , k &lt;= 10 , k ++ ) ; printf ( " % d " k)</pre>              |   |                                              |

SECTION-II

**Note: Attempt any ONE question from this section**

MS-ACCESS

|     |                                                                    |   |
|-----|--------------------------------------------------------------------|---|
| Q.5 | What is File ? Write in detail file types from usage point of view | 8 |
| Q.6 | What is data integrity ? Explain types of integrity                | 8 |

SECTION-III

**Note: Attempt any TWO questions from this section**

C-LANGUAGE

|     |                                                                                                                                                              |       |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| Q.7 | While writing a C program , how many types of errors can occur ? Discuss briefly. Which one is the most difficult to locate and remove ? Justify your answer | 2+4+2 |
| Q.8 | Explain if statement with its purpose , syntax , flowchart and suitable program example                                                                      | 8     |



**OBJECTIVE**

NOTE: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question.

**QUESTION NO. 1**

**MS-ACCESS**

Data that causes inconsistency lacks in

- (A) Good data (B) Data redundancy (C) Data integrity (D) Data anomaly

The columns of a table correspond to ;

- (A) Table (B) Field (C) Record (D) Cell

In an E.R diagram, a rectangle represents

- (A) Entity (B) Attribute (C) Relationship (D) Decision

In 3NF, a non-key attribute must not depends on a

- (A) Non-key attribute (B) Key attribute (C) Composite key (D) Primary key

Microsoft Access saves the database with the extension

- (A) .mdb (B) .msdb (C) .madb (D) .mxls

In MS Access, find and replace command is found in

- (A) File menu (B) Edit menu (C) Tool (D) View menu

**C-LANGUAGE**

The programmer usually enters source code into a computer using

- (A) Compiler (B) Text editor  
(C) Debugger (D) Linker

In C-language, variable name(s) cannot begin with a (an)

- (A) Number (B) Lower - case letter  
(C) Upper-case letter (D) Underscore

The general form of format specifier for floating point value is;

- (A) % m.nf (B) m.n %  
(C) m % .nf (D) m.n%f

Which programming structure makes a comparison

- (A) Relation (B) Repetition  
(C) Decision (D) Sequence

Graphical representation of a program is called

- (A) Logical chart (B) Binary chart  
(C) Flow - chart (D) E- R chart

Semicolon is placed at the end of condition in

- (A) do-while loop (B) for loop  
(C) Hybrid loop (D) while loop

This is a control structure that causes a statement or group of statements to repeat

- (A) Decision statement (B) Sequential  
(C) Loop (D) Logical

The statement that activates a function is known as

- (A) Function design (B) Function definition  
(C) Function declaration (D) Function call

In the statement FILE \*fp, the \* represents

- (A) Multiplication (B) Pointer  
(C) Argument (D) Sentinel

**OR**

**VISUAL BASIC**

7

Labels, buttons and text boxes are examples of

- (A) Procedure (B) Controls  
(C) Properties (D) Methods

8

The option that forces the declaration of all variables is

- (A) Dim (B) Option static  
(C) Option explicit (D) Option strict

9

What is the default color of the comments in code window?

- (A) Green (B) Red  
(C) Blue (D) Black

10

The entire select case construct is terminated with.

- (A) Case Else (B) End if  
(C) End select (D) Terminate select

11

In a case structure, which is executed if two or more cases are true

- (A) All matching cases found  
(B) The last matching case found  
(C) The first matching case found  
(D) An error is generated

12

How many times the following loop will be executed?

- Do Loop  
Statements  
Until x > 100  
(A) As long as x ≤ 100 (B) x < 100 times  
(C) 100 times (D) 101 times

13

Which keyword is used to increment or decrement a counter by a value that you specify ?

