Rai University
EVOLVING THINKING MINDS
A LEADING RESEARCH DRIVEN UNIVERSITY

School of Arts, Science & Commerce

B.Sc. IT
Semester II
Major Assignment

Important Instructions to Student:

1. Last date for Assignment Submission – **30-May-2020**
2. This assignment carries major **weightage of 50 Marks**. Kindly prepare it very carefully and in a very detailed manner. For any help in this regard, kindly contact your faculties.
3. Front Page of Assignment should clearly include details like:
    - **a.** Your Name
    - **b.** UID Number
    - **c.** Subject
    - **d.** Class
    - **e.** Semester

    In the event of no such information, we may not be able to assign marks for your assignment, for which responsibility lies with students.
4. You can write and submit assignment through any of the following options:
    a. Handwritten Assignment – Prepare softcopy of your assignment through suitable apps and send the assignment as one PDF to your respective faculty as mentioned above.
    b. Typed Assignment – Prepare Assignment with following font setting and submit the assignment to your respective faculty as mentioned above.
        i. Font Type – Times New Roman or Arial
        ii. Headings – Font Size 14
        iii. Text (Except Heading) – 12
        iv. Normal Margin and Line Spacing maximum 1.15
5. After this lockdown ends, you all have to submit the physical assignment copies to your respective Faculties. So, keep the assignment carefully for submission.
6. While submitting assignment through email, kindly use subject line as Name of the Programe_Name of Course/Branch_Semester_Name o the the Subject. For Example B.Tech._Mechanical_IV_Theory of Machines

English Communication and Life Skills – II **Prof. Rakhi Pandey**	**Mode of Submission** **Email** – rbs.raiuniversity@gmail.com **Subject Line:** B.Sc. IT IV ECLS-IV
1.	Describe SQ3R study method in detail.
2.	Mention all the helping verbs
3	Explain reading techniques in detail
4	Mention 10 habits that need to be developed
5.	Explain the use of punctuation while using infinitive

DESCRETE MATHEAMTICS **Prof: Vardan Parmar**	**Mode of Submission : Upload on given link** **Link : https://forms.gle/hn5jBE3pTEQmjnGY7** **Subject Line:** B.Sc. IT SEM II Discrete Mathematic
1.	If $y = (\text{ax} + \text{b})^m$, $ax + b \in \mathbb{R}^2, m \in \mathbb{R}$ and $a \neq 0, b$ are constant numbers, then prove that $y_n = \frac{m!}{(m-n)!} a^n (ax + b)^{m-n}, n \in \mathbb{N}$.
2.	If $y = \sin(ax + b), a \neq 0, b$ are constant real numbers then prove that $y_n = \sin\left\{ax + b + \frac{n\pi}{2}\right\}, n \in \mathbb{N}$.
3.	If $A = \begin{bmatrix} 1 & 2 & 3 \\ 0 & -1 & 2 \\ 1 & 3 & 1 \end{bmatrix}$ then find A^{-1}.
4.	If $A = \begin{bmatrix} 4 & 2 & 4 \\ 0 & 7 & 2 \\ 1 & 4 & 1 \end{bmatrix}$ then find A^{-1}.
5.	If $A = \begin{bmatrix} 1 & 12 & 3 \\ 0 & -4 & 0 \\ 6 & 2 & 1 \end{bmatrix}$ then find A^{-1}.

Advanced C & Data Structures **Prof. Poonam Chakravarty**	**Mode of Submission:** **Google Form:** https://forms.gle/USw1srYFMNvv5Rqt5 **Subject Line:** B.Sc. IT II AC&DS
1.	Perform bubble sort and selection sort using following elements and also write C programming code: 57,38,99,40,87,69,79,21,60,18
2	Perform Merge sort and Radix sort using following elements. 87,23,5003,99,419,50,20,14,77,610,1022,589,9900,78932
3.	Perform Quick sort and Insertion sort using following elements. 22,73,89,54,15,92,100,44,69,34
4.	Write C programming code to PUSH and POP an elements in STACK.
5.	Write C program to perform linear search and Binary search.

Database Management System **Prof. Jigar Pandya**	**Mode of Submission:** **E-mail :** https://forms.gle/PFN57c87HouAw9Ef7 **Subject Line: B.Sc. IT II DBMS**
1.	Explain SQL with the category DDL and DML in detail with all the commands in brief.

2	Explain Integrity Constraints in detail in detail with sysntax and example with all variations.
3.	Perform the following operations and explain exach operations in detail, ⇨ Create a table to store a data for the salesmen from a company with the appropriate fields [s_no, s_name, s_address, pincode, state, country, sales_area, salary] and apply required constraints into it. ⇨ Insert at least 15 records in to the table. ⇨ Display all the salesmen details. ⇨ Display all the salesmen salary details with s_no and name. ⇨ Change s_name of salesmen who is from the city Ahmedabad. ⇨ Change the salary of salesmen from the city rajkot. ⇨ Remove the salesmen from te city Baroda. ⇨ Remove the table for salesmen.
4.	Perform set theory between Student table and Library table. Explain the practice.
5.	Create Student table and insert 10 records at least in to it. Create View for the student table and display the content of View.
Computer Organization Architecture Prof. Hardik Patel	**Mode of Submission: Google Form:** https://forms.gle/cnzjTJB123u4kszG6 **Subject Line: B.Sc. IT II COA**
1.	What is the stored program architecture of a computer? Describe with an example
2	Write a program to evaluate the arithmetic statement 1. A*[B+C*(D+E)] 2. F*(G+H) (a) Using 3 address instructions (b) Using 2 address instructions (c) Using 1 address instructions (d) Using 0 address instructions
3.	Define four main component of CUP-- Data processing, Data Storage, Data Movement, Control on data.
4.	Describe following problem: the differences among sequential access, direct access, Random Access.
5.	What is micro-operation? list out and explain all type of micro-operation with diagram.

NOTE: After completing your assignments, contact your respective faculty member and submit the assignment for assessment.