

Model Questions – 2078 (2022)

Subject: Computer Science (Com. 4281)

Full Marks: 50

Time: 2 hrs.

SET A

GROUP – A

Multiple Choice Questions

[9×1 = 9]

Tick the best alternative.

- Which of the statements are used in DDL?
 - Create, alter and drop
 - Create, insert and select
 - Insert, update and delete
 - Delete, alter and drop
- With SQL, how do you select all the records from a table named “Persons” where the value of the column “FirstName” ends with an “a”?
 - SELECT * FROM Persons WHERE FirstName="a"
 - SELECT * FROM Persons WHERE FirstName LIKE "a%"
 - SELECT * FROM Persons WHERE FirstName LIKE "%a"
 - SELECT * FROM Persons WHERE FirstName="%a%"
- Which of the following statements is true about a star network topology?
 - Each device is connected to a switch or hub
 - Each device is connected to each other
 - Each device is connected in a trunk
 - Each device is connected to a terminal
- Which of the following is the correct syntax to display "Stay Safe" in an alert box using JavaScript?
 - alert-box("Stay Safe");
 - confirm("Stay Safe");
 - msgbox("Stay safe");
 - alert("Stay Safe");

5. What is the use of <A>tag?
- A) To insert an image
 - B) To create a link
 - C) To create a hyperlink
 - D) To create a list
6. What is the output of given C program?
- ```
void main()
{
char str1[] = "FIRST";
char str2[20];
strcpy(str2,str1);
printf("%s %s ",str1,str2);
printf("%d", (str1!=str2));
printf("%d", strcmp(str1,str2));
}
```
- A) FIRST FIRST 0 0
  - B) FIRST FIRST 1 1
  - C) FIRST FIRST 1 0
  - D) FIRST FIRST 0 1
7. Where is a class derived in inheritance?
- A) Superclass
  - B) Subclass
  - C) Subsetclass
  - D) Relativeclass
8. Which of these is the correct order of the SDLC?
- A) Analysis, Design, Coding, Testing, Implementation
  - B) Analysis, Design, Testing, Implementation, Coding
  - C) Implementation, Coding, Analysis, Design, Testing
  - D) Design, Testing, Implementation, Coding, Analysis
9. Why is cloud computing popular nowadays?
- A) Cost-sharing and easily accessible
  - B) As modern technology and costly
  - C) Accessible and freely available
  - D) Affordable to all

### GROUP –B

**Give short answer to the following questions.**

**[5×5=25]**

1. Explain 2NF and 3NF with examples.

OR

Demonstrate the basic DML statement with an example.

2. Write a function to add any two numbers in Javascript.

OR

Demonstrate the external CSS implemented in the web page.

3. Describe any five features of OOPs.
4. What are the different stages of software planning? Describe.
5. Define the concept of AI and IoT.

### GROUP –C

**Give long answer to the following question**

**[2×8=16]**

6. How do you implement the Class C IP address in the local area network? Describe.
7. Write a program to enter ten integer numbers into an array, sort and display them in ascending order.

OR

Write a program to read the marks of any 5 students in a subject and count how many students are pass and fail.



**Multiple Choice Questions****[9×1=9]****Tick the best alternative.**

1. To insert a record into a table, we use
  - a) Insert
  - b) Delete
  - c) Alter
  - d) All of the above
2. Which is a database software?
  - a) SQL
  - b) MYSQL
  - c) Oracle
  - d) All of the above
3. A topology where all the nodes are connected to each other.
  - a) Star
  - b) Bus
  - c) Tree
  - d) Mesh
4. In JavaScript, switch control structure supports
  - a) Integer values for case
  - b) Floating values for case
  - c) String values for case
  - d) All of the above
5. To use css codes in our HTML files, we enclose it between
  - a) <script> and </script>
  - b) <style> and </style>
  - c) <head> and </head>
  - d) None of the above

6. What would be the output?

```
#include <stdio.h>
int f(int x)
{
 return x;
}
int main()
{
 f(7);
 printf("result=%d",f(8));
 return 0;
}
```

- a) 0
- b) 9
- c) 2
- d) 8

7. The process of creating multiple classes from an existing class is called ... inheritance.

- a) Single
- b) multiple
- c) hierarchical
- d) multilevel

8. 'SDLC' stands for

- a) System Development Life Cycle
- b) Standard Development Life cycle
- c) Special Development Life Cycle
- d) All of the above (a,b,c)

9. Which is the example of cloud?

- a) Amazon Web Services (AWS)
- b) Dropbox
- c) Cisco WebEx
- d) All of the above

## GROUP –B

**Give short answer to the following questions.**

**[5×5=25]**

1. Define the term 'normalization'. Explain about 1N.

[1+4]

OR

Explain about create, delete and alter commands used in SQL.

