

Reg. No.									
----------	--	--	--	--	--	--	--	--	--



# MANIPAL INSTITUTE OF TECHNOLOGY

MANIPAL

(A constituent unit of MAHE, Manipal)

## VII SEMESTER B.TECH (CHEMICAL ENGINEERING)

END SEMESTER EXAMINATIONS (OPE), DECEMBER 2021

SUBJECT: PE VII – FUELS AND COMBUSTION [CHE 4063]

Time: 75+10 Minutes

(22/12/2021, FN)

Max. Marks:20

### Instructions to Candidates:

- ❖ Answer any TWO full questions.
- ❖ Write specific and precise answers

### PART- B

<b>1A.</b>	How the application of fluidization can be extended to combustion technique. Explain with relative advantages and disadvantages	<b>4</b>
<b>1B.</b>	What do you understand by In-situ and Drift theories of origin of coal? Explain the points in favour of these theories.	<b>3</b>
<b>1C.</b>	Differentiate between the elementary and main constituents of coal. Explain the significance of estimation of these constituents.	<b>3</b>
<b>2A.</b>	How the pressure jet atomizing burner and rotary atomizing burner differ each other in the working? Explain with the neat sketches.	<b>4</b>
<b>2B.</b>	Differentiate between aniline point, freezing point and flash point and explain their significance.	<b>3</b>
<b>2C.</b>	“Vacuum distillation is preferred for refining high boiling petroleum fractions”. Elaborate the process with suitable justification	<b>3</b>