UG First Semester Examination, 2021

Subject: Computer Science (H)

Paper: CC12L (Programming Fundamentals using C Lab)

Time: 2 Hours | Full Marks: 20

The questions are of equal value. Answer any one question ~~on lottery basis~~.

1	Write a program to enter two numbers and find their product.
2	Write a program to reverse a number given by the user.
3	Write a program to swap two numbers.
4	Write a program to check Whether a Number is Even or Odd.
5	Write a program to enter three numbers and find their sum.
6	Write a program to swap two numbers without using any third variable.
7	Write a program to calculate GCD of two numbers.
8	Write a program to compute the sum of first n terms of the series S = 1 + 2 + 3 + 4 + 5 + ...
9	Write a program to check whether a given number is a Prime or Composite.
10	Write a program to compute the factors of a given number.
11	Write a program to calculate LCM of two numbers.
12	Write a program to compute the sum of first n terms of the series S = 1 + 8 + 27 + 64 + ...
13	Write a program to copy the contents of one text file to another text file.
14	Write a program to display n terms of Fibonacci series, n would be provided by the user.
15	Write a program to compute the sum of first n terms of the series S = 1 + 4 + 9 + 16 + 25 + ...
16	Write a program to calculate Factorial of a number given by the user.
17	Write a program to store user given 10 integers in an array and display the smallest number.
18	Write a program to find the sum of digits of a given number.
19	Write a program to print the sum and product of digits of an integer.
20	Write a program to check whether a character is Vowel or Consonant.
21	Write a program to convert a decimal number to its equivalent binary number.
22	Write a program to find the Largest number among three numbers.
23	Write a program to copy the contents of one text file to another text file, after removing all whitespaces.

M. Majumdar

F. Zaman 27.12.2021

UG First Semester Examination, 2021

Subject: Computer Science (H)

Paper: CC13L (Computer System Architecture Lab)

Time: 2 Hours | Full Marks: 20

The questions are of equal value. Answer any one question on lottery basis.

1	Design and implement an AND gate and explain its working principle.
2	Design and implement an OR gate and explain its working principle.
3	Design and implement a NOT gate and explain its working principle.
4	Design and implement a NAND gate and explain its working principle.
5	Design and implement a NOR gate and explain its working principle.
6	Design and implement a XOR gate and explain its working principle.
7	Design and implement a XNOR gate and explain its working principle.
8	Design and implement an AND gate using NAND gate and explain its working principle.
9	Design and implement an OR gate using NOR gate and explain its working principle.
10	Design and implement a Half-Adder and explain its working principle.
11	Design and implement a Full-Adder and explain its working principle.
12	Design and implement a 7- Segment Display with Decoder and explain its working principle.
13	Design and implement an Odd Parity Generator and explain its working principle.
14	Design and implement an Even Parity Generator and explain its working principle.
15	Design and implement a SR Flip-Flop using ICs.
16	Design and implement a JK Flip-Flop using ICs.
17	Design and implement a D Flip-Flop using ICs.
18	Design and implement an OR gate using NAND gate and explain its working principle.
19	Design and implement an AND gate using NOR gate and explain its working principle.

M. Majumder

S. Zaman 27.12.2021

UG(H) Semester-V Examinations, 2021

2021

Subject: Computer Science (H)

Paper: DSE 54L (E2L: Combinatorial Optimization Lab)

Time: 2 hours **Full Marks: 20**

The figures in the margin indicate full marks
Answer any one question.

1. Write a program to implement Simplex method.
2. Write a program to implement Branch and Bound method.
3. Write a program to implement cutting plane algorithm.
4. Write a program to implement approximation solution to travelling salesman problem.

*****

References
(When a passage from a book is included in the question, detail reference should be quoted here)

Signature of Moderator

Subject: Computer Science
Paper: DSE 54L (E2L-Combinatorial Optimization Lab)

Signature of Paper-Setter

UG (H) 5th Semester Examination, 2022

2022

Subject: Computer Science

Paper: DSE-54(E3L : Numerical Methods)

Time: 2 hours **Full Marks: 20**

The figures in the margin indicate full marks
Answer any one question.

