



DEPARTMENT OF HUMANITIES & APPLIED SCIENCES

I Year I/II Semester

1FY3-07/2FY3-07: BASIC MECHANICAL ENGINEERING

Note: Each Assignment of 10 marks

All questions carry equal marks

UNIT-01/ASSIGNMENT-01

Q.No.	Question	CO	BLT
1	Differentiate between the Water tube boiler and the Fire tube Boiler.	1	4
2	What are Boiler “Mountings” and “Accessories”? Examples justify their utility in Boiler operations.	1	1,5
3	What do you mean by the compounding of the steam turbine? State and explain its types.	1	2
4	What is a Prime mover in a machine?	1	1
5	State and explain the classification of Boilers	1	2

UNIT-02/ASSIGNMENT-02

Q.No.	Question	CO	BLT
1	Why reciprocating pumps are called positive displacement pumps?	2	3
2	What are the benefits of providing air vessels in a Reciprocating pump?	2	5
3	Why Otto cycle require some ignition method but Diesel engines do not require an ignition method?	2	5
4	A neat and well-labeled diagram explains the construction and working of centrifugal pumps.	2	1
5	With a neat and well-labeled diagram explain the construction and working of a 4-stroke CI engine.	2	1

*BLT: BLT shows the **Bloom's taxonomy** levels

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UNIT-03/ASSIGNMENT-03

Q.No.	Question	CO	BLT
1	Differentiate VCRS and VARS.	3	4
2	Differentiate between Refrigeration and air conditioning	3	4
3	With a block diagram explain the VAPOUR COMPRESSION REFRIGERATION SYSTEM.	3	1
4	Define refrigerants and state classifications of refrigerants.	3	1
5	With the help of a neat and well-labelled diagram explain the construction and working of window Air conditioners.	3	1

UNIT-04/ASSIGNMENT NO-04

Q.No.	Question	CO	BLT
1	What do you mean by a slip of belt and creep of belt	4	2
2	Comparison between open belt drive and cross belt drive.	4	1
3	What is the advantage of gear drive over belt drive?	4	1
4	Derive an expression length of the belt for the open belt drive system.	4	1
5	Explain different types of gear drives used in belt drives for power transmission.	4	1

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UNIT-05/ASSIGNMENT NO-05

Q.No.	Question	CO	BLT
1	What are the pattern design considerations?	5	5
2	Explain the role of patterns in the casting process.	5	5
3	Differentiate between hot working and cold working	5	4
4	Explain the acetylene welding process in detail.	5	1
5	Explain various forging processes in detail.	5	2

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