CINEC
CAMPUS
Beyond A Graduate

<u>MID SEMESTER EXAMINATION QUESTION PAPER</u>
CODE - QP
Approved for Quality Management System

EDUCATION & TRAINING COURSE: B.ED (HONOURS) IN INFORMATION TECHNOLOGY
COURSE CODE: LC – 0851
YEAR I – SEMESTER I
NETWORK DESIGN AND MANAGEMENT – BDI5134

Faculty	Department / Section/Division
Humanities and Education	Education Department

INSTRUCTIONS TO CANDIDATES	Date of the examination: 2023.02.21
Candidates could be disqualified if you violate examination rules.	Duration of the examination = 1 1/2hours
Candidates are not allowed to communicate with and disturb fellow candidates during the examination.	Total Marks = 100 Marks

<u>Note</u> – **All the 04 questions need to be answered.**

Question 01   (25 Marks)
IP Address = 192.168.100.25 / 18
Using the above-indicated ip address answer a) – c)
Note- Step by step indication of the calculation is required.
   a) Indicate the subnet mask   (05 Marks)
   b) What is the network address?   (08 Marks)
   c) Indicate the total usable ip address range   (12 marks)

Question 02   (25 Marks)
   a) What is STP standing for in computer networks?   (05 Marks)
   b) Explain the root-bridge in STP?   (08 Marks)
   c) How is Forward port different from Block port?   (12 marks)

## Question 03   (25 Marks)
   a) What is a MAN standing for in computer networks?   (05 Marks)
   b) Can a LAN exist in a MAN? Briefly explain the answer provided   (08 Marks)
   c) How is Centralised networks different from distributed networks?   (12 marks)

Question 04   (25 Marks)
   a) What is a VLAN standing for in computer networks? (05 Marks)
   b) Indicate the syntax of "static routing" protocol (08 Marks)
   c) Does a transparent switch in VTP store VLANS? Briefly explain the answer (12 marks)

--------------------END OF THE QUESTION PAPER-----------------

CINEC
CAMPUS
Beyond A Graduate
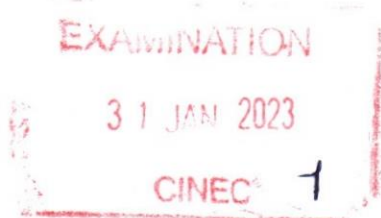
Library.

<u>MID SEMESTER EXAMINATION QUESTION PAPER</u>
CODE - QP
Approved for Quality Management System

EDUCATION & TRAINING COURSE: B.ED (HONOURS) IN INFORMATION TECHNOLOGY
COURSE CODE: LC – 0851
YEAR I– SEMESTER I
INFORMATION SYSTEMS & DATA MODELLING– BD13023

Faculty	Department / Section/Division
Humanities and Education	Education Department

INSTRUCTIONS TO CANDIDATES	Date of the examination: 2023.01.31
This question paper consists of two parts, Part A and Part B	Duration of the examination = 1.5 Hours
Answer all questions.	Total Marks = 20 Marks
Candidates are not allowed to communicate with and disturb fellow candidates during the examination.	Candidates could be disqualified if you violate examination rules.

❖ **This question paper consists of two parts, Part A and Part B.**

❖ **Answer all questions.**

Part A (10 Marks)

Underline the correct answer for all ten (10) questions in the paper. There is no negative marking; a wrong answer achieves 0 marks.

1. A good database designs.
    i. Ensures data integrity.
    ii. Allow access to any user.
    iii. Is expandable with the growth of the organization.
    iv. Has to be modified when the hardware is upgraded.
        a. Correct i and ii only
        b. Correct i , iii and iv only
        c. Correct i and iii only
        d. All correct

2. A relational database consists of collection of
        a. Records
        b. Queries
        c. Transactions
        d. Relations

3. The term .... is used to refer to a row in database environment.
   a. Record
   b. Attribute
   c. Table
   d. Field

4. An attribute that can be divided into several other attributes (components) is called.
   a. Simple attribute
   b. Composite attribute
   c. Multi-Valued attribute
   d. Derived attribute

5. STUDENT (IndexNo, FName, LName, DoB, Address)

   In above IndexNo, FName, LName, DoB, Adress are .... and
   STUDENT is a ....

