

SILIGURI INSTITUTE OF TECHNOLOGY
DEPARTMENT OF CIVIL ENGINEERING
Internal Examination I [CA3]
Concrete Technology (CE(PC)404)
Full Marks: 25 Maximum Time: 60 mins

Group-A

1. Answer any Five following: [5 x 1 =5]

- i) Fine aggregates are the aggregates having the size less than:
a) 5mm b) 4.75mm c) 3.50mm d) 2mm
- ii) Bulking of sand is maximum if moisture content is about
a) 2% b) 4% c) 6% d) 10%
- iii) In an ordinary portland cement, the composition of lime is
a) 50% b) 63% c) 21% d) 33%
- iv) Volume of 1 bag of cement in cubic meter
a) 0.0325 b) 0.0347 c) 0.0346 d) 0.347
- v) The mixture of different ingredients of cement, is burnt at
a) 1200 °C b) 1400 °C c) 1600 °C d) None of these
- vi) Efflorescence in cement is caused due to an excess of
a) Iron oxide b) Alkalis c) Alumina d) Silica
- vii) The following material does not belong to calcareous rocks
a) limestone b) laterite c) chalk d) marl

Group-B

Answer any Four. [4 x 5= 20]

2. Define Cement. Tabulate the oxides content. [1+4=5]
3. a) What are Bogue's Compounds? b) Briefly explain any one Compound contribution towards gaining of strength of cement with graph (2+3=5)
4. Describe any five field tests that can be done on cement.
5. Explain the importance of aggregates in Concrete.
6. Explain the Manufacturing process of cement.
7. What is bulking of sand? Explain the importance of bulking of sand [2+3=5]

March 2023

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