

**IES COLLEGE OF TECHNOLOGY, BHOPAL**  
**M.E. M.TECH (1<sup>st</sup>SEM) ASSIGNMENT-2**  
**ADVANCE MATHEMATICS**  
**(MMMD-101)**

**Date of Assignment:28/10/2014**

**Date of Submission:22/11/2014**

- Note: 1.Question should be written in plain A-4 Size Paper.**  
**2. Minimum 300 Word Limit for each Question.**  
**3. Assignment will submit in stick file.**

Q.1	Define concepts of queuing models (M/M/1: Infinity/ Infinity/ FC FS)
Q.2	concepts of queuing models (M/M/S: Infinity/ Infinity/ FC FS)
Q.3	Explain Solution of Partial Differential Equation (PDE) by separation of variable method.
Q.4	Define Euler Lagrange's equation.
Q.5	Define finite elements method for one dimensional problems.

**IES COLLEGE OF TECHNOLOGY, BHOPAL**  
**M.E./ M.Tech. (1<sup>st</sup> SEM) Assignment -2**  
**- Theory of Elasticity & Plasticity (MMMD- 102)**

**Date of Assignment:28/10/2014**

**Date of Submission:22/11/2014**

- Note: 1.Question should be written in plain A-4 Size Paper.**  
**2. Minimum 300 Word Limit for each Question.**  
**3. Assignment will submit in stick file**

Q.1	For the plane stress condition, tensile stress is 25Mpa, compressive stress is 5 Mpa, and shear stress is 25Mpa. Find the following- (i)Principal stresses (ii) Maximum shear stress
Q.2	Define The stress strain curve for ductile material?
Q.3	Define compatibility equations and stress function equations in Cartesian and Polar coordinate.
Q.4	Define Mohr's circle and physical plane of plastic material.
Q.5	Define Tresca and Coulomb yield criteria for plastic materieal.

# IES COLLEGE OF TECHNOLOGY, BHOPAL

M.E./ M.Tech (1<sup>st</sup> SEM) Assignment -2

Material science (MMMD 103)

Date of Assignment:28/10/2014

Date of Submission:22/11/2014

Note: 1.Question should be written in plain A-4 Size Paper.

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Q.1	Explain the creep phenomenon with figures?	
Q.2	Explain the effect of crystal structure on properties?	
Q.3	Discuss in brief about the Polymers and types of Polymers?	
Q.4	Discuss about the fatigue limit and its significance?	
Q.5	Discuss about the crystal structure of metals with neat sketch?	

# IES COLLEGE OF TECHNOLOGY, BHOPAL

M.E./ M.Tech (1<sup>st</sup> SEM) Assignment -2

Theory of Vibration (MMMD-104)

Date of Assignment:28/10/2014

Date of Submission:22/11/2014

Note: 1.Question should be written in plain A-4 Size Paper.

2. Minimum 300 Word Limit for each Question.

3. Assignment will submit in stick file.

Q.1	Derive the equation for Dunkerley's method?	
Q.2	Define the Maxwell's reciprocal theorem?	
Q.3	Explain the self excited vibrations caused by dry friction?	
Q.4	In a single degree damped vibrating system, a suspended mass of 8 kg makes 30 oscillation in 18b seconds. The amplitude decrease to 0.25 of the initial value after 5 oscillation .Determine the (i) Stiffness of the spring (ii) Logarithmic decrement (iii) Damping coefficient	
Q.5	Derive the Equation for two rotor system torsion oscillations?	

**IES COLLEGE OF TECHNOLOGY, BHOPAL**  
**M.E. M.TECH (1<sup>st</sup>SEM) ASSIGNMENT-2**  
**Computer Aided Design & Drafting**  
**(MMMD-105)**

**Date of Assignment:28/10/2014**

**Date of Submission:22/11/2014**

**Note: 1.Question should be written in plain A-4 Size Paper.**

**2. Minimum 300 Word Limit for each Question.**

**3. Assignment will submit in stick file.**

Q.1	Introduce the computer software and their application?	5
Q.2	Classify the optimizing problem?	5
Q.3	Derive the Equation for linear regression?	5
Q.4	Explain the term Graphics terminal and Design of Workstation?	5