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Code No: 58599

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech IV Year II Semester Examinations, April - 2018
ENHANCED OIL RECOVERY TECHNIQUES
(Petroleum Engineering)

Time: 3 Hours **Max. Marks: 75**

Answer any Five Questions
All Questions Carry Equal Marks
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1.a) Write a short note on polymer flooding.
b) What is the significance of displacement efficiency? [10+5]

2. Describe the challenges of EOR in the current oil industry with special reference to the applicability of EOR techniques in India. [15]

3. What is the effect of surface tension, wettability, capillarity and fluid saturation in displacement process and its application in ASP flooding? [15]

4.a) Differentiate between Huff & Puff Technique and Steam flooding.
b) What are the various options for EOR in reservoir with heavy oil? [7+8]

5.a) How total Mobility of reservoir fluid is contributing in Polymer flooding?
b) Explain the selection criteria for application of MEOR? [8+7]

6.a) How alkaline flooding enhances the hydrocarbon recovery.
b) What is ASP flooding? What are the advantages of ASP flooding? Explain the mechanism. [5+10]

7.a) Describe the role of In-situ combustion technique for enhancing the recovery of oil.
b) What is the miscibility of hydrocarbons? Explain in brief. [7+8]

8.a) Explain the stiles method for water flooding performances indicating the necessary assumptions.
b) Derive the Buckley–Leverette equation for immiscible displacement. [8+7]

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