



# DEPARTMENT OF MECHANICAL ENGINEERING

## MONAD UNIVERSITY, HAPUR

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Course: EME-351, Engineering Managerial Economics

**Dated. – 17/10/2016**

Assignment No: 1

Due date of submission: 10/11/2016

Instructions

1. Write the responses to the assignment in your own handwriting.
2. Submit the responses to your Hod within due date.
3. Write your name, programme, and Enrollment no. clearly at the top of the page.
4. Each question's part carries 5 marks.

Q.1

- A. Define Economics and the controversy between Father Adam Smith and Lord Alfred Marshall?
- B. Diagrammatically discuss about the meaning, importance, types and law of demand?

Q.2

- A. With figure define elasticity of demand, its type and degrees? Numerically support your answer?
- B. Diagrammatically discuss about an indifference curve analysis?



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Assignment No: 2

Due date of submission: 10/11/2016

Instructions

1. Write the responses to the assignment in your own handwriting.
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4. Each question's part carries 5 marks.

Q.1

- A. Define Market? How prices and output are determined under perfect competition?
- B. Discuss about the classification of market? How prices are determined under monopoly and monopolistic competitions?

Q.2

- A. Define Management with its nature, importance, characteristics and principles?
- B. What is decision making? Discuss about the classical and administrative models with the steps followed under decision making?



# DEPARTMENT OF MECHANICAL ENGINEERING

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Dated: -17/10/2016

Course: EME-352 MACHINE DESIGN I

Assignment No: 2

Due date of submission: 10/11/2016

### Instructions

1. Write the responses to the assignment in your own handwriting.
2. Submit the responses to your Hod within due date.
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### Q.1

- a.) Describe, with the help of neat sketches, the types of various shaft couplings mentioning the uses of each type.
- b.) A motor car shaft consists of a steel tube 30 mm internal dia. and 4mm thick the engine develops 10 kw at 2000 r.p.m. find the maximum shear stress in the tube when the power is transmitted through a 4:1 gearing .

### Q.2

- a.) show that the efficiency of self-locking screws is less than 50%.
- b.) Discuss the materials and practical applications for the various types of springs.



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**Dated. – 17/10/2016**

Course: EME-353 TOM-I

Assignment No: 2

Due date of submission: 10/11/2016

Instructions

1. Write the responses to the assignment in your own handwriting.
2. Submit the responses to your Hod within due date.
3. Write your name, programme, and Enrollment no. clearly at the top of the page.
4. Each question's part carries 5 marks.

**Q.1**

- a) Calculate minimum force required to slide a body on a rough horizontal plane.
- b) Derive an expression for efficiency of inclined plane.

**Q.2**

- a) Explain Cam & classified it within detail.
- b) What type's terms are used in Radial cams?



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Dated.-17/10/2016

Course: EME- 354, Heat and Mass Transfer

Assignment No: 2

Due date of submission: 10/11/2016

Instructions

1. Write the responses to the assignment in your own handwriting & don't copy from other's assignment.
2. Submit the responses to your HoD within due date.
3. Write your name, programme, and Enrollment no. clearly at the top of the page.
4. Each question's part carries 5 marks.

**Q.1**

(a) Write short notes on

(i) Parallel flow heat exchanger (ii) counter flow heat exchanger (iii) overall heat transfer coefficient

(b) Differentiate between the mechanism of filmwise and dropwise condensation.

**Q.2**

(a) Explain the following:

(i) Radiation shield      (ii) Shape factor      (iii) Black body

(b) State and explain following laws of radiation.

(i) Wein's displacement law

(ii) Stefan Boltzmann law



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**Dated: - 17/10/2016**

Course: EME-355, Internal combustion engine

Assignment No: 2

Due date of submission: 10/11/2016

**Instructions**

1. Write the responses to the assignment in your own handwriting & don't copy from other's assignment.
2. Submit the responses to your HoD within due date.
3. Write your name, programme, and Enrollment no. clearly at the top of the page.
4. Each question's part carries 5 marks.

Q.1

- (a) Explain the design consideration for the combustion chamber of S.I engine.
- (b) What are the properties of lubricants? Describe wet sump lubrication system.

q.2

- (a) A 42.5KW engine has a mechanical efficiency of 85%. Find the indicated power and friction power. If the friction power is assumed to be constant with load, what will be the mechanical efficiency at 60% of the load?
- (b) Write Short notes on the following:
  - (i) Catalytic converter
  - (ii) Hydrocarbon emission from C.I engine



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**Dated. - 17/10/2016**

Course: EME-356 Manufacturing Science-II

Assignment No. 2

Due date of submission: 10/11/2016

Instructions

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2. Submit the responses to your HoD within due date.
3. Write your name, programme, and Enrollment no. clearly at the top of the page.
4. Each question's part carries 5 marks.

Q.1

- (a) Explain briefly the parts of lathe machine and also write down the types of lathe machine.
- (b) Differentiate the fundamental difference between a planner and shaper with suitable examples.

Q.2

- (a) List the various methods of measuring chip-tool interface temperature, and explain any two of them.
- (b) Write a short notes on:

(i) Honing

(ii) Lapping

(iii) Polishing