

CSM : 17

**CIVIL ENGINEERING
PAPER - II**

Time Allowed : 3 hours

Full Marks : 100

Figures in the margin indicate full marks for the questions.

Attempt any 5 (five) questions taking not more than 3 (three) questions from each Part.

PART - A

1. (a) What is meant by the terms “seasoning of timber” and “preservation of timber”? Name the various methods of applying preservations of timber. **(10)**
(b) What is meant by soil stabilization? What are the different methods of soil stabilization? Discuss the method of bitumen stabilization of soil. **(10)**
2. (a) What do you understand by PERT and CPM in the management of a project? Where do you suggest their use? **(10)**
(b) How the bricks classified as per IS code? What are the properties associated with this classification? **(10)**
3. (a) What are the objectives of building laws? Explain the terms (i) Building line (ii) Built up area (iii) floor area ratio. **(10)**
(b) What are the different types of road sign? Give example of each with appropriate sketches of each type. **(10)**
4. (a) Define Contour. Explain the different methods of contouring. What are the uses of contour map in civil engineering projects? **(10)**
(b) Draw a neat dimensional sketch of a single B.G. track in embankment and label the parts. What are the requirements of an ideal permanent way? **(10)**

PART - B

5. (a) Describe with neat sketch the construction and working principle of a septic tank. (10)
- (b) What is meant by 'river-training' and what are the different objectives served by it? Enumerate the different methods which are used for controlling and training rivers and describe any one method in details. (10)
6. (a) What is meant by water logging? What are its ill effects? Describe some anti-logging measures with suitable sketches. (10)
- (b) What is the difference between combined sewer system and a separate sewer system? Which one is preferable and why? (10)
7. (a) What is runoff? Discuss the factors in details that effect the runoff. Explain the different methods of estimating runoff. (10)
- (b) What are cross drainage works? Mention various types of cross drainage works and the conditions which they are used. (10)
8. (a) What are the different forces considered for stability analysis of a gravity dam? Explain the middle third rule. (10)
- (b) What is environmental impact assessment (EIA) Explain the parameters that are to be included for EIA of a river valley project. (10)

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