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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

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