

**M. TECH.-III (CIVIL-HYDRAULIC ENGINEERING) (CBCS –  
2015 COURSE) : SUMMER - 2018  
SUBJECT: ELECTIVE – I a) COASTAL ENGINEERING**

Day: **Tuesday**  
Date: **29/05/2018**

**S-2018-3023**

Time: **11.00 AM TO 02.00 PM**  
Max Marks. 60

**N.B.**

- 1) All questions are **COMPULSORY**
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both sections should be written in **SEPARATE** answer books.

**SECTION - I**

**Q.1** Write short notes on any **THREE** of the following **(10)**

- a) Global phenomena of tides
- b) Sand trap design criteria
- c) Control of vibration of offshore structures.
- d) Types of wave breakers

**OR**

- a) What are various methods of wave data collection?
- b) What are advantages and limitations of statistical and spectral wave data analysis methods.

**Q.2** a) What is the roll of rip current in development of cell circulation? **(10)**

- b) What are design aspects you will consider for layout of port on East coast of India?

**OR**

State assumption and limitations of linear wave theory and the advantages and applicability over higher order wave theories.

**Q.3** What are different types of oil platform on the basis of depth, hydraulic design aspects and function. **(10)**

**OR**

Explain the natural and manmade causes of coastal erosion. Describe the measures to be taken to control the erosion.

**SECTION - II**

**Q.4** Write short notes on any **THREE** of the following **(10)**

- a) Advantages of random wave modeling technique
- b) Radio active tracer studies
- c) Layout of port dock to control wave resonance
- d) Types of dredgers

**OR**

- a) What is the functions of dry dock, approach channel coast guard and turning circle in the port area.
- b) What are various aspects related to coastal zone management?

**Q.5** Explain port cost analysis for short and long term development of port for master plan. **(10)**

**OR**

What is dimensional analysis for modeling? Describe 'scale and measures to control it.

**Q.6** Explain the need of special purpose port for the development of facilities at existing major port. **(10)**

**OR**

What are advantages various of dredgers used in deep and shallow water for effective dredging?