



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

**Student Name:**

**Student ID:**

**Q:1 Fill in the blanks**

- 1- In los Angelos abration 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 #.....
- 2- According to ASTM initial setting time should not be less than .....while the final setting time should not be more than .....
- 3- Initial setting time can be defined as.....
- 4- Water consistency of cement paste can be define as .....
- 5- In sieve analysis test the fine aggregates washed on sieve # ....., also it must be dried in the oven at a temperature of.....for..... hours.
- 6- For tension sample the specimen is filled in ..... layers each layer tamped ..... Stock.
- 7- Bulk dry specific gravity can be defined as.....
- 8- In sieve analysis test the fine aggregates was put on the vibrating machine for ..... minutes, while coarse aggregates put on vibrating machine for ..... minutes.
- 9- The pressure method used in the determenation of the air content is based on the principle of .....
- 10- Maximum aggregate size can be defined as .....

**Q:2** Sieve analysis test was performed on sand sample, the sample total weight before washing = **270 gm** and the sample total weight after drying and before sieving=**240 gm**.(20 Marks)

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

Sieve size (mm)	Individual mass retained (gm)	Corrected mass retained	Individual percent retained	Cumulative percent retained	Cumulative percent passing
6.3	00.00				
5.0	00.00				
2.0	85.00				
1.6	75.00				
0.5	35.00				
0.2	22.00				
0.16	5.00				
Pan	15.00				

Q3: For a sample of **Fine aggregate** the following data is collected

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