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1<sup>st</sup> Semester B.Arch Examination, BENGAL ENGINEERING and SCIENCE UNIVERSITY  
2008-2009

Subj:- Materials and details of construction (AR102)  
Answer Q2 and any four questions from rest.

Time-3hrs  
Marks-70

Q1- a) What are the characteristics of good timber?

b) Explain-

- i) Defects of timber
- ii) Natural seasoning of timber
- iii) Conservation of timber
- iv) Preservation of timber

(2+8=10)

Q2- Explain the following:

- i) Cement should be stored in air-tight room
- ii) Timber should be stored in well ventilated room.
- iii) Brick should be soaked in water before use.
- iv) Sea sand is not suitable for building.
- v) Angular pit sand is best suited for masonry.
- vi) Stone to be laid on its natural bed only.
- vii) Cement should be used within six months from date of manufacture.
- viii) Use of gypsum in cement is necessary
- ix) Concrete has a tendency to shrink
- x) Broken bricks are suitable for PCC only.
- xi) White cement is used for decorative purposes.
- xii) Use of Blast furnace slag cement should be encouraged.
- xiii) Quartzite is suitable for road metal, aggregate.
- xiv) Natural seasoning yields better timber
- xv) Ridge sawing yields best quality of timber.

(15x2=30)

Q3- Write short notes on the following. (any 5)

- i) Aggregate
- ii) Bulking of sand
- iii) Efflorescence
- iv) Properties of a good building stone
- v) Use of fat lime
- vi) Fixing of door frame.

(5x2=10)

Q4- What do you mean by plastic? How they are classified? What are the properties of plastics in general? Discuss their uses in general now and also in future building industry. (10)

Q5- a) Discuss about the various stages of brick manufacture.

b) Draw alternative layers of brick laid in English Bond for 250 mm. Thick wall. (5x2)

Q6- How are stones classified? Discuss about various type of stones available in India and their uses in building industry. (10)

Q7- Write notes on-

- 1) Rapid hardening cement
- 2) Low heat cement
- 3) Natural cement
- 4) White cement
- 5) Pozzolanic cement

(2x5)