



DEPARTMENT OF MECHANICAL ENGINEERING
MONAD UNIVERSITY, HAPUR

Session - (2018-2019)

Programme Name:

Student's Name:

Father's Name:

Enrollment Number:

Course Name:

Course Code:

Assignment Number:

Date of Submission:

Course Faculty Signature



DEPARTMENT OF MECHANICAL ENGINEERING
MONAD UNIVERSITY, HAPUR

Dated:-01/03/2019

Course: BTME 321 – Operation Research

Assignment No: 1

Due date of submission: **12/03/2019**

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 “**course faculty**” 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) As you are aware of the operations research. Explain the scope of operations research.
- (b) Define linear programming problem with examples.

Q2.

- (a) As you are aware of the transportation problems. Write down the names of the transportation methods.
- (b) What are the assignment problems, define with an example?



DEPARTMENT OF MECHANICAL ENGINEERING
MONAD UNIVERSITY, HAPUR

Dated:-01/03/2019

Course: BTME 322 - Refrigeration & Air conditioning

Assignment No: 1

Due date of submission: **12/03/2019**

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 "**course faculty**" within due date.
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Q.1

(a) You are aware about refrigeration system. Explain method of refrigeration system.

(b) You are familiar about air refrigeration cycle. Differentiate between open and closed air refrigeration cycle.

Q.2

(a) You know about aircraft refrigeration system. Write merits and demerits of aircraft refrigeration system.

(b) You are aware about Bell Coleman cycle. Derive an expression of coefficient of performance for reversed Bell Coleman cycle.



DEPARTMENT OF MECHANICAL ENGINEERING
MONAD UNIVERSITY, HAPUR

Dated:-01/03/2019

Course: BTME-323 Machine Design -II
Assignment No: 1

Due date of submission: **12 /03/2019**

Instructions

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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) You are already known about law of gearing. Explain the terminologies involved in a spur gear profile.
- (b) You are already aware of involutes gear. Explain the classification of gear.

Q.2

- (a) As you are familiar with the selection of gear material. Explain the various types of gear manufacturing methods.
- (b) You are aware about pitch circle, addendum and back lash of gear tooth; derived the tangential load on a spur gear tooth.



DEPARTMENT OF MECHANICAL ENGINEERING

MONAD UNIVERSITY, HAPUR

Dated:-01/03/2019

Course: BTME-324 Measurement and Instrumentation.

Assignment No: 1

Due date of submission: **12/03/2019**

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 "**course faculty**" 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) You are aware about measuring instruments. Write the applications of measuring instruments.
- (b) You know about functional elements of a measuring system. Explain it.

Q.2

- (a) You are familiar with resistance strain gauges. Explain the principle of resistance strain gauges.
- (b) You are aware transducer. Describe piezoelectric transducer.



DEPARTMENT OF MECHANICAL ENGINEERING
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Dated:-01/03/2019

Course: BTME-325 Heat and Mass Transfer

Assignment No: 1

Due date of submission: **12/03/2019**

Instructions

1. Write the responses to the assignment in your own handwriting & don't copy from other's assignment.
2. Submit the responses to **“course faculty”** 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) As you already know about heat transfer. Explain the different modes of heat transfer with examples.
- (b) As you are aware about conduction; derive the one dimensional, steady state conduction equation for composite slab.

Q.2

- (a) As you are familiar with the concept of insulation. Find the critical radius of insulation for a cylindrical object.
- (b) As you already know the concept of heat transfer. Define the following terms:
 - i. Thermal Conductivity
 - ii. Convection heat transfer coefficient
 - iii. Thermal diffusivity