

**Course Code: ES-115**  
**Class: B.Tech (All Branch)-1<sup>st</sup> Sem.**  
**Title: Fundamental of Computers & Programming (FCP)**  
**Assignment Number: 1**  
**Last Dates for Submission: 10<sup>th</sup> Nov, 2016**

**Instructions**

Write the responses to the assignment in your own handwriting.

1. Submit the responses to your HOD within the due date.
2. Write your Name, Programme, and Enrolment No. clearly at the top of the page.

**Question 1:**

**a)**

i) What is RAM in the context of computer? Why is it needed? What is SRAM and its role in a computer? A computer has primary memory still it requires hard disk, why? Explain the storage organization of a Hard disk and access time for it.

ii) Explain the characteristics/functions of any four input devices.

**b)**

i) What is the need of Operating system for a Computer System? Explain the file management, I/O Management and memory management in the context of Operating system with the help of an example.

ii) Define the following terms in the context of programming with the help of an example:

- (a) Data Types
- (b) Arrays
- (c) Subroutines and functions
- (d) Logical and relational operators

**Question 2:**

**a) Perform & Write down the following programs**

i) Write a C program to find maximum between three numbers.

ii) Write a C program to input marks of five subjects Physics, Chemistry, Biology, Mathematics and Computer. Calculate percentage and grade according to following details:

Percentage > 90% : Grade A

Percentage > 80% : Grade B

Percentage > 70% : Grade C

Percentage > 60% : Grade D

Percentage > 40% : Grade E

Percentage < 40% : Grade F

**b) Convert the following numbers as directed**

i) Decimal 325.61 into Binary.

ii) Decimal 112 into Binary.

iii) Binary 11110011 to Decimal.

iv) Binary 111.0101 to Decimal.

v) Binary Multiplication of 1111 and 1010

**Course Code: ES-115**  
**Class: B.Tech (All Branch)-1<sup>st</sup> Sem.**  
**Title: Fundamental of Computers & Programming (FCP)**  
**Assignment Number: 2**  
**Last Dates for Submission: 10<sup>th</sup> Nov, 2016**

Instructions

1. Write the responses to the assignment in your own handwriting.
2. Submit the responses to your HOD within the due date.
3. Write your Name, Programme, and Enrolment No. clearly at the top of the page.

**Question 1:**

a)

i) Write an interactive program which prompts the user with the following options on the opening menu:

- 1) Subtract two integers
- 2) Compare two integers to find the smallest
- 3) Test an integer for odd or even
- 4) Quit

**Enter your choice:**

If an "1" is entered, prompt for the input of two integers and display their difference. If "2" is entered, prompt for two integers and display the smaller of the two. If "3" is entered, prompt the user for one integer and print out if it is odd or even. If "4" is entered, exit the program. If the user enters any letters or numbers other than the choice, redisplay the prompt. All output should go to the terminal and all input should come from the keyboard.

ii) Write a C program to input basic salary of an employee and calculate its Gross salary according to following:

Basic Salary  $\geq$  10000 : HRA = 20%, DA = 80%

Basic Salary  $\geq$  20000 : HRA = 25%, DA = 90%

Basic Salary  $\geq$  30000 : HRA = 30%, DA = 95%

iii) Write a C program to input any character and check whether it is alphabet, digit or special character.

**b) Explain each of the following with suitable example.**

- i) Decision Control Statements (if, if else and switch case)
- ii) Loop control statements do, do while, for
- iii) Arrays (1 D, 2D )
- iv) Structures & unions

**Question 2:**

a) What is a data type? What is the need of data types in the C programming? Write down all the data types available in C.

b) What do you understand by the terms 'Sorting' & 'Searching'? Explain the usefulness of searching. Also, write the program of linear search and sorting with the help of arrays.



