



**ZIMBABWE**

**MINISTRY OF HIGHER AND TERTIARY EDUCATION,  
INNOVATION, SCIENCE AND TECHNOLOGY  
DEVELOPMENT**

**HIGHER EDUCATION EXAMINATIONS COUNCIL  
(HEXCO)**

**NATIONAL CERTIFICATE**

**IN**

**ENVIRONMENTAL HEALTH**

**SUBJECT: Building Practice**

**PAPER NO: 399/15/S01**

**DURATION: 3 Hours**

**MARCH/APRIL 2022 EXAMINATION**

**REQUIREMENTS**

**INSTRUCTIONS TO CANDIDATE**

**Answer ANY FIVE (5) questions.**



QUESTION 1

- (a) Outline at least five essential protective clothing to be used by workers at a building site. (5 marks)
- (b) List five (5) important items that a client should have before engaging an Architect to design a building plan. (5 marks)
- (c) Illustrate a corner profile using explanatory notes and labels and show clearly how a quoin is established. (10 marks)

QUESTION 2

- (a) Produce a geometrically axed semi – circular arch whose span is 1200mm, rise 600mm and depth of face 200mm.  
(Use a scale of 1:10 and label any 10 parts) (10 marks)
- (b) Explain the significance of drilling trial holes on the ground before construction work begins. (10 marks)

QUESTION 3

- (a)
  - (i) Explain the reasons for lacing reinforcement rods near the bottom. (4 marks)
  - (ii) Explain why the ends of rods are hooked. (4 marks)
- (b) Use sketches to show the difference between a W or fork roof truss and king post roof truss. (12 marks)

QUESTION 4

- (a) Calculate the following material quantities :-
  - (i) The number of roofing sheets (endurite type) to be used on a gabled roof of length 10 metres (5 marks)
  - (ii) The number of asbestos sheets on a gabled roof of 20 metres. (5 marks)
- (b) Describe in detail the purpose of construction and finishing of the following door types:-
  - (i) braced and battered door (5 marks)
  - (ii) framed ledged and battered door. (5 marks)

QUESTION 5

- (a) (i) With reference to ventilation of a building structure.  
(ii) Outline and explain at least two classifications for ventilation. (4 marks)
- (b) Give the minimum standard sizes for the following
- (i) Minimum thickness of foundation concrete.  
(ii) Door height, with, thickness  
(iii) Width and depth of trenching for housing  
(iv) Partition walls.

QUESTION 6

Illustrate and explain the following bonds

- (a) Stretcher bond. (10 marks)  
(b) header bond (10 marks)

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