[2+1+2]

2. What is a function in JS? Write a program to create a button, onclick of which displays an alert message. Use function.

[2+3]

OR

Make a simple webpage using HTML and CSS. Include:

[2+3]

->header for image

->two columns of width 25% and 75%

3. Differentiate between procedure Oriented programming and Object-Oriented programming.
- [5]
4. What is a software development model? Explain about spiral model.
- [2+3]
5. Explain any two fields where we can use AI.
- [5]

## GROUP –C

**Give long answer to the following question**

**[2×8=16]**

6. What is an IP address? What are its types? Under IPv4, how many classes are there? List them out. Differentiate between static and dynamic IP.
- [1+1+2+4]
7. Write a C program using structure to input employees' id, name and salary. Then print that entered data in sorted format on the basis of salary (from highest to lowest).
- [8]

OR

Let, a datafile named "book.txt" contains information of books (name, price, edition). Write a program in C language to add some more data and then print all the records of books having price >900.

[4+4]



**Multiple Choice Questions****[9×1=9]****Tick the best alternative.**

1. Which of the following is the basic structure of SQL to create table in data base.....?
  - a. CREATE table (field1 data\_type, field2 data\_type,.....)
  - b. CREATE table table\_name (field1 data\_type, field2 data\_type,.....)
  - c. CREATE table table\_data (field1 data\_type, field2 data\_type,.....)
  - d. All of the above
2. Which of the following is not example of DML(Data Manipulation Language)?
  - a. INSERT
  - b. UPDATE
  - c. DELETE
  - d. GRANT
3. Computer Network is
  - a. Collection of hardware components and computers
  - b. Interconnected by communication channels
  - c. Sharing of resources and information
  - d. All of the Above
4. .... is not the phase of waterfall model.
  - a. Requirement analysis
  - b. Testing
  - c. Build prototype
  - d. Maintenance
5. Which of the following syntax is correct to embed JavaScript to HTML?
  - a. <script type="text/javascript"></script>
  - b. <script language type="text/javascript"></script>
  - c. <script type="text/javascript language"></script>
  - d. All of the above
6. The prevention of data from unauthorized access is.....
  - a. Data security
  - b. Data integrity
  - c. Data misuse
  - d. All of above

7. The delivery of computing services over the internet rather than having local servers or personal devices handle applications is called.....
  - a. Cloud Computing
  - b. Analog Computing
  - c. Mobile Computing
  - d. All of the above
8. A variable which holds memory address of another variable is.....
  - a. Function
  - b. Pointer
  - c. Array
  - d. Structure
9. Binding the data with the code that manipulates it is .....
  - a. Polymorphism
  - b. Encapsulation
  - c. Inheritance
  - d. Abstraction

#### **GROUP –B**

**Give short answer to the following questions.**

**[5×5=25]**

1. Explain Cloud Computing with its characteristics. [2+3]
2. What is DBMS? Write its advantages and disadvantages. [1+4]

OR

What is normalization? Write its advantages. [1+4]

3. WAP to display largest among three numbers using JavaScript. [5]
4. Explain OOP with its features. [5]
5. Explain SDLC with its phases. [5]

#### **GROUP –C**

**Give long answer to the following question**

**[2×8=16]**

6. Explain guided and unguided transmission media with its types. [4+4]
7. WAP to input name and address of 10 employees and sort them in ascending alphabetic order according to their name. [8]

OR

WAP to enter name, roll no and marks of 10 students and store them in a file. [8]