## **ASSIGNMENT-1**

**Course-** B.TECH (1st year/ 1st sem)

**code-ES-116**

**Sub-** Basics of Electrical Engineering

**Last date of Submission-** 06/11/2016

### **Instruction**

- 1) Write the responses to the assignment in your own handwriting.**
- 2) Submit the responses to your HOD within the due date.**
- 3) Write your name, program and Enrollment number clearly at the top of the page.**

### **Q1.**

- a) What is a DC circuit? Explain the solution of DC Circuits using laws and theorems with suitable examples?**
- b) Write the various terminology of electrical network? What is the use of delta to star and star to delta transformation in the circuit? Explain it in brief?**

### **Q2**

- a) Derive the expression of quality factor and bandwidth of the series RLC circuit at resonance with example?**
- b) What is a three phase system? Explain two wattmeter methods to determine power in three phase system?**



## ASSIGNMENT-2

**Course-** B.TECH (1st year/ 1st sem)

**code-** ES-116

**Sub-** Basics of Electrical Engineering

**Last date of Submission-**06/11/2016

### Instruction

- 1) Write the responses to the assignment in your own handwriting.**
- 2) Submit the responses to your HOD within the due date.**
- 3) Write your name, program and Enrollment number clearly at the top of the page.**

### **Q1**

- a) What is magnetic circuit? Explain the various terminology of the magnetic circuits?**
- b) Derive the principles and EMF equation of a transformer? Explain the losses and efficiency of a single phase transformer?**

### **Q2**

- a) Explain the operation and uses of moving iron and moving coil instrument in brief?**
- b) Explain the types, operating principal, torque speed curves of DC and AC machines?**



## **ASSIGNMENT-1**

**Course- B.Tech (All branch)**  
**code- BS-113**

**Sub**

**Sub-Engg. Chemistry Year-1<sup>st</sup> year/1<sup>st</sup>sem**

**Last date of Submission-06/11/2016**

### **Instruction**

- 1) Write the responses to the assignment in your own handwriting.
- 2) Submit the responses to your HOD within the due date.
- 3) Write your name, program and Enrollment nu clearly at the top of the page.

#### **Q1.**

- a) What is Bonding. Explain different types of bonding with proper examples.
- b) Explain postulates of VBT. Give MOT for  $N_2$  and NO molecule.

#### **Q2.**

- a) Give reaction mechanism for Aldol condensation and Friedle Craft Reaction
- b) Define isomers. Explain different types of isomers with proper examples.



## **ASSIGNMENT-2**

**Course-** B.Tech (All branch)

**Sub-Engg. Chemistry** Chemistry **Year-** 1<sup>st</sup> year/1<sup>st</sup> sem

**Last date of Submission-** 06/11/2016

### **Instruction**

- 1) Write the responses to the assignment in your own handwriting.
- 2) Submit the responses to your HOD within the due date.
- 3) Write your name, program and Enrollment nu clearly at the top of the page.

### **Q1.**

- a) Define the term Polymer. Explain different types of poly mers with proper examples.
- b) Explain working of Galvanic cell with proper diagram.

### **Q2.**

- a) What is water hardness. Give methods of hard water treatment.
- b) Explain different types of fuel. Explain working of Bio gas plant.

MONAD UNIVERSITY HAPUR

Course: EPHY113

Sub:**Engg Physics**

Assignment: 1

Due date of submission: 10/11/2016

Instructions:

1. Write the response to the assignment in your own handwritings.
2. Submit the response to your H.O.D. within the due date.
3. Write your name, program and enrollment no. clearly at the top of the page.

Q 1(A) explains space and time invariance under Lorentz Transformation

Q 1(B) mass and energy both are equivalent to each other elaborate this Statement with suitable examples

Q 2(A). Explain the term interference give its classification with examples.

Q2 (B). Explain constancy of speed of light on the basis of Micholson-Morely

Experiment.

MONAD UNIVERSITY HAPUR

Course: EPHY113 **Engg Physics**

Assignment: 2

Due date of submission: 10/11/2016

Instructions:

1. Write the response to the assignment in your own handwritings.
2. Submit the response to your H.O.D. within the due date.
3. Write your name, program and enrollment no. clearly at the top of the page.

Q 1(A) Describe Young's double slit experiment? Derive an expression for the intensity at a point in the region of superposition of two Coherent waves of the same period of the wavelength.

Q 1(B) How Newton's rings are formed? Describe Newton's ring experiment .To determine the wavelength of monochromatic light with necessary Theory.

