

NATIONAL BUSINESS AND TECHNICAL EXAMINATIONS BOARD
NATIONAL TECHNICAL CERTIFICATE EXAMINATION

CARPENTRY & JOINERY

SECTION B – ESSAY

ATTEMPT FIVE QUESTIONS ONLY

1. A piece of wood 20MM X 45MM X 400MM finished size is to be prepared.
 - a. State the size of wood from which the finished size can be obtained.
 - b. Name the tools most suitable for preparing the piece of wood.
 - c. State the function of each tool.

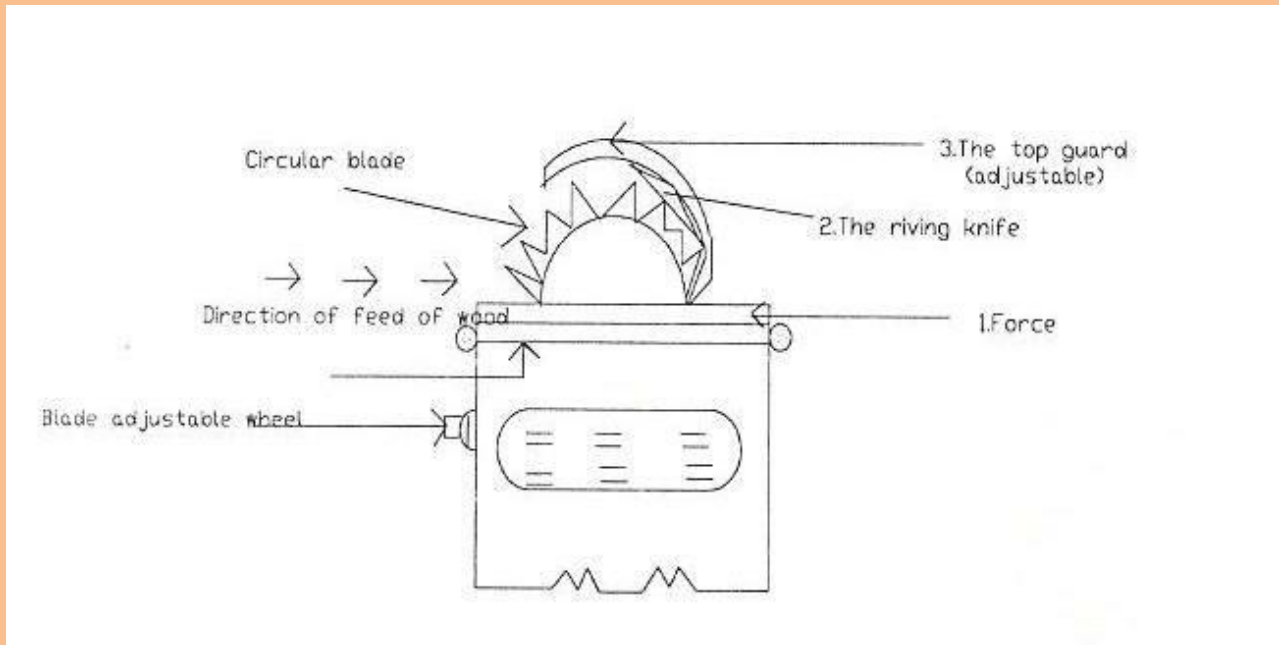
- 1a. The size of wood from which 20MM X 45 MM X 400MM could be obtained is:
25MM X 50MM X 405MM.

- 1b. The tools most suitable for preparing the piece of wood stated above are:
 - i. Pencil
 - ii. Tape rule
 - iii. Try square
 - iv. Marking gauge
 - v. Cross cut saw
 - vi. Jack plane

- 1c. The function of each tool listed above are:
 - i. Pencil: A led pencil is used for marking parallel lines on the wood.
 - ii. Tape Rule: The tape rule is used for taking measurement of the specific sizes to work on.
 - iii. The try square: The try square is employed to try the squareness of the stuff being prepared and also for marking out
 - iv. The marking gauge: This hand tool is used for marking out parallel lines applied to gauge the width and thickness of the piece being prepared.
 - v. Cross cut saw: As the name implies, this tool is used to cut the piece of wood being prepared to the required length.
 - vi. The Jack plane: The jack plane is used for planning the piece to the required width and thickness.

