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**INTERNATIONAL CENTRE FOR APPLIED SCIENCES**  
(Manipal University)  
**II SEMESTER B.S. DEGREE EXAMINATION – JUNE 2016**  
**SUBJECT: BUILDING CONSTRUCTION -1 (CE I22)**  
(BRANCH: CIVIL /ARCHITECTURE)  
**MONDAY, 13<sup>TH</sup> JUNE, 2016**

**Time: 3 Hours**

**Max. Marks: 100**

- ✓ **Answer ANY FIVE FULL Questions.**
- ✓ **Assume missing data, if any, suitably and indicate them clearly.**
- ✓ **Draw sketches wherever necessary**

- 1A. Discuss the various geological classification of rocks.  
1B. Explain any four important properties of stones.  
1C. Briefly explain the physical and chemical classification of rocks.

**(10+4+6 =20marks)**

- 2A. Explain in detail, the various ingredients of a good brick earth, including the role played by each ingredient.  
2 B. What are the properties of good brick?  
2C. Explain with the help of neat sketches  
a) Allahabad tiles b) Sialkot tiles

**(8+4+8 =20marks)**

- 3A. List and explain properties of five important varieties of timber  
3B. Explain any four important mechanical properties of timber  
3C. Explain in details  
a) Fat lime b) Hydraulic lime c) Poor lime

**(5+6+9 =20marks)**

- 4A. What is meant by 'BOGUE' compounds? Explain the role of each compound.  
4B. Explain in detail, how Soundness test on cement is conducted?  
4C. List various important properties of Rubber.

**(8+6+6 =20marks)**

- 5A. Explain in briefs how plastics are classified, giving example for each type.  
5B. Explain the various factors influencing corrosion of reinforcing bars in concrete and their control measures.  
5C. Explain the constituents of an oil paint.

**(8+6+6 =20marks)**

6A. Write descriptive note on various important Properties of "Bitumen"

6B. Explain any four types of varnishes

6C. Explain the following types of floor tiles,

- a) Mosaic tiles    b) Marble slabs

**(6+6+8 =20marks)**

7A. Explain any four types of admixtures.

7B. Explain with help of neat sketch, "Compaction factor test" conducted on fresh concrete.

7C. Write explanatory note on a) Pull - out test b) Ultrasonic test, performed on hardened concrete.

**(8+6+6 =20marks)**

8A. Explain what is light weight concrete? Explain also its significance.

8B. What is meant by segregation? What are the main factors responsible for segregation? And also explain various control measures to avoid segregation.

8C. Explain in detail the "Compression test" conducted on hardened concrete.

**(8+6+6 =20marks)**

