

- Q.23 Describe the role of additive in cement.
- Q.24 List various factors that affect selection of raw materials.
- Q.25 Explain determination of fineness of cement.
- Q.26 List different type of cement.
- Q.27 Explain the thermo chemistry of clinker formation.
- Q.28 Explain the test done to determine the water consistency.
- Q.29 Write physical properties of cement.
- Q.30 Write properties and uses of Quick setting cement.
- Q.31 Describe Le-Chadelier's Apparatus.
- Q.32 Explain mechanical properties of Portland cement.
- Q.33 List advantages of wet process.
- Q.34 Explain chemical composition of portland cement.
- Q.35 Explain role of gypsum in cement.

#### Section-D

**Note: Long answer questions. Attempt any two question out of three Questions. (2x10=20)**

- Q.36 Explain cement manufacturing by wet process with the help of flow chart.
- Q.37 Explain the effect of raw materials and its constituents on the properties of cement.
- Q.38 Discuss the health and safety measures taken in cement industry.

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#### 4th Sem. Branch: Ceramic Sub : Cement Technology

Time : 3 Hrs.

M.M. : 100

#### SECTION-A

**Note: Multiple choice Questions. All Questions are compulsory. (10x1=10)**

- Q.1 Cement was invented in  
a) 1902 b) 1804  
c) 1916 d) 1824
- Q.2 Portlant cement was invented by  
a) Joseph Aspdin b) Albert Einstein  
c) Ferredy Nissan d) None of these
- Q.3 Percentage of silica in Portland cement is \_\_\_\_\_.  
a) 17-25% b) 25-50%  
c) 5-10% d) 100%
- Q.4 The proportional Iron oxide in white cement clinker should be \_\_\_\_\_.  
a) 1% b) 4%  
c) Less than 10% d) More than 4%

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Q.5 Initial setting time of ordinary portland cement is \_\_\_\_ mins.

- a) 30 mins                      b) 60 mins
- c) 90 mins                      d) 45 mins

Q.6 Colour of portland cement is \_\_\_\_\_.

- a) Grey                          b) Blue
- c) Orange                      d) Red

Q.7 Gypsum is used for controlling \_\_\_\_\_ Cement.

- a) Setting time
- b) Mixing time
- c) Softening temperature
- d) Ignition temperature

Q.8 The main component of lime stone is :

- a)  $\text{Na}_2\text{O}$                           b)  $\text{CaO}$
- c)  $\text{FeO}$                           d)  $\text{MgO}$

Q.9 Calcareous materials contains

- a) Alumina                      b) Magnesium
- c) Limestone                      d) All of these

Q.10 \_\_\_\_\_ apparatus is used to determine fineness of cement?

- a) Vicat                          b) Blaine Air Permeability
- c) Beaker                          d) Furnace

### Section-B

**Note: Objective type questions. All questions are compulsory. (10x1=10)**

Q.11 Colour of portland cement is \_\_\_\_\_. (Grey/Black)

Q.12 A good quality cement should have higher percentage of \_\_\_\_\_? (Lime/Silica)

Q.13 Formula of iron Oxide is  $\text{Fe}_2\text{O}_3$ . (True/False)

Q.14 The final setting time of ordinary Portland cement is 6 Hrs. (True/False)

Q.15 90 mesh sieve is used to measure \_\_\_\_\_ of cement.

Q.16 Blast furnace slag cement is made from \_\_\_\_\_. (Furnace slag/Tank furnace)

Q.17 Colour of lime stone is \_\_\_\_\_.

Q.18 Initial setting time of cement should not be less than \_\_\_\_\_. (30 min/1 hr)

Q.19 Soundness of cement is tested by \_\_\_\_\_ apparatus. (Vicat/ Le Chatelier's)

Q.20 Gypsum is used to control the initial setting time of cement. (True/False)

### Section-C

**Note: Short answer type Question. Attempt any twelve questions out of fifteen Questions. (12x5=60)**

Q.21 Write difference between natural and artificial cement.

Q.22 Describe the raw materials used in manufacturing of cement.