- (A) Interval (B) Skip  
(C) Step (D) Next

14

If the elements in two arrays are related by their subscripts, the arrays are called

- (A) Dynamic (B) Associated  
(C) Static (D) Parallel

15

The property used to get the number of items stored in a ListBox is

- (A) items (B) Items.count  
(C) Number (D) count



# DG Khan Board-2019

12<sup>th</sup> CLASS – 12019

COMPUTER SCIENCE (NEW COURSE)

ACADEMIC SESSION : 2015-2017 TO 2017-2019

**SUBJECTIVE**

**SECTION-I**

TIME : 2.10 HOURS

MARKS : 60

**MS ACCESS**



**QUESTION NO. 2** Write short answers to any Six (6) of the following questions

6 x 2 = 12

- (1) Define data inconsistency.
- (2) What is the use of data dictionary ?
- (3) How a relation is formed in data Base ?
- (4) Why is requirement analysis conducted ?
- (5) What do you mean by data Integrity ?
- (6) Define referential Integrity.
- (7) Write any four advantages of IDE.
- (8) Define the term degree of relation.
- (9) Why is a list box used in form ?

**QUESTION NO. 3** Write short answers to any Six (6) of the following questions

6 x 2 = 12

**C-Language**

**OR**

**Visual Basic**

- (1) What is machine language?
- (2) Define the term loading.
- (3) What is expression?
- (4) Write a single C-statement to initialize two integer variables x and y to 0
- (5) Determine the output  
`int x = 1;  
print f ( "%d" , x++ );`
- (6) Find the errors.  
`float a = 10.02`
- (7) Define standard input.
- (8) Write the code to input character value in variable "a"
- (9) Determine the output  
`print f ( "* \n ** \n *** \n" );`

- (1) What is machine language?
- (2) Define the term loading.
- (3) What is expression?
- (4) Write a single V B statement to initialize two integer variables x and y to 0
- (5) Determine the output.  
`Dim x = 1 as Integer  
Msg Box ( x + 10 )`
- (6) Find the errors  
`Dm a = 10.02 as Integer`
- (7) Define standard input.
- (8) Write the code to input character value in variable "a"
- (9) Determine the output  
`Msg Box ( " * " & VbNewLine & " ** " )`

P.T.O.



**QUESTION NO. 4** Write short answers to any Six (6) of the following questions **6 x 2 = 12**

| <u>C-Language</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | OR <u>Visual Basic</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>(1) How does a selection structure select a statement to execute?</p> <p>(2) Convert the following conditional expression into if-else statement:<br/> <math>x &lt; 0 ? y = 31 : z = 21 ;</math></p> <p>(3) Determine the output of following code segment<br/> <pre>int P = 19 ; if (P = 10 )     printf (" Price") ;</pre></p> <p>(4) Distinguish between break and continue statements used in loops.</p> <p>(5) Convert the following code into while loop :<br/> <pre>for (int x = 1 ; x &lt;= 10 : x++)     printf (" loop") ;</pre></p> <p>(6) Draw the flow chart of do...while loop .</p> <p>(7) Enlist two types of functions in C.</p> <p>(8) What is a function call?</p> <p>(9) How is the end of text file indicated ?</p> | <p>(1) Which statement terminates Do and For loops early?</p> <p>(2) Write down the syntax of Do ...Loop... Until.</p> <p>(3) How many times does the following loop execute?<br/> <pre>N = 10 Do While N &gt;= 10     N = N - 1 Loop</pre></p> <p>(4) Define Upper Bound in an array</p> <p>(5) List down any two uses of array</p> <p>(6) Why are combo Box controls used ?</p> <p>(7) What is the purpose of Text property of a button?</p> <p>(8) Define context menu. How is it created ?</p> <p>(9) How are parameters passed by reference ?</p> |

**SECTION-II (MS - ACCESS)**

**Note: Attempt any one question**

**(1 x 8) = 8**

Q.5. Explain any four advantages of DBMS.

Q.6. What is filter? Discuss different types of filters in MS-Access? (MS-Access)

**SECTION-III**

**Note: Attempt any two questions.**

**(2 x 8) = 16**

| <u>C-Language</u>                                                                                                                                                                                                                                                                                  | OR <u>Visual Basic</u>                                                                                                                                                                                                                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Q.7. Explain printf function with suitable examples.</p> <p>Q.8. What is "switch" statement. Explain its working with flowchart and example?.</p> <p>Q.9. Write a program in C-language to print the sum of following series.<br/> <math>0 \quad 3 \quad 6 \quad 9 \quad 12 \quad 15</math></p> | <p>Q.7. Explain the working of While-wend loop with example</p> <p>Q.8. What is "select-case" structure. Explain its working with flow chart and example.</p> <p>Q.9. Write a program in Visual Basic to print the sum of following series.<br/> <math>0 \quad 3 \quad 6 \quad 9 \quad 12 \quad 15</math></p> |



