

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

**CLASS: BE
BRANCH: CHEMICAL ENGG**

**SEMESTER: VII
SESSION : MO/2019**

SUBJECT : CL7035 COLLOID AND INTERFACIAL 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.

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- Q1 (a) Classify colloids based on their method of preparation. [2]
(b) What is the mechanism of colloidal stability in aqueous medium? How gold number are used to select the dispersing agent? [3]
- Q2 (a) What is Tyndal effect? [2]
(b) What is Micellar solution? How it is different from reverse micelle? [3]
- Q3 (a) What is zeta potential? [2]
(b) What is electrophoresis? What is sedimentation potential? [3]
- Q4 (a) What is craft temperature? [2]
(b) Give classification of biosurfactants. What are the advantages and limitations of biosurfactants? [3]
- Q5 (a) What is HLB? What is its importance? [2]
(b) Derive the relationship between surface tension and surface energy. [3]
- Q6 (a) Discuss the stability of liquid foams. [2]
(b) What are the procedures in breaking emulsions? [3]

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