



**Civil Engineering Department**  
**Construction Material Lab (ENCE 215)**  
**Quiz # 1**

**Student Name:**

**Student ID:**

**Q:1 Fill in the blanks (20 Marks)**

- 1- Workability defined as.....  
.....
- 2- In the slump test, the cone was filled in ..... Layers, each layer was compacted .....blows using rod with dimension of .....length, and .....diameter.
- 3- There are three shape of slump:..... ,..... and.....
- 4- Compacting factor can be defined as.....  
.....
- 5- In sieve analysis test the fine aggregates was put on the vibrating machine for ..... minutes, while coarse aggregates put on vibrating machine for ..... minutes.
- 6- In sieve analysis test the fine aggregate washed on sieve #.....
- 7- Fine aggregates can be simply defined as the aggregates that pass sieve #.....
- 8- In los Angelos abrasion test 5 kg sample consists of ..... Kg collected from seive .....and .....kg collected from sieve ..... Is tested accoding to grade B with ..... metallic balls and the intac material is obtained by sieving the sample on the seive #.....
- 9- Apparent specific gravity defined as.....
- 10-In sieve analysis test the fine aggregates washed on sieve # ....., also it must be dried in the oven at a temperature of.....for..... hours.

**Q2: complete the table below for the sieved 20 mm aggregate and find the following:  
(20 Marks)**

1-Percentage error and specify whether it's acceptable or not

2-Finesse modules

**Mass before sieving = 1381.2 gm**

Sieve size (mm)	Individual mass retained (gm)	Corrected mass retained	Individual percent retained	Cumulative percent retained	Cumulative percent passing
25	2.3				
19	52.2				
12.5	1143.6				
9.5	150.0				
6.3	16.5				
4.75	9.5				
Pan	4.7				

Q3: For a sample of **coarse aggregate** the following data is collected **(10 Marks)**

Displaced aggregate weight (gm)	230 gm
Bulk Specific gravity on dry basis	2.362
Specific gravity on saturated surface dry biases	2.474

1-Find absorption ratio for this aggregate sample

2-Find apparent specific gravity.