**COMPUTER SCIENCE (NEW COURSE)**

TIME: 20 MINUTES

**ACADEMIC SESSION : 2015-2017 TO 2016-2018**

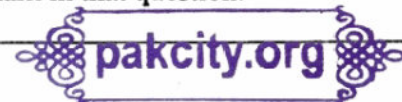
**OBJECTIVE**

MARKS: 15

NOTE: You have four choices for each objective type question as A , B , C and D . The choice which you think is correct , fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question.

**QUESTION NO. 1**

**MS-ACCESS**



- 1 Duplicate data in multiple data files is called  
(A) Data Integrity (B) Data Consistency (C) Program dependency (D) Data redundancy
- 2 The data or information that describes an entity is called  
(A) Attribute (B) Record (C) Tuple (D) Data Item
- 3 Which of the following is a one-to-many relations  
(A) Student – Reg No. (B) Mother – daughter (C) Person – Date of Birth (D) Country – Capital
- 4 Which form of dependency is removed in 3 NF (Third Normal Form)  
(A) Functional (B) Transitive (C) Partial (D) Associative
- 5 In 3 NF (Third Normal Form) , a non-key attribute must not depend on a  
(A) Non-key attributes (B) Key attributes (C) Composite key (D) Sort key
- 6 Each separate piece of Information stored in a record is called  
(A) Form (B) Field (C) Table (D) Relation

**C-LANGUAGE**

- 7 stdio stands for  
(A) Standard Input output (B) Simple input output (C) String Input output (D) Start Input output

OR **VISUAL BASIC**

The prefix for naming a menu item is (A) mnu (B) mmu (C) mne (D) men

**C-LANGUAGE**

- 8 Which is numeric data type with decimal point (A) float (B) int (C) Char (D) long

OR **VISUAL BASIC**

How many bytes are occupied by decimal data type in Visual Basic ? (A) 16 (B) 12 (C) 1 (D) 8

**C-LANGUAGE**

- 9 Format specifier is started with symbol (A) ? (B) & (C) % (D) \*

OR **VISUAL BASIC**

Which of the following is valid data type in Visual Basic (A) Array (B) Char (C) Boolean (D) int

**C-LANGUAGE**

- 10 Which operator in C is called a ternary operator (A) if (B) ++ (C) ? (D) ()

OR **VISUAL BASIC**

To display a message ..... is used  
(A) msg boxes ( ) (B) message box ( ) (C) msg box ( ) (D) Input box ( )

**C-LANGUAGE**

- 11 Relational operators allow you to ..... numbers (A) Add (B) Multiply (C) Compare (D) Divide

OR **VISUAL BASIC**

A form that contains a subform is called (A) Form (B) Major Form (C) Main Form (D) Query

**C-LANGUAGE**

- 12 A loop within a loop is called (A) Complex loop (B) Nested loop (C) Infinite loop (D) Running loop

OR **VISUAL BASIC**

A loop that never ends is called (A) Complex loop (B) Infinite loop (C) Running loop (D) Finite loop

**C-LANGUAGE**

- 13 Global variables are created in (A) RAM (B) ROM (C) Hard Disk (D) Cache

OR **VISUAL BASIC**

A control that is used to display text or to accept user input is  
(A) text Box (B) Label (C) Button (D) Image box

**C-LANGUAGE**

- 14 A function can return ..... value (A) 1 (B) 2 (C) 3 (D) 4

OR **VISUAL BASIC**

Which control combines the characteristics of text box and list box  
(A) Combo Box (B) Scroll bar (C) Timer (D) Menu box

**C-LANGUAGE**

- 15 In if statement , false is represented by (A) 0 (B) 1 (C) 2 (D) 3

OR **VISUAL BASIC**

Which method is used to add items in a List box  
(A) Add item (B) Index item (C) Remove item (D) Insert item



**QUESTION NO. 2 Write short answers to any Six (6) of the following questions**

**6 x 2 = 12**

- (1) What is the use of data dictionary ? (2) Differentiate between database and database Management System
- (3) Write any two responsibilities of a database administrator (4) State the purpose of feasibility study
- (5) Define Synonym (6) What are the database anomalies?
- (7) Write any two advantages of forms (8) How does an input mask help the user to enter data?
- (9) Why a list box is used in forms?