1. Write a C program to compute the root of the equation $x^4 - 4x - 9 = 0$, using Bisection method, correct to three significant figures.

2. Write a C program to find the root of the equation $x^3 - 3x + 4 = 0$, using Regula Falsi method, correct to three decimal places.

3. Write a C program to compute the root of the equation $e^{-x} - sinx = 0$, using Secant method, correct to three significant figures.

*****

References
(When a passage from a book is included in the question, detail reference should be quoted here)

M. Mayander

Signature of Moderator

Subject: Computer Sc.
Paper: DSE-54(E3L : Numerical Methods Lab)

Signature of Paper-Setter

B.Sc(H)/Semester-V Examination/~~2022~~ 2021

~~2022~~ 2021

Subject: COMPUTER SCIENCE
Paper: DSE 53L (E1L: Microprocessor Lab)

Time: 2 hours **Full Marks: 20**

All questions are of equal marks. The figures in the margin indicate full marks
Answer any one question on lottery basis

1. Write an assembly language program to find the smaller of two numbers.
2. Write an assembly language program to display the truth table for and AND gate.
3. Write an assembly language program to implement a simple sub routine call.
4. Write an assembly language program to perform n byte addition of two numbers.
5. Write an assembly language program to find the largest among 10 integers stored in memory locations starting from 2050H
6. Write an assembly language program for linear search.
7. Write an assembly language program to check whether a number is even or odd.
8. Write an assembly language program to create an even parity generator.
9. Write an assembly language program to multiply two 8-bit numbers.
10. Write an assembly language program to find the largest among 10 integers stored in memory locations starting from 2050H
11. Write an assembly language program to find the sum of the first n odd natural numbers.
12. Write an assembly language program to check whether a number is prime or not.
13. Write an assembly language program to convert decimal to binary.

*****

References
(When a passage from a book is included in the question, detail reference should be quoted here)

M. Mojumder
Signature of Moderator

Subject: Computer Science
Paper: DSE 53L (E1L: Microprocessor Lab)
20/12/21
Signature of Paper-Setter

UG(H) 5th Semester Examinations, 2022

2022

Subject: Computer Science (H)

Paper: DSE 53L (E2L: Information Security Lab)

Time: 2 hours **Full Marks: 20**

~~The figures in the margin indicate full marks~~
Answer any one question.

1. Perform encryption and decryption of Caesar cipher. Write a script for performing these operations.
2. Perform encryption and decryption of a Rail fence cipher. Write a script for performing these operations
3. Demonstrate sending of a digitally signed document.
4. Demonstrate sending of a protected word document.

*****

References
(When a passage from a book is included in the question, detail reference should be quoted here)

M. Majumder
Signature of Moderator

Anil Tudu
Signature of Paper-Setter

Subject: Computer Science
Paper: DSE 53L (E2L: Information Security Lab)

UG(H) 5th Semester Examinations, 2022

2022

Subject: Computer Science (H)

Paper: DSE 53L (E3L: Modelling and Simulation Lab)

Time: 2 hours **Full Marks: 20**

The figures in the margin indicate full marks
Answer any one question.

1. Write a program to simulate computer generation of random numbers.
2. Write a program to simulate Monte-Carlo Simulation.
3. Write a program for simulation of Single Server Queuing System.
4. Write a program simulate and control a conveyor belt system.
5. Write a program test for Standard Normal Distribution.

*****

References
(When a passage from a book is included in the question, detail reference should be quoted here)

Signature of Moderator

Subject: Computer Science
Paper: DSE 53L (E3L: Modelling and Simulation Lab)

Signature of Paper-Setter

a. Keep Font name as 'Calibri (Body)'.
b. Font size as 10.
c. Margins Top: 0.5, Bottom 0.7
Left: 0.5, Right 0.5

Paragraphs should be in 'justified' alignment.