Q 2(A).What is meant by Diffraction of light .Describe the feature of single slit Fraunhofer Diffraction pattern.

Q2 (B).Discuss the phenomenon of rotation of plane of polarized light by optically active material.





## MONAD UNIVERSITY HAPUR (UP)

Course: B.Tech-1, Subject Name: *Engg. Mathematics I*

Assignment No: 1

Due date of submission: 10.11.2016

Instruction

3. Write the responses to the assignment in your own handwriting.
4. Submit the responses to your HOD within the due date.
5. Write your Name, Programme and Enrolment No. clearly at the top of the page.

Q.1.

(a) Reduce the matrix to normal form and find rank of.

$$\begin{bmatrix} 1 & 2 & -1 & 4 \\ 2 & 4 & 3 & 4 \\ 1 & 2 & 3 & 4 \\ -1 & -2 & 6 & -7 \end{bmatrix}$$

(b) Test the consistency of the following system of linear equation and hence

Find the solution if  $2x - y + 3z = 8, -x + 2y + z = 4, 3x + y - 4z = 0$ .

Q2.

1. If  $y = \sin(m \sin^{-1}x)$ , then prove that

$$(1-x^2)y_2 - xy_1 + m^2y = 0 \quad \& \quad (1-x^2)y_{n+2} - (2n+1)xy_{n+1} - (n^2-m^2)y_n = 0.$$

(b) State Leibnitz theorem. If  $y = e^{m \cos^{-1}x}$

Show that  $(1-x^2)y_{n+2} - (2n+1)xy_{n+1} - (n^2+m^2)y_n = 0$  and calculate  $y_n(0)$ .



## MONAD UNIVERSITY HAPUR (UP)

Course: B.Tech-1, Subject Name: *Engg. Mathematics I*

Assignment No: 2

Due date of submission: 10.11.2016

Instruction

6. Write the responses to the assignment in your own handwriting.
7. Submit the responses to your HOD within the due date.
8. Write your Name, Program me, and Enrolment No. clearly at the top of the page.

Q.1.

(a) If  $u=x+y+z$ ,  $v=x^2+y^2+z^2$ ,  $w=yz+zx+xy$  prove that  $\text{grad } u$ ,  $\text{grad } v$  and  $\text{grad } w$  are Coplanar vectors.

(b) Show that the vector  $v = 3y^4z^2\hat{i} + 4x^3z^2\hat{j} - 3x^2y^2\hat{k}$  is solenoidal.

Q2.

(a) If  $u, v, w$  are the roots of the equation  $(x-a)^3 + (x-b)^3 + (x-c)^3 = 0$ , then find  $\frac{\partial(u,v,w)}{\partial(a,b,c)}$

(b) Find the area of a plate in the form of a quadrant of the ellipse  $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$

## **B.Tech (1<sup>st</sup> Semester)**

### **Course: DIP 111 Professional Communication**

Assignment No: 1

#### **Instructions**

1. Write the responses to the assignment in your own handwriting.
2. Submit the responses to your HoD within the due date.
3. Write your Name, Programme, and Enrolment No. clearly at the top of the page.

Q. 1 (a) Write the types of sentences you have studied. Define them with the help of examples. Examples should be 10 in numbers of each type.

(b) Define articles. Write 10 examples of each type of article containing their use in the sentences.

Q.2 (a) Explain Verbal Communication. Define oral and Written Communication.

(b) Define verbal barriers in detail.

## **B.Tech (1<sup>st</sup> Semester)**

### **Course: DIP 111 Professional Communication**

Assignment No: 2

#### **Instructions**

1. Write the responses to the assignment in your own handwriting.
2. Submit the responses to your HoD within the due date.
3. Write your Name, Programme, and Enrolment No. clearly at the top of the page.

- Q. 1 (a) Describe listening process. Quote the main points to be followed for being a good listener.
- (b) Write a note on listening comprehension and note taking.
- Q.2 (a) Define group discussion. Explain some tips for group discussion.
- (b) Explain interview techniques. What are the preparations to be done before appearing in an interview?