RAGHUNATHPUR COLLEGE

Department of Computer Application:

NOTICE   **Date: 18/08/2020**

All the students of 2nd Semester and 4th semester of Computer Application department are hereby notified that they will have submitted the internal assignment in each paper through online mode within 26th August, 2020. Every students should write their registration no, and mention the paper name with course code in assignment. Students will send the assignment in respective teacher's mail id or what's app no.

BCA(H)SEM-II

Sl. No.	Course Code	Course Title	Course Type	Examiner	Mail Id/WhatsApp (Where the assignment to be submited)	REMARKS
1	BBCACCHC201	Digital Logic	CC-3	SANCHITA BANERJEE	sanchitabanerjee_june22@yahoo.com 8906511091	
2	BBCACCHC202	Data Structure using C	CC-4	SOUGATA MUKHERJEE	sougata_17@yahoo.com 9832179729	
3	BBCAGEHT2	Mathematics - II	GE-2	PALLAB BID	sreepallab@gmail.com 8145445776	
4	BAECCLET	EnglishCommunication	AECC-2	SANKHA MAJI	sougatamukherjee.online@gmail.com 9832179729	

The assignments of CC-3, CC-4, GE-2 and AECC-2 of SEM-II will provide in the what'sapp group of SEM-II(BCA Group 2019) and in the college website (raghunathpurcollege.ac.in).

BCA(H)SEM-IV

Sl. No.	Course Code	Course Title	Course Type	Examiner	Mail Id/WhatsApp (Where the assignment to be submited)	REMARKS
1	BBCACCHC401	Database Management System	CC-8	SANCHITA BANERJEE	sanchitabanerjee_june22@yahoo.com 8906511091	
2	BBCACCHC402	Microprocessor – 8085	CC-9	SOUGATA MUKHERJEE	sougata_17@yahoo.com 9832179729	
3	BBCACCHC403	Object Oriented Programming using JAVA	CC-10	SOUGATA MUKHERJEE	sougata_17@yahoo.com 9832179729	
4	BBCAGEHT404	Management Information System	GE-4	SANCHITA BANERJEE	sanchitabanerjee_june22@yahoo.com 8906511091	
5	BBCASEHT405	Computer Organization	SEC-2	SOUGATA MUKHERJEE	sougata_17@yahoo.com 9832179729	

The assignments of CC-8, CC-9, CC-10, GE-4 and SEC-2 of SEM-IV will provide in the what's app group of SEM-IV(BCA 2018 Batch) and in the college website (raghunathpurcollege.ac.in).

The assignments of above mentioned papers are followed in the next few pages.

Course Title: *Digital Logic*

Course Code: **BBCACCHC201**

Course Type: CC-3

F.M=10

1. Each question carries 1 mark: (Answer any ten questions)   1x10=10

    i.   Define quad in K-Map?

    ii.   Find the gray code of the given binary number $(101101)_2$.

    iii.   What is meant by a bit?

    iv.   Design a modulo-3 counter using T-flipflop.

    v.   Subtract $(1010)_2$ from $(1101)_2$ using 2's complement.

    vi.   What do you mean by a bit?

    vii. Differentiate between positional and non-positional number system.

    viii. Which gates are called universal gates and what are its advantages?

    ix.   Simplify using K-Map: $F(a,b,c)=\sum_m(2,3,4,5)$

    x.   State De-Morgan's law.

    xi.   Name the two forms of Boolean expression with an example of each.

    xii.   Design a three bit Parity Generator.

    xiii. How many outputs we will receive from a decoder having four inputs? Explain.

    xiv. Write the expression of both the outputs of a full substractor?

    xv.   Show that dual of Ex-OR is equal to Ex-NOR.

Course Title: **Data Structure using C**

Course Code:**BBCACCHC202**

Course Type: CC-4

F.M=10

Each question carries 1 mark: (Answer any ten)   **1X10=10**

1. Define data structures?
2. What is recursion?
3. What is the prerequisite of binary search?
4. Which data structures follow FIFO technique and which data Structures LIFO technique?
5. Define space complexity.
6. Give the names of linear data structures and nonlinear data structure.
7. What is weighted graph?
8. What is strictly binary tree?
9. What is dangling pointer?
10. What do you mean by ADT?
11. Define rear end of a queue.
12. Write name of 3 different tree traversal algorithm.
13. What is root node?
14. Write different applications of graph.
15. What do you mean by polish notation?