   a. Fields, Record
   b. Fields, Relation
   c. Records, Relationships
   d. Tuples, Table

6. Which of the following is an example for a multivalued attribute?
   a. Phone Number
   b. First Name
   c. Date of Birth
   d. Index Number

7. Referential Integrity can enforce through.
   a. Primary Key
   b. Composite Key
   c. Alternate Key
   d. Foreign Key

8. The derived attributes in an entity relationships diagrams are denoted by.
   a. Dotted oval
   b. Dotted triangle
   c. Double oval
   d. Dotted rectangle

9. What does the following SQL statement do?

Select * from Customer where Cust_Type=" Best";

    a. Selects all the fields from the Customer table for each row with a customer labeled "best."

    b. Selects the "*" field from the Customer table for each row with a customer labeled "best."

    c. Selects fields with a "*" in them from the Customer table.

    d. Selects all the fields from the Customer table for each row with a customer labeled "*"

10. Select the correct SQL statement to display cities, temperature and conditions from weather table whose condition is either sunny or rainy but whose temperature is greater than 700F.

    a. Select city, temperature, condition from weather where condition='Sunny' AND condition="Rainy' OR temperature >70;

    b. Select city, temperature, condition from weather where condition='Sunny' OR condition="Rainy' OR temperature >70;

    c. Select city, temperature, condition from weather where condition='Sunny' OR condition="Rainy' AND temperature >70;

    d. Select city, temperature, condition from weather where condition='Sunny' AND condition="Rainy' AND temperature >70

PART B (10 Marks)

Given below is database schema (relation table set) for a library management system.
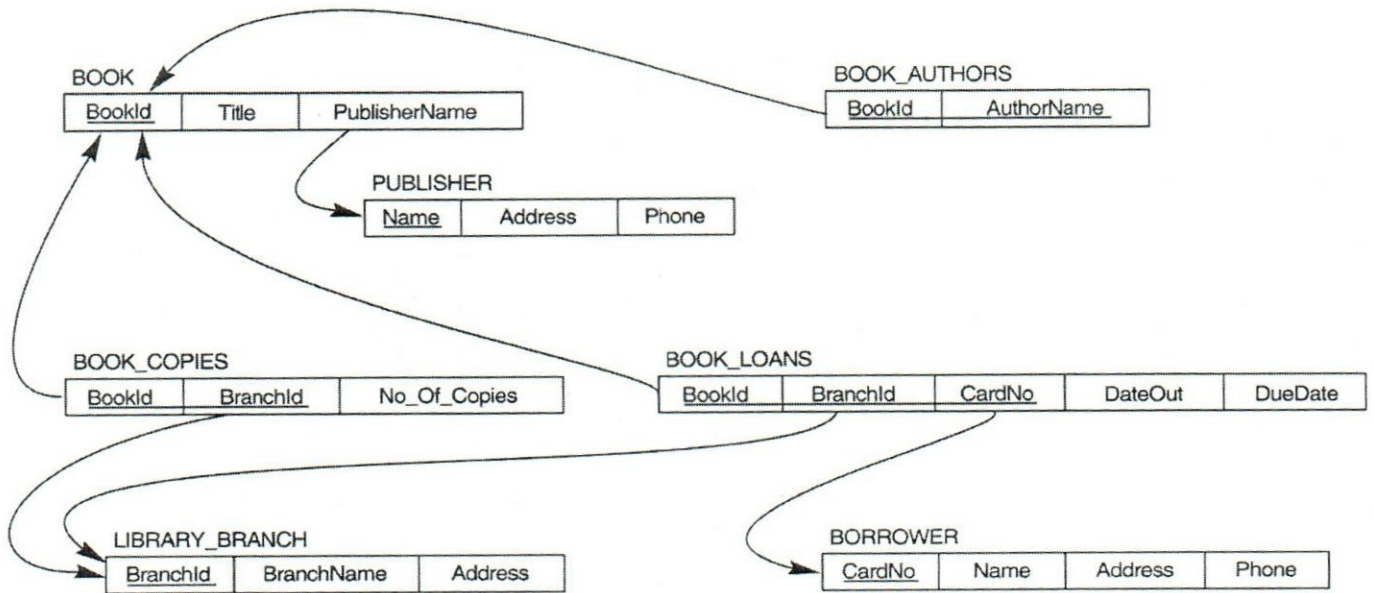
Draw the ER diagram for the above relational schema. You need to use correct notations and represent relationship cardinalities appropriately. Mention any assumption you have made.

