BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION)

CLASS: BE   SEMESTER: VII
BRANCH: CIVIL   SESSION: MO/2018

SUBJECT: CE8003 HARBOUR DOCK AND AIRPORT ENGINEERING

TIME: 1.5 HOURS   FULL MARKS: 25

INSTRUCTIONS:
1. The total marks of the questions are 30.
2. Candidates may attempt for all 30 marks.
3. In those cases where the marks obtained exceed 25 marks, the excess will be ignored.
4. Before attempting the question paper, be sure that you have got the correct question paper.
5. The missing data, if any, may be assumed suitably.

Q1 (a) Explain any two requirements of a good harbor. [2]
(b) What considerations govern the size and position of harbor entrances? Write the empirical formulae used in the design of harbor entrance. [3]

Q2 (a) Distinguish between spring tide and neap tide. [2]
(b) Enumerate the important forces generated by a storm wave breaking on a sea structure. [3]

Q3 (a) What is the function of hearth or core of a rubble mound breakwater? Which type of material is used to make the core? [2]
(b) What is fender? Explain any two types. [3]

Q4 (a) Distinguish between light ship and buoy. [2]
(b) Which type of dredge is used if the bed of sea is of hard soil? Explain its function. [3]

Q5 (a) Why basin walls have to be of greater height and bigger sections as compared to dock walls? [2]
(b) Write short notes on marine railway. [3]

Q6 (a) The only disadvantage of an entrance with two pair of gates is the entry and exit of ship takes a lot of time. Give reasons. [2]
(b) Curved shapes are theoretically better than straight ones for lock gates. Justify. Write any one drawback of these gates. [3]

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