

Total No. of Questions : 6]

SEAT No. :

P13

[Total No. of Pages : 1

APR-17/BE/Insem.-14
B.E. (Civil)
Sub Sea Engineering (Open Elective)
(2013 Pattern) (Elective - IV) (Semester - II)

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates :

- 1) *Answer Q1 or Q2, Q3 or Q4, Q5 or Q6*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *Figures to the right side indicate full marks.*
- 4) *Assume Suitable data if necessary*

UNIT - I

- Q1)** a) Explain types of Oil exploration [5]
b) Draw schematic diagram of sub sea production system showing important components. [5]

OR

- Q2)** a) What is Indian scenario of sub sea production system [5]
b) Write a note on FPSO [5]

UNIT - II

- Q3)** a) Explain technological challenges as Civil Engineer for sub sea oil exploration [5]
b) Explain Manifold, ROV [5]

OR

- Q4)** a) Explain Christmas Tree , Umbilical, Jumper [5]
b) Explain situations that call for Deep water oil explorations. [5]

UNIT - III

- Q5)** a) Highlight Design challenges in subsea engineering [5]
b) Explain intervention methods AUV's, and Divers [5]

OR

- Q6)** a) Explain with sketch typical subsea installation systems [5]
b) Explain how acoustic and Hydraulic, systems work for application in subsea engineering. [5]

