

7.12.9

B. Arch 5th Semester Examination - 2010

Material and Methods of Construction (AR-502)

Time: 3 hours

Full Marks: 70

Answer Any Five Questions

- 1.(a) Explain the principles /techniques of thermal insulation in a building. 5
- (b) What is the difference between Blanket Insulation and Slab/Block Insulation? 4
- (c) Explain with sketches the methods of flat roof insulation. 5

2. (a) Name three allied products of Jypsum used in building construction. 3
- (b) What is the use of Blast Furnace Slag in building construction? 3
- (c) What are the different types of Fibre Glass? Explain the use of Fibre Glass in Construction. 4
- (d) What are the basic components of a Composite material? Name a few Composite Materials used in construction. 4

- 3.(a) Explain the principles of Shell Structure. 3
- (b) What are its advantages? 3
- (c) Explain with sketch different types of Dome Construction. 5
- (d) What is the basic principle of Folded Plate Construction? 3

- 4.(a) Explain with sketches different types of Tensile Structure. 9
- (b) Explain the principles of Pneumatic Construction. 5

5. (a) What is the necessity of Joints in a structure? 2
- (b) Explain the comparison between Expansion Joint and Isolation Joint. 3
- (c) Explain with sketch the use of Water Bar as a material used in expansion joint. 4
- (d) Explain with sketch the details of expansion joint in flat roof construction 5

- 6.(a) Explain with sketch the details of Sliding Joint between the roof slab and parapet wall. 4
- (b) Explain with sketch the formwork used in Construction Joint. 5

- (c) Explain with the sketch the difference between Complete and Partial Contraction Joint in construction. 5

7. (a) Discuss the utility of structural steel work in construction. 3
- (b) Discuss the use of Angle Sections and 'T' Sections in construction. 3

- (c) What is difference between Rivetted Connection and Welded Connection in structural steel work 3
- (d) Explain with sketch the methods of interconnection for constructing columns in structural steel work 5