

INTRODUCTION TO BUILDING CONSTRUCTION (211-2)

MAY/JUNE 2007

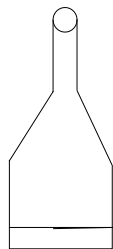
QUESTION 1.

A. State five factors that can cause accidents in the workshop.

ANSWER:

Five factors that can cause accidents in the workshop include:

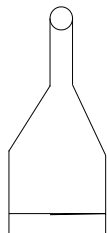
- (i) Working on moving or dangerous equipment.
 - (ii) Quarreling and fighting in the workshop.
 - (iii) Failure to use safety clothing or personal protective devices e. g goggles, respirator, helmets or ear plugs.
 - (iv) Taking unsafe position or posture when operating equipment.
 - (v) Lack of adequate lighting and ventilation.
 - (vi) Overloading equipment.
 - (vii) Lack of suitable training on safety regulations.
 - (viii) Failure to enforcement safety practice rules.
- B. With the aid of neat sketches, show the tools for carrying out the following craft work.
- (i) Picking mortar from the head pan



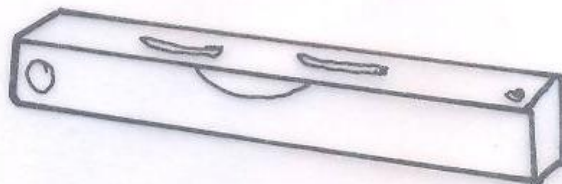
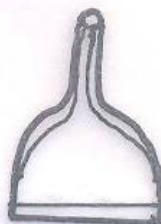
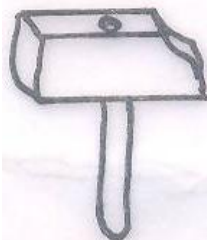
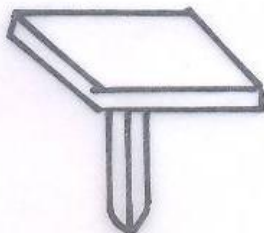
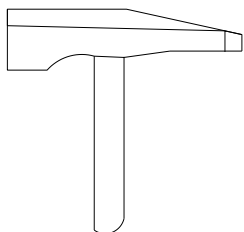
- (ii) Cutting holes or chases.



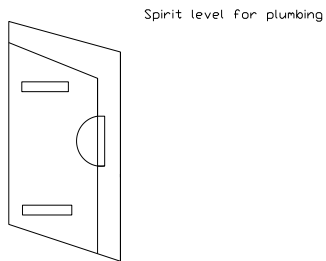
- (iii) Carrying mortar during pointing.



Bolster and Hammer for cutting bricks



(iv) Cutting bricks



- (v) Leveling courses horizontally.

QUESTION 2

- a. State three (3) cuttings tools used in the carpentry workshop and two (2) boring tools.

ANSWERS

Three cutting tools:

- (i) Hand saw
- (ii) Chisel
- (iii) Gouges
- (iv) Key hole saw
- (v) spoken shaves

Boring tools

- b. State three types of saws and two types of planes used in the carpentry workshop

ANSWERS

- (i) Cross cut saw
- (ii) Rip saw
- (iii) Compass saw
- (iv) Tenon saw
- (v) Dove-tail saw
- (vi) Back saw
- (vii) Key-hole saw
- (viii) Skew back hand saw
- (ix) Coping saw

QUESTION 3

- a. State two (2) methods of site clearing

ANSWER

Two methods of site clearing

- (i) Manual clearing/hand clearing
- (ii) Mechanical clearing

Mention three (3) tools used in each method

- (1) Three tools used in manual/hand clearing:

- (a) Shovel
- (b) Pick
- (c) Fork
- (d) Craft
- (e) Cutlass
- (f) Rake

- (2) Three tools used in mechanical clearing

- (i) Bulldozer
- (ii) Caterpillar
- (iii) Skimmer
- (iv) Dumper

QUESTION 4

- A. State three (3) methods of setting out

ANSWER

- (I) Using builder's square
- (II) Using 3:4:5 method
- (III) Site square
- (IV) Theodolite

- B. Define the term profile

Profiles are established at the corners of the building and also at intersections and used for securing 25mm or 100 x 25mm nailed to 50 x 50mm posts or pegs driven firmly into the ground, saw cuts or nails demarcate the width of walls and the spread of foundations: And the bricklayer sets his lines to these and when working below ground, plumbs down from them at the corners of the building.

QUESTION 5

State five (5) types of foundations and state where each is most suitable.

ANSWER

S/NO	FOUNDATION	WHERE USED
i	Strip Foundation	Rocky, solid chalk, sands and gravel, gravel with only small proportion of clay
ii	Short-bored pile foundation	Shrinkable clay
iii	Raft foundation	Soft natural ground or fill, or on ground that is liable to subsidence as in mining areas
iv	Pad foundations	Sand and gravel with only small proportions of the clay, dense salty sand
v	Wide-strip foundation	Where the load bearing capacity of the ground is low e.g marshy ground, soft clay, salty ground

QUESTION 6

Identify the following sectional parts of solid ground floor.

ANSWER

- (i) Earth filing
- (ii) Hardcore filing
- (iii) Oversite concrete
- (iv) Cement screed

QUESTION 7

- (a) State five(5) types of walling materials
 - (i) Brick
 - (ii) Sandcrete block
 - (iii) Stone
 - (iv) Concrete
 - (v) Timber
 - (vi) Mud
 - (vii) Glass
 - (viii) Metal