

APPENDIX

CARIBBEAN EXAMINATIONS COUNCIL

**REPORT ON CANDIDATES' WORK IN THE
SECONDARY EDUCATION CERTIFICATE EXAMINATION**

MAY/JUNE 2009

**BUILDING TECHNOLOGY
OPTION II – CONSTRUCTION**

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Question 6

(a) Ingredients of oil paint

- Pigment
- Binder
- Thinner
- Dryer
- Solvent

(b) Emulsion paint (Water based)

Steps:

- Prime surface and fill holes/cracks
- Apply first coat
- Check for defects and correct
- Apply evenly a second coat and allow to dry

(c) Varnishing:

- Fill all gaps
- Sand surfaces (medium)
- Apply sanding sealer
- Sand surfaces (fine)
- Wipe clean and apply varnish

(d) Types of floor finishes

- Carpet
- Vinyl tiles
- Wood block
- Terrazo
- Cement/sand screed
- Paint

(b) (i) Combined System – In this system all forms of discharge are conveyed in the same sewer line.

(ii) Separate System – This is where separate sewers are used to discharge waste; one for effluent and the other for soil disposal.

(c) Combined System

- Advantage
- Easy to maintain.
 - All drains are flushed when it rains.
 - It is impossible to connect to the wrong sewer.

- Disadvantage - All discharge must pass through the sewage treatment installation.
- When there is heavy rain there is the possibility of overflow of the septic tank.

Separate System

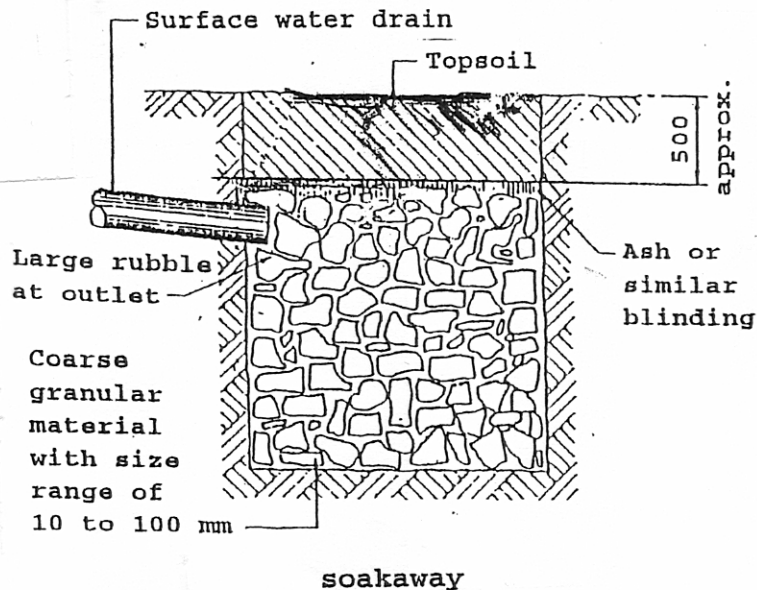
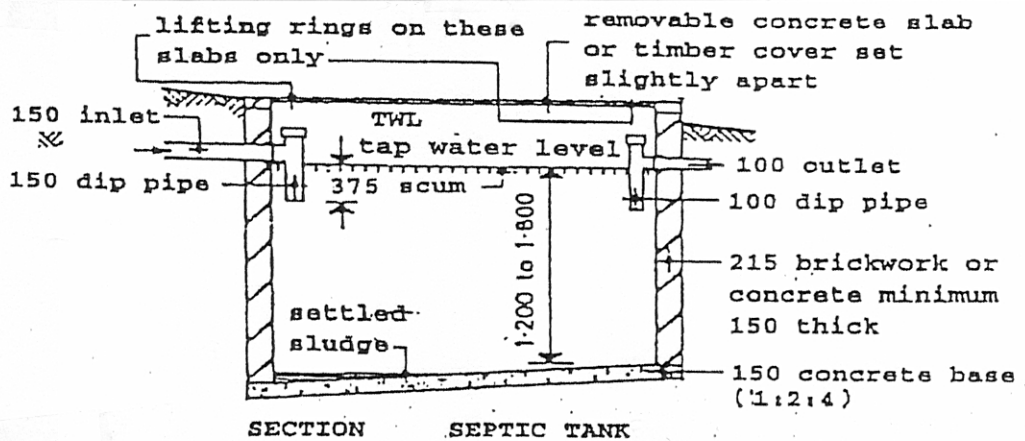
- Advantages: - One sewer receives the surface water discharge and conveys this directly to a suitable outfall without treatment.
- There is no chance of overflow during heavy rains.

