

**Assignment-II**  
**Programme: - B.TECH Civil -3<sup>RD</sup> Semester**  
**Course: - Building Material & Construction**  
**Course Code:-BTCE-211**  
**Last Date of Submission:-23.10.2017**

Instructions:

1. Write the assignment in your own handwriting.
2. Submit assignment to your HOD within given time.
3. Write your name, program and enrolment number clearly at the top of the pages.

Q.1

- a) What are the common defects of Plastering?
- b) Explain the Single Flemish Bond for 2-Brick wall.

Q.2

- a) What are the various functions of lintels and chajjas?
- b) State the qualities you will consider in selecting timber for construction purposes.

**Assignment-II**  
**Programme: - B.TECH Civil -3<sup>RD</sup> Semester**  
**Course: - Fluid Mechanics**  
**Course Code:-BTCE-212**  
**Last Date of Submission:-23.10.2017**

Instructions:

1. Write the assignment in your own handwriting.
2. Submit assignment to your HOD within given time.
3. Write your name, program and enrolment number clearly at the top of the pages.

Q.1

- a) Distinguish between:
  - i) Steady and Unsteady Flow
  - ii) Laminar and Turbulent Flow
  - iii) Rotational and Irrotational Flow
- b) Define dimensionless numbers and discuss some of them with their significance.

Q.2

- a) Explain the principle of venturimeter with a neat sketch.
- b) Write a short note on losses in pipes and fittings.

**Assignment-II**  
**Programme: - B.Tech Civil 3<sup>RD</sup> Semester**  
**Course: - Strength of Material**  
**Course Code:-BTCE-213**  
**Last Date of Submission:-23.10.2017**

**Instructions:**

1. Write the assignment in your own handwriting.
2. Submit assignment to your HOD within given time.
3. Write your name, program and enrolment number clearly at the top of the pages.

**Q.1**

- a) Explain the Macaulay method.
- b) Derive the torsion equation for circular shaft when subjected to torsion.

**Q.2**

- a) Derive the Euler formula for column which has one end fixed and other free.
- b) How thick and thin cylinders are classified .Derive the equation for hoop stress and radial stress in thick cylinder.

**Assignment-II**  
**Programme: - B.TECH Civil -3<sup>RD</sup> Semester**  
**Course: - Surveying**  
**Course Code:-BTCE-214**  
**Last Date of Submission:-23.10.2017**

Instructions:

1. Write the assignment in your own handwriting.
2. Submit assignment to your HOD within given time.
3. Write your name, program and enrolment number clearly at the top of the pages.

Q.1

- a) Explain contouring ?describe the different methods of contouring
- b) What are towers and signals in a triangulation survey?

Q.2

- a) How classification of triangulation systems is done?
- b) What is a vertical curve? Why it is provided?

**Assignment-II**  
**Programme: - B.TECH Civil -3<sup>RD</sup> Semester**  
**Course: - Essential of Management**  
**Last Date of Submission:-23.10.2017**

Instructions:

1. Write the assignment in your own handwriting.
2. Submit assignment to your HOD within given time.
3. Write your name, program and enrolment number clearly at the top of the pages.

**Question:-1**

- a) What do you mean by decision- making?
- b) What is meant by programmed decisions and non-programmed decisions?

**Question:-2**

- a) What is meant by organizing? Briefly explain the objectives of organizing process/
- b) What is an organizational Structure? Why is an organizational structure important?

**Assignment-II**  
**Programme: - B.TECH Civil -3<sup>RD</sup> Semester**  
**Course: - Engineering Mathematics-III**  
**Last Date of Submission:-23.10.2017**

Instructions:

1. Write the assignment in your own handwriting.
2. Submit assignment to your HOD within given time.
3. Write your name, program and enrolment number clearly at the top of the pages.

Q.1

a) We know very well that moments are statistical tools, used in statistical investigation denoted by  $\mu$ . If  $x_1, x_2, x_3, x_4, \dots, x_n$  are the value of variable with corresponding frequencies  $y_1, y_2, y_3, y_4, \dots, y_n$  respectively then moment about mean is define as

$$\mu_r = \frac{\sum_{i=1}^n f_i (x_i - \bar{x})^r}{N}, \text{ where } r = 1, 2, 3, 4, \dots \text{ and } N = \sum_{i=1}^n f_i. \text{ The first three}$$

moments of a distribution, about the value 2 of the variable are 1, 16 and -40. Show that the mean is 3, variance is 15 and  $\mu_3 = -86$ .

We know very well that, in correlation analysis, the degree (or strength) of relationship between two variables, say  $X$  and  $Y$ , is measured by a single number  $r$  called a correlation coefficient for examples: Volume of a cube  $V = L^3$ , perfectly correlated, Rainfall and crop yield, correlated. Computational formula is

$$r = \frac{N \sum xy - \sum x \sum y}{\sqrt{[N \sum x^2 - (\sum x)^2][N \sum y^2 - (\sum y)^2]}}$$

Now using this formulae

calculate the correlation coefficient between the following data:

X	5	9	13	17	21
Y	12	20	25	33	35

Q.2

- a) A time series is a set of numerical values of a given variable listed at successive intervals of time. For example: Hourly temperature of a city, bimonthly electricity bills

Moving averages is used for smoothing the time-series. That is, it smoothens the fluctuations of the data by the method of moving averages. When period of moving average is odd. Fit a trend line to the following data by the free hand graphical method:

Year	1980	1981	1982	1983	1984	1985	1986
Sales	35	60	45	70	65	62	80

- b) A **transcendental** function is an analytic function that does not satisfy a polynomial **equation**, in contrast to an algebraic function on the other hand a function which is not an algebraic function. In other words, a function which "transcends," i.e., cannot be expressed in terms of, algebra. Examples of transcendental functions include the **exponential function**, the **trigonometric** functions and the inverse functions of both a polynomial is an expression formed from adding a series of terms which are all powers of x and a constant. Algebraic functions can be expressed as polynomials and roots while transcendental functions have roots that cannot be so expressed

because the function isn't built on polynomials and radicals. They are built on functions like logs, exponents, and trigonometry functions. This is the difference between a **transcendental** function and algebraic function. Compute the real root of the equation  $x^3 - 5x + 3 = 0$  in the interval  $[1, 2]$  by the secant method by performing four iterations