Course Title: MATHEMATICS-II

Course Code: BBCAGEHT2

Course Type: GE-2

F.M=10

1. Answer any **five** of the following.   2X5=10

a) Find the domain of $f(x) = \sqrt{4+x} + \sqrt{9-x}$.

b) Define convergent of a sequence.

c) Show that the series $1 + \dfrac{1}{3} + \dfrac{1}{9} + \dfrac{1}{27} + \ldots\ldots\ldots + \infty$, is convergent.

d) State Rolle's Theorem.

e) Write down the formula for integration of a product of two function.

f) Evaluate $\int_0 xe^x dx$.

g) Write down the method of solving an exact differential equation.

h) Find the particular integral of $\dfrac{1}{D^2 + 4} x^2$.

i) If $f(h) = f(0) + hf'(0) + \dfrac{h^2}{2!} f''(\theta h)$, 0<θ<1, find θ, when h=1 & $f(x) = (1-X)^{\frac{5}{2}}$.

j) If $u = \tan^{-1} \dfrac{x^3 + y^3}{x - y}$, show that $x\dfrac{\partial u}{\partial x} + y\dfrac{\partial u}{\partial x} = sin2u$.

k) Is the sequence $\{\dfrac{4n+3}{n+3}\}$ increasing ?

l) Evaluate $\int e^x (\dfrac{1-x}{1+x^2}) dx$.

m) Find from the definition, the value of $\int_0^1 x \, dx$.

n) Solve , $(D^2 + 3D + 2)y = 0$.

(FOR 2nd SEM)

Course Title: English Communication

Course Code: BAECCLET

Course Type: AECC

Full marks 10

Attempt any 5 questions. (Each question carries 2 marks)   **2X5=10**

1. What is the difference between monologue and dialogue?
2. What is effective communication?
3. What is intra-personal communication?
4. What is non-verbal communication?
5. What is the definition of inter-personal communication?
6. Give any two skills foe successful communication?

Course Title:Database Management System

Course Code:BBCACCHC401

Course Type: CC-8

F.M=10

Ques.1: Answer any ten questions: **[10x1=10]**

    i)   Give one example of each: DDL, DML, DCL.
    ii)   Write applications of data warehousing in DBMS?
    iii)   Difference between DROP and DELETE commands?
    iv)   Write the combination of ACID property?
    v)   Define Schema.
    vi)   Write a query to fetch the details of employees whose names start with letter "a"?
    vii)   Explain the logical level of Data Abstraction.
    viii) Write the purpose of Normalisation in DBMS?
    ix)   Who is a DBA?
    x)   What are the components of storage manager?
    xi)   Define the two basic kind of indices.
    xii)   List four applications of DBMS?
    xiii) What is an Entity Relationship Model?
    xiv) Write advantage of RDBMS?
    xv)   Explain the concept of Foreign key.

(FOR 4ᵗʰ SEM)

Course Title:Microprocessor – 8085

Course Code: BBCACCHC402

Course Type: CC-9

Answer any 10 questions: FM-10

                                                                                                                            1X10=10

1. What is the purpose of an accumulator?
2. What is an opcode?
3. Define PSW.
4. What is Address Latch Enable signal?
5. What is the function of S0 & S1 signal?
6. How many different memory locations can be addressed by 8085 microprocessor?
7. Write the full form RIM & SIM.
8. Write the use of XCHG instruction.
9. Define DMA.
10. Give example of memory mapped I/O and peripheral mapped I/O.
11. Define Program Counter.
12. Differentiate between ADD and ADI instruction.
13. Why 8085 is an 8bit microprocessor?
14. Why stack is used in 8085 microprocessor?
15. Define interrupt?

