KERALA AGRICULTURAL UNIVERSITY

B.Tech (Food.Engg) 2014 Admission
Ist Semester Final Examination- January -2015

Cat. No: Cien.1101   Marks: 50.00
Title:Civil Engineering (2+1)   Time: 2 hours

I   Fill up the blanks   (10 x 1=10)

1. The main component of good brick earth is _____

2. The initial setting time of ordinary Portland cement should not be less than

3. Full form of TMT steel is _____

4. For general RCC works ,the grade of concrete used is _____

5. The maximum intensity of pressure that can be transmitted to the soil without failure is known as _____

6. A graphical methods of survey in which field observations and plotting proceed simultaneously is known as _____

7. The angle,a line makes with the true meridian is known as_____

8. Reduced level is the _____of a point relative to the datum

9. Waste water from bathrooms ,kitchen ,washing place etc known as _____

10. The vertical walls inside a septic tank are known as _____

II Write short notes on any FIVE questions   (5 x 2=10)

1. Convert the whole circle bearing to reduced bearing and reduced bearing to whole circle bearing

   a) 185^0 30' 45"   b) 247^0 42' 20"

   c) N 46^0 35' E   d) S 32^0 15'W

2. What are the IS code recommendations for setting time of cement

3. Write a note on radiation method in plane table surveying

4. Explain jar test

5. What do you mean by tempering of clay

6. Explain "local attraction" in surveying

7. In a chain survey ,the length of a line measured with a 20 m chain was found to be 765.2 m. Afterwards ,it was found that the chain was 0.03 m too long. Find the true length of the line .

III Write short notes on any FIVE questions   (5 x 4=20)

1. Explain the physical test for cement

2. Explain the laboratory tests for assessing the quality of bricks

3. Describe various units of buildings

4. Explain different types of foundations

5. The following bearings were observed while traversing with a compass

Line	FB	BB
AB	$45^0 0'$	$226^0 0'$
BC	$98^0 0'$	$227^0 30'$
CD	$29^0 30$	$209^0 0'$
DE	$324^0 230'$	$144^0 30$

   Mention the stations affected by local attraction and determine the corrected bearings

6. The following consecutive readings were taken with a level and a four meter leveling staff on a continuously sloping ground

   3.854 , 3.360, 2.925, 1.955, 0.855, 3.790, 2.640, 1.545, 1.930, 0.865, 0.665

   The level was shifted after the fifth and eight readings

   The first reading was taken on a bench mark whose R.L is 150.250 meters .Calculate the reduced levels of the change points and the level difference between the first and last points

7. A line was measured with a steel tape which was exactly 30 m at 20^0 c and pull of 50N and the measured length was 467.287 m. Temperature during measurement was 28^0 C and the pull applied was 100N .The tape was uniformly supported during measurement .Find the true length of the line ,if the cross sectional area of the tape is 0.02 cm^2 The coefficient of expansion per ^{0}C =0.0000117 and E=2.1 x 10^5 N/mm^2

IV Write an essay on any ONE   (1 x 10=10)

1. Explain two point problem plane in table surveying .Also state the advantages and disadvantages of plane table surveying

2. With a neat sketch explain the manufacture of cement

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