##  BHARATI VIDYAPEETH INSTITUTE OF TECHNOLOGY

**Question Bank (I-Scheme)**

**Name of subject: Concrete Technology Unit Test: II**

**Subject code: 22305 Course: CE**

 **Semester: III**

**CHAPTER 4 (Concrete design mixed testing of concrete)**

**(2 Marks)**

a. Name four methods of concrete mix design.

b. Write four objectives of concrete mix design.

c Define concrete mix design.

**(4 Marks)**

a. Explain the ultrasonic pulse velocity test and techniques of measuring pulse velocity through concrete.

b. Draw a neat and labelled sketch of rebound hammer and write two limitations of it.

 **CHAPTER 5 (Quality control of concrete)**

**(2 Marks)**

a. Define curing and state its methods.

b. List four materials used for filling joints in concrete.

c. Define stripping time of concrete .

d.Differentiate between volume batching and weight batching.

**(4 Marks)**

a. Suggest one type of materials for water proofing for the following situations:

(i) Rising dampness in building

(ii) Leakages in dam

(iii) Concrete continuously in wet or damp condition.

(iv) Leakages in lavatory, bathroom and kitchen floor

(v) Cracks on plastered surface

 (vi) Cracks on roof surface

b. Suggest the type of joints in concrete when it is likely to increase in volume due to temperature change. Explain it and draw its neat sketch.

c Explain the significance of batching, compaction and curing of concrete.

d. (i) Suggest the relevant method of water - proofing used for following construction.

1) Basements of buildings.

2) Swimming pool.

3) Water tank.

(ii) Suggest the relevant method of transportation of concrete used for construction in following situation.

1) Concreting in hilly areas.

2) Concreting of high rise building.

e. Write four requirements of good formwork and draw a sketch showing cross section of formwork for a L-shaped column.

f. Precautions to be taken while transporting n compaction of concrete.

g. Draw neat and labelled sketches of following:

(i) Plan of column formwork.

 (ii) Expansion joint with load transfer device.

**CHAPTER6 (Chemical admixtures in concrete ,special concrete and extreme weather concreting))**

**(2 Marks)**

a. Describe four characteristics of ready mix concrete.

b. State two purposes of using accelerating admixtures in the concrete.

c. State two disadvantages of air entraining admixtures.

1. **Marks)**

a. Write two effects and two precautions of cold weather and hot weather concreting.

b. . Differentiate between retarding and accelerating admixtures with following points.

(i) Hydration process.

(ii) Setting time

(iii) Weather condition

 (iv) Use.

c. Define the following special types of concretes with its one use.

(i) Vacuum concrete

(ii) Fiber reinforced concrete.

(iii) High performance concrete

 (iv) Self compacting concreted

d. Write two advantages and two disadvantages of vacuum de-watered concrete floor.

e. Explain light weight concrete with advantages and limitations.

f. Write down advantages n disadvantages of ready mix concrete.

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