(FOR 4ᵗʰ SEM)

Course Title: Object Oriented Programming using JAVA

Course Code: BBCACCHC403

Course Type: CC-10

Answer any 10 questions: FM-10

                                                                                            1X10=10

1. Why java is a two stage programming languages?
2. What is byte code?
3. Define package in java.
4. What is the difference between JDK and JRE?
5. Define relationship between class and object.
6. What is constructor?
7. Define Code reuse.
8. What is polymorphism?
9. Define overloading.
10. What is meant by abstract class?
11. How objects are created in java?
12. What are the types of Exceptions?
13. Define Thread.
14. What is the advantage of synchronization?
15. What is remote applet?

Course Title:Management Information System

Course Code: BBCAGEHT404

Course Type: GE-4

F.M=10

Ques.1: Answer any ten questions: **[10x1=10]**

i)   Define E-tailing.
ii)   Write the type of interactions in E-Governance?
iii)   What are the three stages of online transaction?
iv)   Differentiate between Intranet and Extranet.
v)   What are the benefits of E-Advertising?
vi)   Write the characteristics of EIS?
vii)   Write the importance of E-Commerce in modern business era?
viii)   Give one popular example of B2C and C2C E-Business.
ix)   Write the applications of DBMS in Management information system?
x)   What are the function of MKIS?
xi)   What do you mean by E-CRM?
xii)   Write the four major information systems of an Organisation?
xiii)   Why EDI is important?
xiv)   What are the measures to ensure security in E-Commerce?
xv)   What role is played by MIS in stuffing?

(FOR 4th SEM)

Course Title: Computer Organization

Course Code: BBCASEHT405

Course Type: SEC-2

Answer any 10 questions (Choose the correct option):   FM-10

                                                                                                              1X10=10

1. Virtual memory consists of
   (A) Static RAM   (B) Dynamic RAM
   (C) Magnetic memory   (D) none of these
2. Cache memory acts between
   (A) CPU and RAM   (B) RAM and ROM
   (C) CPU and Hard Disk   (D) none of these
3. Generally Dynamic RAM is used as main memory in a computer system as it
   (A) Consumes less power   (B) has higher speed
   (C) has lower cell density   (D) needs refreshing circuitry
4. Von Neumann architecture is
   (A) SISD   (B) SIMD
   (C) MIMD   (D) MISD
5. In Reverse Polish notation, expression A*B+C*D is written as
   (A) AB*CD*+   (B) A*BCD*+
   (C) AB*CD+*   (D) A*B*CD+
6. SIMD represents an organization that _____.
   (A) refers to a computer system capable of processing several programs at the same time.
   (B) represents organization of single computer containing a control unit, processor unit and a memory unit.
   (C) includes many processing units under the supervision of a common control unit
   (D) none of the above.
7. Floating point representation is used to store
   (A) Boolean values   (B) whole numbers
   (C) real integers   (D) integers
8. Assembly language
   (A) uses alphabetic codes in place of binary numbers used in machine language

(B) is the easiest language to write programs

(C) need not be translated into machine language

(D) None of these

9. In computers, subtraction is generally carried out by

(A) 9's complement (B) 10's complement

(C) 1's complement (D) 2's complement

10. Cache memory works on the principle of

(A) Locality of data (B) Locality of memory

(C) Locality of reference (D) Locality of reference & memory

11. PSW is saved in stack when there is a

(A) interruptrecognised (B) execution of RST instruction

(C) Execution of CALL instruction (D) All of these

12. _____ register keeps tracks of the instructions stored in program stored in memory.

(A) AR (Address Register) (B) XR (Index Register)

(C) PC (Program Counter) (D) AC (Accumulator)

13. The BSA instruction is

(A) Branch and store accumulator (B) Branch and save return address

(C) Branch and shift address (D) Branch and show accumulator

14. MIMD stands for

(A) Multiple instruction multiple data (B) Multiple instruction memory data

(C) Memory instruction multiple data (D) Multiple information memory data

15. An instruction pipeline can be implemented by means of

(A) LIFO buffer (B) FIFO buffer

(C) Stack (D) None of the above