

Reg. No.

**MANIPAL INSTITUTE OF TECHNOLOGY****MANIPAL***(A constituent unit of MAHE, Manipal)***VI SEMESTER B.TECH. REGULAR EXAMINATIONS- APRIL/MAY 2019****SUBJECT: PETROLEUM REFINERY ENGINEERING [CHE 4004]****REVISED CREDIT SYSTEM, (03/05/2019)****Time: 3 Hours****MAX. MARKS: 50**

Instructions to Candidates: Answer ALL the questions. Missing data may be suitably assumed.

1A	Explain the naphtha reformer unit with the help of flow sheet.	5
1B	Explain the preparation of grease and explain the various thickeners used in grease.	5
2A	Explain the various main thermal properties of petroleum fractions (at least four).	6
2B	Briefly explain the TBP apparatus and draw the TBP apparatus.	4
3A	Why hydrogen manufacture is important in petroleum refinery unit and explain the hydrogen manufacture process through naphtha reforming?	6
3B	Explain the FCC unit with separate regeneration unit and draw a neat diagram.	4
4A	What is LOBS? Explain the method of preparation of LOBS?	4
4B	Briefly explain the various types of lube oils used in industry? (at least six lube oils).	6
5A	What are the tests important for kerosene fraction and describe them.	4
5B	What are the important tests used for Gasoline fraction and explain them?	3
5C	Explain at least three most important properties for characterization of crude oil.	3