Disadvantages:

- There is the risk of connecting to the wrong sewer line.
- Soil drains are not flushed during heavy rains.

Question 7

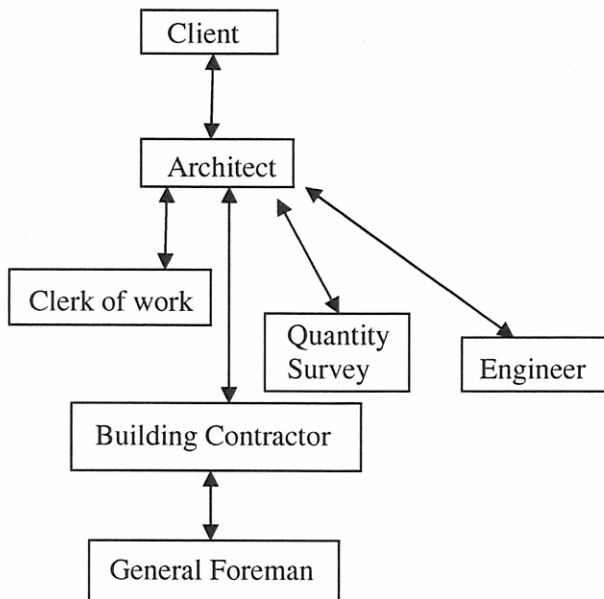
(b) (i)



Question 8

- (a) (i) Carpentry – install doors, construct roofs, construct formwork
- (ii) Electrical installation – install electrical fixtures, carries out wiring work
- (iii) Masonry/Tiling – works with concrete & mortar. Lay tiles, Build stone walls
- (iv) Painting and decorating – Responsible for finishing the building by applying paint
 - Finish Joinery Fitments with various types of finishes. E.g. varnish, stain, etc
- (v) Plumbing – Lay pipes, install taps, install toilet bowls, etc.

(b)



(b) **Building owner:** the client; the person which commissions the work and directly or indirectly employs everybody.

Architect: engaged by the building owner as his agent to design, advise and ensure that the project is kept within cost and complies with the design.

Clerk of works: employed on large contracts as the architect’s onsite representative. He has only liaison power and cannot issue instructions on his own behalf; he can only offer advice.

Quantity surveyor: engaged to prepare bills of quantities, check tenders, prepare interim valuations and advice the architect on the cost of variations.

General Foreman : responsible to the contractor and supervises activities on the site.

Engineer: responsible for designing the structural component of the building.

Question 9

(a) **Factors:**

1. History
2. Financing
3. Materials
4. Culture
5. Climate

Explanations

- History of site: Flood prone; landslide, built-up and previous use
- Material – choice and availability of material, cost, suitability
- Financing – Ability of clients to access funds for the project
Is it affordable? (Affordability)
- Climate – wet, hot, cold, windy would determine where windows or balconies are placed in a building, design of windows
- Culture – would have an influence on the shape and style of the building

(b) **British**

Bricks

Arches

MDF

Steep Roof

Dormers

Casement Windows

Architraves

American

- High rise building
- Dry wall
- Steel frame building
- Split-level building with separate roofs for each
- Panel construction
- Glass framing
- Curtain walls
- Column and Beams