



Answer Five (05) questions out of Eight (08) questions.

Answers should be illustrated with sketches and diagrams with assumptions stated, clearly and neatly

(Q1) Timber has replaced by many other materials for most of the applications in the recent past. Still Timber is used in many industrial applications in many parts of the world.

- (i) Classify and explain with examples the trees that supply Timber to the Construction Industry. (05 marks)
- (ii) Name and explain three(03) properties in Timber that determine the strength. (05 marks)
- (iii) Name and explain three(03) Preservation methods of Timber from moisture. (05 marks)
- (iv) What is Plywood and explain the advantages of using Plywood. (05 marks)

(Q2) Blocks from early days have used in construction Industry and in present, it has replaced traditional burnt clay bricks in many applications.

- (i) Name Four(04) types of construction blocks that are presently used in Sri Lankan Construction Industry and briefly explain the procedure of making them. (05 marks)
- (ii) Classify and explain the types of cement blocks used in Sri Lanka according their physical characteristics. (05 marks)
- (iii) Name and explain two (02) quality control measures used in manufacture of cement blocks. (05 marks)
- (iv) Name four(04) advantages of using cement blocks for construction. (05 marks)

(Q3) Asbestos from recent past is used in many construction applications.

- (i) Name three (03) properties of asbestos and corresponding applications industry. (05 marks)
- (ii) Identify three (03) asbestos cement products manufactured in Sri Lanka for construction Industry. (05 marks)
- (iii) State three (03) important functional requirements that should satisfy by a particular roofing sheet. (05 marks)
- (iv) What steps would you take in laying asbestos-cement sheets on a roof to ensure that these requirements are met. (05 marks)

(Q4) (a) Cast Iron in general is not particularly strong or tough material, but is widely used in engineering industries.

- (i) What is 'Grey Cast Iron' (05 marks)
- (ii) Name Five (05) significant properties of 'Grey Cast Iron'. (05 marks)



- (b) Aluminum is a metal which is widely used second to steel from recent in the construction industry.
- State and briefly explain four (04) metal treatment methods done to improve the performance of aluminum and its alloys. (05 marks)
 - Name Four (04) significant physical properties of pure aluminum. (05 marks)
- (Q5) Polyvinyl chloride (PVC) is the oldest and most common plastic being used in the construction Industry. .
- State Four (04) important properties of PVC. (05 marks)
 - State and explain Four (04) advantages of using UPVC pipes. (08 marks)
 - Briefly explain two(02) manufacturing processes of PVC products used in the construction industry. (07 marks)
- (Q6) Ranging from Roof, Wall to Floor there is a wide range of tiles available in Sri Lankan Construction Industry. .
- State Three(03) different manufacturing defects that can be found in local roof tiles. (05 marks)
 - Write and explain two(02) common defects that can be found in Ceramic wall tiles. (05 marks)
 - State Four (04) performance standards that should be met by any roofing material. (05 marks)
 - State and explain Three(03) important physical properties that should be satisfied by any wall or floor tile. (05 marks)
- (Q7) Plaster is of great importance as a finishing material as it contributes much to the final appearance.
- Propose a mix proportion for a plaster plastering an external wall. (05 marks)
 - Briefly explain the process of mixing of a lime mortar. (05 marks)
 - Explain what is meant by 'Waterproofed Mortars'. (05 marks)
 - Differentiate between color washing and white washing . (05 marks)
- (Q7) Paints as a finishing material is having a great variety and flexibility in application in present day constructions.
- Describe the essential components of paints. (05 marks)
 - Briefly discuss about the types of wood varnishes and the varnishing process. (05 marks)
 - Briefly explain the steps that should be followed when painting on a new wood work (05 marks)
 - Discuss how the different types of paints are chosen for iron works based on the application and the environment. (05 marks)
- (Q8) Due to the increasing demand in raw materials, environmental restrictions and indirect costs have caused to increase the prices and reduce the quality of Clay Bricks in Sri Lanka.
- State Five(05) defects that you can be identified in Bricks visually at the site. (05 marks)
 - Name and explain Four (04) types of Burnt Clay Bricks used in Sri Lanka. (05 marks)
 - Explain what is meant by 'Efflorescence' in bricks. (05 marks)
 - Explain how you would test for 'Efflorescence' (05 marks)