Create a PowerPoint Presentation having ~~Four~~ Three Slides for your project that describes a topic of your subject. [10+10] = 20

3. Create an Excel worksheet with fields as Name, Roll No, Marks in three subjects (SUB-A, SUB-B, SUB-C), ~~Add~~ and Total marks (this value should be auto calculated). 10

Represent the data by inserting pie-chart [10+10] = 20

References
(When a passage from a book is included in the question, detail reference should be quoted here)

Signature of Moderator

Subject. Com. Sc. (P)

Paper..... SEC-1L .....

Signature of Paper-Setter Humayun Rashid

UG(Prog) 3rd Sem ..... EXAMINATION, 20..21

~~USE A SEPARATE SCRIPT FOR EACH HALF/GROUP~~

20..21

Subject..... ~~Com. Sc. (P)~~ Computer Science (Prog)

Paper..... SEC-1L .....

Time..... 2 hours Full Marks..... 20 .....

Answer any..... One .....questions

The questions are of equal value

The figures in the margin indicate full marks

1. Create a table containg Rainfall information for four months from September to December (in milimetres) at your location. ~~10~~ 10

Create a Bar-chart taking data from the table that you have created. [10+10] = 20

2. Write a letter to ~~your~~ the principal ~~of your~~ college requesting

Write a report on how covid protocol is being maintained during class session at your college. ~~Bar~~ Follow the following instructions:- 10

References
(When a passage from a book is included in the question, detail reference should be quoted here)

Signature of Moderator

Subject... Com. Sc. (P)

Paper..... SEC-1L .....

Signature of Paper-Setter Humayun Kabir

U.G. 3rd Sem ..... EXAMINATION, 20 21

~~USE A SEPARATE SCRIPT FOR EACH HALF/GROUP~~
20 21

Subject..... Computer Science .....

Paper..... CC-31L .....

Time..... 2 Hours ..... Full Marks..... 20 .....

Answer any..... 1 (one) ..... questions

The questions are of equal value
The figures in the margin indicate full marks

SET-1

1. Write a program along with the algorithm to search an element from a list. Give user the option to perform Linear or Binary search. (Marks-20)

2. Write an algorithm and implement ~~by~~ stack operations using Array. (Marks-20)

3. Write a program (with algorithm) to implement various operations on AVL Tree.. (Marks-20)

4. Write a program along with the algorithm to perform quick sort. (Marks-20)

References
(When a passage from a book is included in the question, detail reference should be quoted here)

M. Mayumdar
Signature of Moderator

Subject.....

Paper..... CC-31L .....

Signature of Paper-Setter

U.G. 3rd Sem ..... EXAMINATION, 2021

~~USE A SEPARATE SCRIPT FOR EACH HALF/GROUP~~

2021

Subject..... Operating system .....

Paper..... CC-32L .....

Time... 2 hrs ..... Full Marks..... 20 .....

Answer any..... 1 (one) ..... question

~~The questions are of equal value~~

The figures in the margin indicate full marks

~~SET-1~~

Implement the following using Bash Shell Script.

1. (a) Check whether a given year is leap year or not.

(b) Find the sum of squares of the digits of a numbers. Marks-20

2. (a) check whether a given number is prime or not.

(b) print all the prime numbers between 1 & 100 Marks-20

References
(When a passage from a book is included in the question, detail reference should be quoted here)

M. Mojumder

Signature of Moderator

Subject..... OS .....

Paper..... CC-32L .....

Signature of Paper-Setter

3.(a) Check whether a given string is palindrome or not. (Marks-20)

(b) Convert a binary number to decimal

—— ✕ ——

References
(When a passage from a book is included in the question, detail reference should be quoted here)

M. Mahmud

Signature of Moderator

Subject..... OS

Paper..... CC-32L

Signature of Paper-Setter

UG 3rd Sem (H) ..... EXAMINATION, 2021

~~USE A SEPARATE SCRIPT FOR EACH HALF/GROUP~~

20.21.