--------------------END OF THE QUESTION PAPER-----------------

CINEC
C A M P U S
Beyond A Graduate

MID SEMESTER EXAMINATION QUESTION PAPER
CODE - QP
Approved for Quality Management System

EDUCATION & TRAINING COURSE: B.ED (HONOURS) IN INFORMATION TECHNOLOGY
COURSE CODE: LC – 0851
YEAR I – SEMESTER I
MATHEMATIC FOR COMPUTING - BD13033

Faculty	Department / Section/Division
Humanities and Education	Education Department

INSTRUCTIONS TO CANDIDATES	Date of the examination: 2023.01.31
Candidates could be disqualified if you violate examination rules.	Duration of the examination = 2 hours
Candidates are not allowed to communicate with and disturb fellow candidates during the examination.	Total Marks = 100 Marks

Answer all the questions.

Question 01

a) Let,
$$f(x) = 4x^3 - 2x + 5$$

Find $f(1)$ and $f(-1)$ (6 marks)

b) Find the domain and the range of
$$y = \sqrt{25 - x^2}$$

(12 marks)

c) Let $f(x) = x^2 + 7$ and $g(x) = 2x - 3$, find $f \circ g(x)$

(7 marks)

Question 02

a) Find the following Limits.

i)

$$\lim_{x \to 3} \frac{x-3}{x^2-9}$$

(7 marks)

ii) $$\lim_{x \to 2} \frac{\sqrt{x^2+5}-3}{x-2}$$

(9 marks)

b) Find the derivative of
$$f(x) = 5x^3 - \frac{3}{\sqrt{x}} + 8x^{\frac{1}{3}}$$

(9 marks)

Question 03

Sketch the graph of $y = x^2 - 6x + 5$ indicating all the intersection points, minimum/Maximum points, increasing and decreasing intervals.

(25 marks)

Question 04

a) Convert the following angles to radians.
 i) 120^0
 ii) 270^0
 iii) 45^0

(9 marks)

b) It is given that $\sin 30^0 = \frac{1}{2}$ and $\cos 30^0 = \frac{\sqrt{3}}{2}$ find the following values.
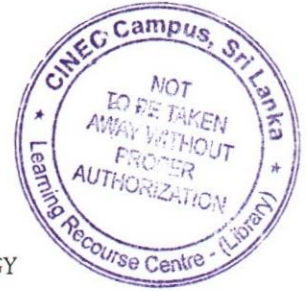 i.   Tan 30^0
 ii. Sin 60^0
 iii. Tan 150^0
 iv. Cos 120^0

(16 marks)

--------------------END OF THE QUESTION PAPER-----------------

CINEC
C A M P U S
Beyond A Graduate

MID EXAMINATION QUESTION PAPER

CODE - QP

Approved for Quality Management System

EDUCATION & TRAINING COURSE: B.ED (HONOURS) IN INFORMATION TECHNOLOGY

COURSE CODE: LC – 0851

YEAR I – SEMESTER I

Subject: Introduction to programming BDI3014

Faculty	Department / Section/Division
Humanities and Education	Education

INSTRUCTIONS TO CANDIDATES	Date: 2023/01/30
Total Marks = 20	Duration of the examination = 1.5 Hours
	Candidates could be disqualified if you violate examination rules.
	Candidates are not allowed to communicate with and disturb fellow candidates during the examination.

❖ **You need to attempt the all questions.**

Question 01

(a) What is Data Processing? Explain with a suitable Example. (2.5 Marks)

(b) What is an Algorithm? How it is used in Software Development? Explain

(2.5 Marks)

Question 02

(a) Write a Pseudocode to the following scenario,

Ask a user to enter a number. If the number is between 0 and 10, Print the word blue. If the number is between 10 and 20, Print the word red. If the number is between 20 and 30, Print the word green. If it is any other number, Print that it is not a correct color option.

(10Marks)

Question 03

(a) Write a Pascal code to print odd numbers between 1 and 20. Write your Answer in the Sheet.

(05 Marks)

-------------------END OF THE QUESTION PAPER-----------------