KERALA AGRICULTURAL UNIVERSITY
B.Tech.(Food Engg.) 2019 Admission
I Semester Final Examination-January 2020

Cien.1101 **Basic Civil Engineering (2+1)** **Marks: 50**
Time: 2 hours

I **Fill in the blanks:** **(10x1=10)**

1. Slump test is used to determine _____ property of concrete.
2. The stone masonry in which mortar is not used is known as _____.
3. The instrument, which is used for setting out right angles to a chain line is _____.
4. The phenomenon causes deflection of magnetic needle in compass due to the influence of magnetic substances is called _____.
5. Chemical formula for alum is _____.
6. The basic reaction taking place in a septic tank is _____.

Define the Following

7. What is the standard size of a brick?
8. What is the role of steel in concrete?
9. What are the two primary divisions of surveying?
10. Define sewage

II **Write Short notes on any FIVE of the following** **(5x2=10)**

1. What is meant by characteristic strength of concrete? On this basis how are concretes graded?
2. What are the purposes of surveying?
3. What are the temporary adjustments to be done for a dumpy level before taking readings at each set up?
4. What is a bench mark? What are its types?
5. What is the role of coagulants in water treatments? Give some examples for coagulants.
6. How can the quantity of sewage be estimated?
7. What are the uses of steel?

III **Answer any FIVE of the following.** **(5x4=20)**

1. Briefly explain the physical properties to be considered while selecting a building material.
2. What is meant by ranging of a line? Explain direct ranging with a neat sketch.
3. Explain the two methods for measuring horizontal angles in theodolite surveying.
4. Differentiate between stadia method and tangential method of tacheometry.
5. What is meant by disinfection in water treatment? Discuss various methods of disinfection.
6. Analyse the various reasons for water pollution. How it can be reduced?
7. What are the systems of sewerage? Comment the advantages and disadvantages of each.

IV **Write an essay on any ONE of the following** **(1x10=10)**

1. The following staff readings were observed successively with a dumpy level , the instrument have been shifted after third, sixth and eighth readings:2.228, 1.606, 0.988, 2.090, 2.864, 1.262, 0.602, 1.982, 1.044, 2.68 metres. Enter the above readings in standard page of leveling field book and calculate the reduced levels of points by height of collimation method if the first reading was taken on staff held on a bench mark of 432.384m. Apply the arithmetic checks also.
2. What are the functions of a foundation? Discuss various types of foundations used for different types of buildings?

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