**Multiple Choice Questions****[9×1=9]****Tick the best alternative.**

1. The key that identifies each record uniquely, is called
  - a) Primary key
  - b) Unique key
  - c) Key record
  - d) Field name
2. Which forms simplifies and ensures that there are minimal data aggregates and repetitive groups:
  - a) 1NF
  - b) 2NF
  - c) 3NF
  - d) All of the mentioned
3. Which of the following is/are the main goals of a distributed database?
  - a) Interconnection of database
  - b) Incremental growth
  - c) Reduced communication overhead
  - d) All of the above
4. Which of the following is a ternary operator in JS?
  - a) -
  - b) ?:
  - c) +
  - d) :
5. PHP stands for ...
  - a) Hypertext Processor
  - b) Hyper Markup Processor
  - c) Hyper Markup Preprocessor
  - d) Hypertext Preprocessor

6. What is the first octet value of class A IP?
- a) 0-126
  - b) 128-191
  - c) 224-239
  - d) 192-223
7. The function
- ```
int fibo()
{
    Statements;
}
```
- Is called
- a) Function declaration
 - b) Function definition
 - c) Function end
 - d) None of the above
8. What is an abstraction in object-oriented programming?
- a) Hiding the implementation and showing only the features
 - b) Hiding the important data
 - c) Hiding the implementation
 - d) Showing the important data
9. Agile Software Development is based on which of the following type?
- a) Iterative Development
 - b) Incremental Development
 - c) Both Incremental and Iterative Development
 - d) Linear Development

GROUP –B

Give short answer to the following questions.

[5×5=25]

1. Differentiate between centralized and distributed database. [5]

OR

What is RDBMS? Explain relational model of a database. [2+3]

2. Write the difference between server side scripting and client side scripting. [5]

OR

Write steps to connect PHP code to your database. Let, database name is 'test'. [5]

3. What are the different types of inheritance? Explain them. [5]
4. Describe in brief the process of prototype model. [5]
5. Define e-commerce and e-business. What are the advantages and disadvantages of e-commerce? [5]

GROUP –C

Give long answer to the following question

[2×8=16]

6. Define communication system. Explain each component of communication system with necessary diagram. [1+2+5]

OR

Define OSI reference model. Explain each layer of OSI model. [1+7]

7. Differentiate between library and user defined function. Write a program to display largest among three numbers by using pointer. [4+4]



Multiple Choice Questions**[9×1=9]****Tick the best alternative.**

1. Which of the following is a group of one or many attributes that uniquely identifies a row?
 - a) Key
 - b) Determinant
 - c) Tuple
 - d) Relation
2. In general, a file is basically a collection of all related
 - a) Rows & Columns
 - b) Fields
 - c) Database
 - d) Records
3. Give an example of half duplex mode of data communication.
 - a) TV
 - b) Radio
 - c) Walkie-Talkie
 - d) Internet
4. Which of the following can't be done with client-side JavaScript?
 - a) Validating a form
 - b) Sending a form's content by email
 - c) Storing the form's contents to a database file on the server
 - d) None of the above
5. Which one of the following should not be used while sending password or other sensitive information?
 - a) GET
 - b) POST
 - c) REQUEST
 - d) NEXT

6. What will fopen will return if there is any error while opening a file?
 - a) Nothing
 - b) NULL
 - c) EOF
 - d) Depends upon compiler
7. Which feature of OOP indicates code reusability?
 - a) Abstraction
 - b) Polymorphism
 - c) Encapsulation
 - d) Inheritance
8. Which of the following is the first step in SDLC framework?
 - a) Feasibility Study
 - b) Requirement Gathering
 - c) Communication
 - d) System Analysis
9. Which segment of e-commerce model does eBay belong to?
 - a) B2B
 - b) B2C
 - c) C2B
 - d) C2C

GROUP –B

Give short answer to the following questions.

[5×5=25]

1. What is RDBMS? Explain relational model of a database. [2+3]

OR

What is primary key? What are the features of good primary key? [1+4]

2. What is event handling in JavaScript? Explain with example. [2+3]

OR

What is variable? Write rules to variable in PHP. [1+4]

3. Define data abstraction and encapsulation. Mention their main advantages in OOP. [2+3]

4. Explain internet of thing (IOT) along with advantages and disadvantages. [5]

5. Describe in brief the process of agile model. [5]

GROUP –C

Give long answer to the following question.

[2×8=16]

6. Define network topology. Describe star and ring topology with necessary diagram. [2+6]
7. Write a c program to input name, salary, and post of 'n' employee and sort them in alphabetical order according to their name. [8]

OR

Write a program to create a data file named 'student.dat' and store roll number, name and address of 10 students and display the record in proper format. [8]