2. With the aid of a neat sketch, draw the side view of a circular saw to show:
 - i. The fence
 - ii. The riving knife
 - iii. The tops guard.

2a. The circular saw machine



The side view of a circular sawing machine.

2b. Briefly explain the function of riving knife on the machine

The sole function of a riving knife on a circular saw machine is to widen the timber being sawn to prevent it from bending the saw as it is slightly thicker than the saw.

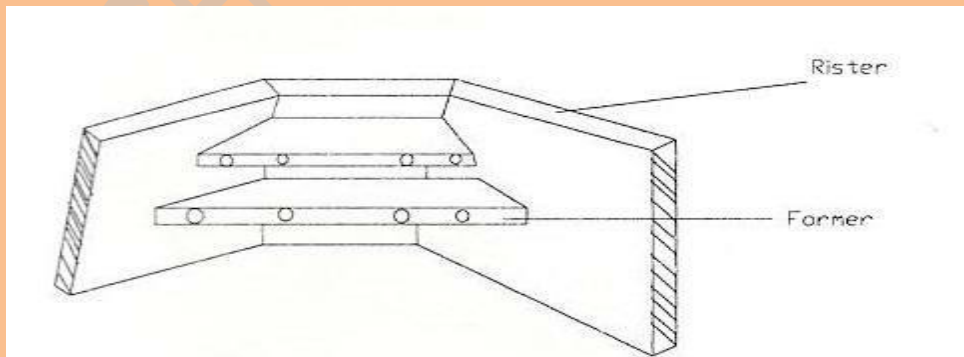
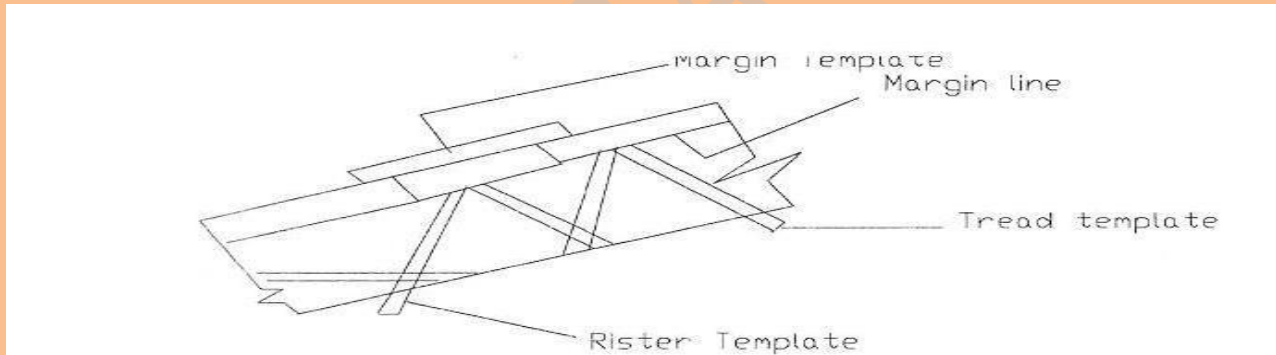
3. In a neat diagram illustrate how pellets and capping are used to conceal the screw head in joinery work.

