

II B.Tech. I Semester Supplementary Examinations, May -2005
BUILDING MATERIALS AND CONSTRUCTION
(Civil Engineering)

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. (a) What are the tools for blasting and explain them along with neat sketches.
(b) What does dressing of a stone mean? Describe how dressing is carried out for Rubble and Ashlar masonry.
2. Explain how the tiles are manufactured.
3. (a) What is rapid hardening cement? What are its advantages?
(b) "After use, the concrete mixer should be thoroughly washed and cleaned." Explain. Why.
4. (a) What is meant by decay of timber? What are its causes?
(b) Explain how aluminum is alternate material for wood.
5. (a) Name different types of spread foundations.
(b) Explain in detail about any two types of spread footings, along with their advantages and disadvantages with neat sketches.
6. (a) Compare English bond with Flemish bond.
(b) Discuss essential features of single and double Flemish bonds.
7. Define roof covering? What are the various types of roof coverings commonly adopted in India? Explain them in detail.
8. Discuss the defects found in plastering work and suggest the remedies to avoid such defects.

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1. (a) What are different properties and uses of bitumen.
(b) Discuss different forms of bitumen.
2. (a) What are the advantages, disadvantages and uses of sand-lime bricks.
(b) Explain the compressive strength and water absorption tests for bricks.
3. (a) What is meant by artificial hydraulic lime? How is it manufactured?
(b) How the various ingredients of the concrete mix are measured? Explain.
4. (a) Describe the process of conversion of timber.
(b) What are the factors that affect physical properties of steel.
5. (a) Describe the various loads to be considered in designing foundations.
(b) Enumerate the objects of foundations
6. Enumerate the various classes of rubble masonry. What are the important points to be kept in view while carrying out rubble masonry work.
7. What do you understand by the following? Draw rough sketches to support your answers wherever necessary:
 - (a) Landing.
 - (b) Nosing.
 - (c) Handrail.
 - (d) Baluster.
 - (e) String.
 - (f) Waist.
 - (g) Scotia.
8. Mention the objectives of providing painting and plastering to the exposed surfaces.

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1. (a) Give the list of explosives used in blasting and explain their composition.
(b) Define natural bed of a stone and discuss its importance.
2. (a) What are the advantages and disadvantages of clamp burning.
(b) Write the comparison between clamp burning and kiln-burning.
3. (a) Distinguish between intermittent kiln and continuous kiln with the help of neat sketches in the manufacture of lime.
(b) Define cement concrete? Explain the importance of its each ingredient.
4. (a) What are the objectives of preservation of timber?
(b) State the requirements of a good preservative for timber.
5. (a) What are the points to be considered while designing foundations on reclaimed soils.
(b) Discuss the essential requirements of a good foundation.
6. Explain the various sorts of coursed rubble masonry with sketches.
7. (a) Differentiate between Mosaic and Terrazzo floors? For what type of works you recommend the above floorings?
(b) "For large spans shell roofs are provided". Discuss the factual situation of the above statement.
8. How would you proceed to paint
 - (a) a new wood paneled door.
 - (b) a new steel roof truss of a workshop.

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1. (a) What are the precautions to be taken in the process of blasting.
(b) Write a brief note on preservation of stones.
2. (a) Explain the following:
 - i. Clamp and kiln.
 - ii. Bullnose brick and cownose brick.(b) Explain briefly water absorption test and warpage tests for tiles.
3. (a) What is soundness of cement ? how it is determined in laboratory ?
(b) What is fineness of cement ? How it is determined in laboratory?
4. (a) Describe the process of conversion of timber.
(b) What are the factors that affect physical properties of steel.
5. (a) What are the causes of failures of foundations.
(b) Discuss some methods of improving the bearing capacity of soil.
6. (a) State the differences between rubble and Ashlar masonry.
(b) Describe composite Masonry.
7. (a) What are curved roofs?
(b) Describe the Method of construction of on R.C.C. flat roof.
8. What is the object of painting or varnishing a surface and where will you prefer a paint to varnish and vice versa?