**QUESTION NO. 3 Write short answers to any Six (6) of the following questions**

**6 x 2 = 12**

**C-Language**

- (1) What is main function used in C program ? (2) What are run-time errors ?
- (3) Define source code (4) Define variable initialization with syntax
- (5) Differentiate between unary and binary operator
- (6) What is the output of following code ?

```
int n = 3, m = 5;
printf(" %d \n %d \t %d ", n/m, m/n, n % m);
```

- (7) List three names of functions used for character input.

- (8) What is the output of following code ?

```
Char Ch1 = 'A';
Ch1 += 2;
Printf(" %C ", Ch1);
```

- (9) Find Errors in the following code

```
Void main ()
{
float n1 = 3.5, n2 = 4.1;
printf(" %d \t %d ", n1, n2);
}
```

**OR Visual Basic**

- (1) What is compiler ? (2) What is code window ?
- (3) Why we use three-letter prefix with the name of control ? (4) What is an assignment operator ?
- (5) Predict the output of following code

```
Dim n, m As integer
Dim x, y As integer
n = 3
m = 5
x = n mod m
y = m mod n
Print x mod y
```

- (6) Define select-case statement (7) What is condition?
- (8) Which statement terminate Do and For loop early? (9) What is nested loop ?

**QUESTION NO. 4 Write short answers to any Six (6) of the following questions**

**6 x 2 = 12**

**C-Language**

- (1) Write two advantages of switch statement in C language
- (2) Write the error from following code :

```
Void main () ;
{ int x = 10 ;
 if (x == 10)
 x ++
 else
 x -- ;
}
```

- (4) Define infinite loop

- (6) Convert the following code into while loop

```
int n = 5, f = 1 ;
for (i = 1 ; i <= n ; i ++)
f = f * i ;
```

- (3) Write the output of the following code

```
int x, y, z = 1 ;
x = y = 3 ;
if (x == y) || (y < z)
printf(" Yes ");
else
printf(" NO ");
```

- (5) Write the output of the following code

```
int m = 5 ;
while (m < 10)
{
printf(" %d \n ", m);
m = m + 2 ;
}
```

- (7) What is function call?
- (8) Describe built-in function
- (9) How is a file opened in C?



## DG Khan Board-2018

### OR Visual Basic

- (1) Define algorithm
- (2) Write error from following code  
Dim M As string  
If M = 0  
Msg Box "Zero"  
Else  
Msg Box "Not Zero"
- (3) Write output of following code  
Dim N As Integer  
FOR N = 1 to 10 step 3  
Print N  
Next
- (4) State the purpose of message box
- (5) Write the output of following  
Dim M as Integer  
M = 5  
M = M \* 10  
Print M
- (6) Convert the following code into while loop  
Dim i, n, f As Integer  
n = 5  
f = 1  
FOR i = 1 to n  
f = f \* i  
Next
- (7) Define implicit declaration
- (8) Differentiate between For ..... Next loop and While ..... wend loop
- (9) Describe breakpoint in VB.

### SECTION-II (MS - ACCESS)

**Note:** Attempt any one question

5. Write down the properties of a relation in detail 2+2+2+2
6. Define report. Discuss its different types 2+3+3

### SECTION-III

**Note:** Attempt any two questions.

#### C-Language

7. What is debugging ? How many types of errors may occur in writing program , explain in detail 2+2+2+2

#### OR Visual Basic

What is debugging ? Briefly explain the types of errors may occur in a code 2+2+2+2

#### C-Language

8. Write a program that inputs a number and finds whether it is even or odd 8

#### OR Visual Basic

Write a program that inputs a number and finds whether it is even or odd 8

#### C-Language

9. Define do-while loop. Explain its working with the help of Example and Flowchart 2+2+2+2

#### OR Visual Basic

Define do-while loop. Explain its working with the help of Example and Flowchart 2+2+2+2