

UCCC & SPBCBA & SDHG COLLEGE OF BCA & I.T.

S.Y.B.C.A. (SEMESTER – 3rd): 2020-21

ASSIGNMENTS

Date: 02-09-2020

Instructions for students

- 1) Assignments must be self-handwritten with blue ink ball point pen only.
- 2) Write assignments in your notebook/foolscap book.
- 3) The top margin of each assignment page must contain student's full name and signature.
- 4) After completion of assignment writing task on or before due date, Scan/capture photo of each assignment page and prepare a subject wise PDF file.
- 5) Students have to upload/submit subject wise PDF file online using the link provided by the respective subject teacher. The link will be provided later on.
- 6) Last date of online assignment submission i.e., upload on the given link is **02-10-2020**.
- 7) Assignment questions of all subjects are given in this file only.

301- Statistical Methods

ASSIGNMENT – 1

1. Ten years data on price and sales of a commodity was observed as below. Find the coefficient of correlation between these two.

Price	55	57	90	62	64	67	69	72	74	77
Sales	50	55	54	58	62	65	70	57	60	65

2. Two persons were asked to watch ten specified TV programmes and offer their evaluation by rating them 1 to 10. These ratings are given below Calculate Spearman's Coefficient of correlation.

TV Programme	A	B	C	D	E	F	G	H	I	J
Critic I	4	6	3	9	1	5	2	7	10	8
Critic II	2	3	4	9	5	7	1	10	8	6

ASSIGNMENT – 2

1. Obtain the regression equation of x and y and y and x for the paired data given below. Also compute the coefficient correlation:

Market Price of X	26	28	30	31	35
Market Price of Y	20	27	28	30	25

2. In an examination of 675 candidates, the examines supplied the following information

Marks obtained (percentage)	No. of Candidate
Less than 10	7
Less than 20	39
Less than 30	95
Less than 40	201
Less than 50	381
Less than 60	545
Less than 70	631
Less than 80	675

ASSIGNMENT – 3

1. The petrol filling station has recorded the following data for litres of petrol sold per automobile in a sample of 680 automobiles.

Petrol sold (litres)	0-4	5-9	10-14	15-19	20-24	25-29
Frequency	74	192	280	105	23	6

2. Calculate Quartile deviation and coefficient of Quartile deviation

x	17-19.5	20-25.5	26-35.5	36-40.5	41-50.5	51-55.5	56-60.5	61-70.5
f(x)	9	16	12	26	14	12	6	5

ASSIGNMENT – 4

1. Calculate the co-efficient of correlation from the following data:

	100	200	300	400	500	600	700
	30	50	60	80	100	110	130

2. The following data give the experience of machine operators and their performance ratings given by the number of good parts turned out per 100 pieces .

Operators.	1	2	3	4	5	6	7	8
Experience (x)	16	12	18	4	3	10	5	12
Performance (y)	87	88	89	68	78	80	75	83

302- Software Engineering-I

ASSIGNMENT – 1

1. What is Software Engineering? Explain types of Software.
2. What is myth? Explain types of Myths.

ASSIGNMENT - 2

1. What is Software Process Model? Explain Water fall model and Prototype Models.
2. What is SRS? Explain characteristics of SRS.

ASSIGNMENT – 3

1. Explain software requirement? Explain fact finding techniques.
2. Draw DFD of Online Library Management System.

ASSIGNMENT - 4

1. What is DFD? Explain various symbols used in DFD?
2. Explain Module, sequence and effectiveness of modular design.

303- Relational Database Management System **(RDBMS)**

ASSIGNMENT – 1

1. Explain range searching and pattern matching operator with proper example.
2. Explain referential integrity constraint in detail with example.

ASSIGNMENT - 2

1. Write a short note on “Join operations” with proper example.
2. What do you mean by updatable view? Explain the restrictions on it.

ASSIGNMENT – 3

1. What do you mean by cursor? Explain it in detail.
2. Explain Implicit and explicit locking with example.

ASSIGNMENT - 4

1. Explain the concept of package with example.
2. What is exception? Write a detail note on exception.

304- Data Structures

ASSIGNMENT – 1

1. Define Data Structure. Write a note on types of data structure.
2. Do as directed:

Convert following infix expression to postfix and prefix expression.

$$(A * B) / (C ^ (D - E) + F) * G$$

$$(A - B) + (C - D) ^ E * F$$

Evaluate the following postfix expression

$$10 \ 7 \ , \ 2 \ , \ - \ , \ / \ , \ 2 \ , \ 1 \ , \ 5 \ , \ + \ , \ * \ , \ +$$

Evaluate the following prefix expression

$$* \ , \ + \ , \ 5 \ , \ 3 \ , \ + \ , \ 6 \ , \ 6$$

ASSIGNMENT - 2

1. Write a note on malloc(), calloc(), realloc(), free() functions of C.
2. What is stack? Explain application of stack in computers and real world and List out operations performed on stack. Write an algorithm to pop an element from stack.

ASSIGNMENT – 3

1. Define Queue. List out its type and applications. Write an algorithm for enqueue and dequeue operations.
2. Define Linked list. List out its type and applications Write an algorithm for insert and delete operations on singly linked list.

ASSIGNMENT - 4

1. Define Tree and Graph. Explain Pre-order, In-order, and Post-order traversal with algorithm.
2. List out various searching and sorting techniques. Write an algorithm of linear search and 2-way merge sort.

305- Object Oriented Programming

ASSIGNMENT – 1

1. Explain friend function in detail.
2. Differentiate between call by value and call by reference with example.

ASSIGNMENT - 2

1. What is Polymorphism? Explain types of polymorphism in detail with example.
2. What is containership? How it is differ from inheritance? Explain with example.

ASSIGNMENT – 3

1. What is constructor? Explain types of constructor in detail.
2. Explain operator overloading in detail.

ASSIGNMENT - 4

1. What is access specifier in detail.
2. Explain pure virtual function in detail.