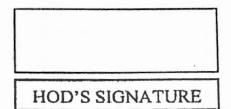


FACULTY: ENGINEERING DEPARTMENT: CIVIL ENGINEERING FIRST SEMESTER EXAMINATION (MARCH 2017) 2016/2017 ACADEMIC SESSION

Course Title: Civil Engineering Materials

Course Code: CVE 307



Instructions:

1) Attempt any four Questions

- 2) Time Allowed: 3 hours
- 3) SEVERE PENALTIES APPLY FOR MISCONDUCT, CHEATING, POSSESSION OF UNAUTHORIZED MATERIALS DURING EXAM



ELIZADE UNIVERSITY, ILARA – MOKIN FACULTY OF ENGINEERING DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING

Session: 2016/17 Course: Civil Engineering Materials Instruction: Attempt Four Questions.

Semester: First

Course Code: CVE307

Units: 3

4 Marks

8Marks

Time Allowed: 3 hrs

Question 1

a. Define the following terms:

- i. Concrete 1.5 Marks ii. Aggregate 1.5 Marks
- **b.** Mention four mineral components in Portland cement.

c. Briefly explain four types of cement.

Question 2

a. A good quality Concrete is essentially a homogeneous mixture of cement, coarse and fine aggregates and water. Briefly explain the stages of Concrete production. 7 Marks
b. Define the following:

i.	Workability	1 Mark
ii.	Segregation:	1 Mark
iii.	Bleeding	1 Mark
State five factors that can affect workability of a Concrete.		5Marks

Question 3

a.	What do you understand by the term structural steel?	3 Marks	
b.	Mention the designated shapes of the structural steel and their uses.	8 Marks	
c.	Welding is perhaps the most important process used in the fabrication and erection of		
	structural steelwork. Discuss 4	Marks	

Question 4

a. Define the following:

c.

i. Standing Timber

2 Marks

5

ii. Rough Timber

iii. Converted Timber

b. Enumerate varying bases that are considered for the classification of timbers. 5 Marks

c. State four uses of Timber products as applicable in Civil Engineering works. 4 Marks

Question 5

a. Define the term Bitumen. 2 Marks
 b. Briefly explain the following bituminous materials that are used in pavement construction.
 i. Asphalt cement 3 Marks
 ii. Cutback asphalt 3 Marks
 iii. Emulsified asphalt 3 Marks

c. Mention four tests that can performed on bitumen.

6

2 Marks

4 Marks

2 Marks