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Roll No

CE-602-CBGS
B.Tech., VI Semester
Examination, December 2020
Choice Based Grading System (CBGS)
Environmental Engineering -I

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.

ii) All questions carry equal marks.

iii) Assuming missing data suitably.

iv) In case of any doubt or dispute the English version question should be treated as final.

1. The following data have been noted from the census department. Calculate the probable population in the year 2021 and 2031 by using arithmetic and geometric method.

14
2021

year / df	1951	1961	1971	1981	1991	2 001
Population	35000	42700	48800	60000	72800	88500

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PTO

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2. a) Compare the design and working features of the slow sand filter and rapid sand filter. 7
- b) Compare the differences between centrifugal and displacement type pumps. 7
3. a) What is sedimentation and explain any two types of sedimentation tank? 7
- b) What is intake structure? And explain river intake and reservoir intake with neat diagram? 7
4. a) Explain the following methods for bacteriological analysis of quality of water 7
- i) Total count test
- ii) Membrane filter technique
- b) What are the purposes served by aeration? List any four methods of aeration. 7

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5. a) Explain the conservancy and water carriage system. 7
- b) Write briefly about sewer appurtenances. 7
6. a) Briefly explain about BOD and COD. 5
- b) Write about the water borne disease. 5
- c) What are the different natural methods of waste water disposal? 4
7. a) What are the factors affecting the selection of materials for sewer construction? 7
- b) What are the different Fluctuation in sewage flow? 7
8. a) Briefly explain about the oxygen sag analysis. 7
- b) What is disinfection? Explain break point chlorination. 7

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