Subject. Computer Science (H)

Paper. CC-33L (Computer Networks Lab)

Time. 2 hours Full Marks. 20

Answer any 1 (one) questions

The questions are of equal value

The figures in the margin indicate full marks

1. Simulate Cyclic Redundancy Check (CRC) 20

2. Simulate and implement Stop and wait protocol for noisy channel. 20

References
(When a passage from a book is included in the question, detail reference should be quoted here)

M. Majumdar
Signature of Moderator

Subject.....

Paper.....

Signature of Paper-Setter

B.Sc. UG 5th semester EXAMINATION, 20..21

USE A SEPARATE SCRIPT FOR EACH HALF/GROUP
20..21

Subject..Computer Science (H)

Paper..C.C-51 (Lab) Internet Technologies

Time..2 Hours Full Marks..20

Answer any..one..questions

The questions are of equal value
The figures in the margin indicate full marks

Answer any one from following: 1X20=20

Q.1.

A) Create event driven program to print a table of numbers from 5 to 15 and their squares and cubes using alert. 10

B) Enter a list of positive numbers terminated by Zero. Find the sum and average of these numbers. 10

Q.2.

A) Write a JSP program to count the number of visitors on website. 10

B) Write a JSP program to auto refresh a web page. 10

References
(When a passage from a book is included in the question, detail reference should be quoted here)

Signature of Moderator

Subject..Computer Science

Paper..CC-51 (Lab)

Signature of Paper-Setter Amit Ghosh Roy

UG (Prog.) 5th Sem EXAMINATION, 20.21.

~~USE A SEPARATE SCRIPT FOR EACH HALF/GROUP~~
20.2.1

Subject Computer Science (Program)

Paper SEC-3L (Visual Basic Programming)

Time 2 hours Full Marks 20

~~Answer any questions~~
Answer any one question

The questions are of equal value
The figures in the margin indicate full marks

Instruction :

1) Write the program and display the user interface in your answerscript
2) Provide atleast three sets of inputs and outputs.

	with suitable user interface.	
1.	Write a VB application to compute the	
to	factorial of a number.	20
	with suitable user interface	
2.	Write a VB application to Compute the	
	Fibonacci series upto n terms.	20
3.	Write a VB application with suitable user	
	interface to compute the sum of odd numbers	
	and even numbers in an array of n integers.	20

References
(When a passage from a book is included in the question, detail reference should be quoted here)

Signature of Moderator

Subject Computer Science (Prog.)

Paper SEC-3L (Visual Basic Programming)

Signature of Paper-Setter

UG 5th Sem .....EXAMINATION, 20 21

~~USE A SEPARATE SCRIPT FOR EACH HALF/GROUP~~
20..21

Subject. Computer Science

Paper. DSE - 54E12

Time. 2 hours Full Marks. 20

Answer any 1 (one) questions

The questions are of equal value
The figures in the margin indicate full marks

1. Write a program to find the initial basic feasible solution by North west corner rule of the following transportation problem. 20

Source	D_1	D_2	D_3	D_4	Supply
S_1	2	3	11	7	6
S_2	1	0	6	1	1
S_2	5	8	15	9	10
Demand	7	5	3	2	

References
(When a passage from a book is included in the question, detail reference should be quoted here)

M. Majumder

Signature of Moderator

Subject. Computer Science

Paper. DSE-54 (E1)

Signature of Paper-Setter

2. Write a program to solve the following by simplex method. 20

Maximize $Z = 5x_1 + 3x_2$

Subject to $x_1 + x_2 \leq 2$

$5x_1 + 2x_2 \leq 10$

$3x_1 + 8x_2 \leq 12$

and $x_1, x_2 \geq 0$.

References
(When a passage from a book is included in the question, detail reference should be quoted here)

M. Mayuri

Signature of Moderator

Subject..... CS

Paper..... DSE-54 (EL)

Signature of Paper-Setter