Diagrams showing pellets and capping

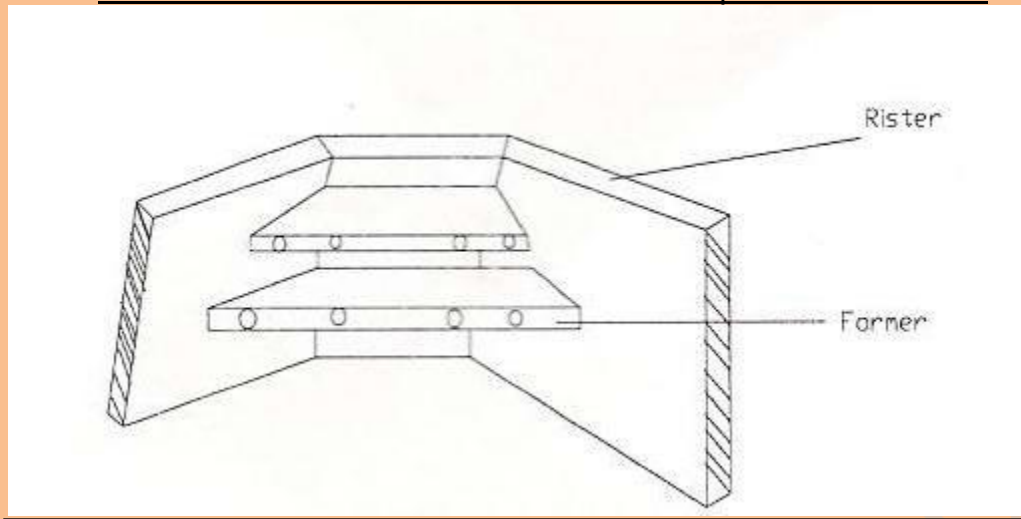


4. a. in a neat sketch illustrate how the first riser is formed in a shaped step
b. Also, show how the formers are screwed in position to the riser.

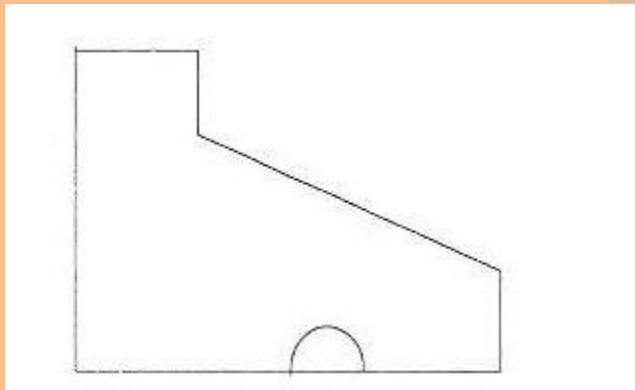
4a Formation of First Riser



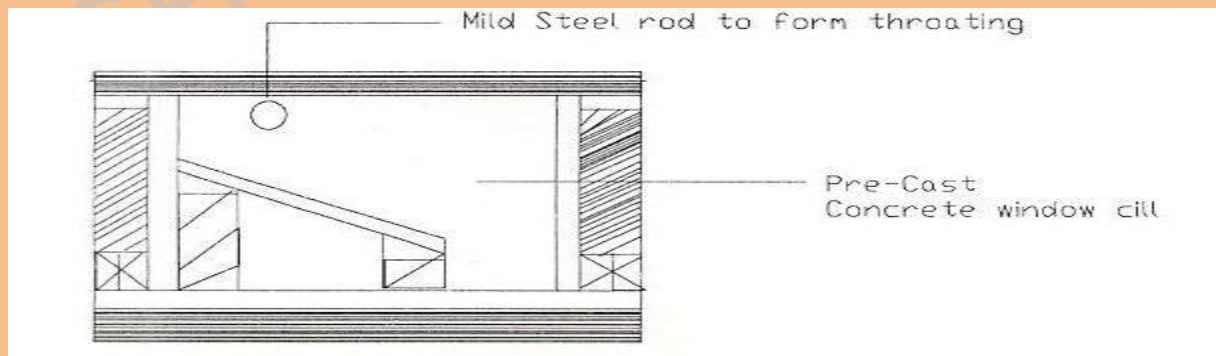
4b. sketch to illustrate how former is screwed in position to the riser



5. A window cill pre-cast concrete unit as shown in fig. 1 is to be produced.
a. With the aid of neat drawing, design a formwork to show the cross sectional view of the concrete unit.

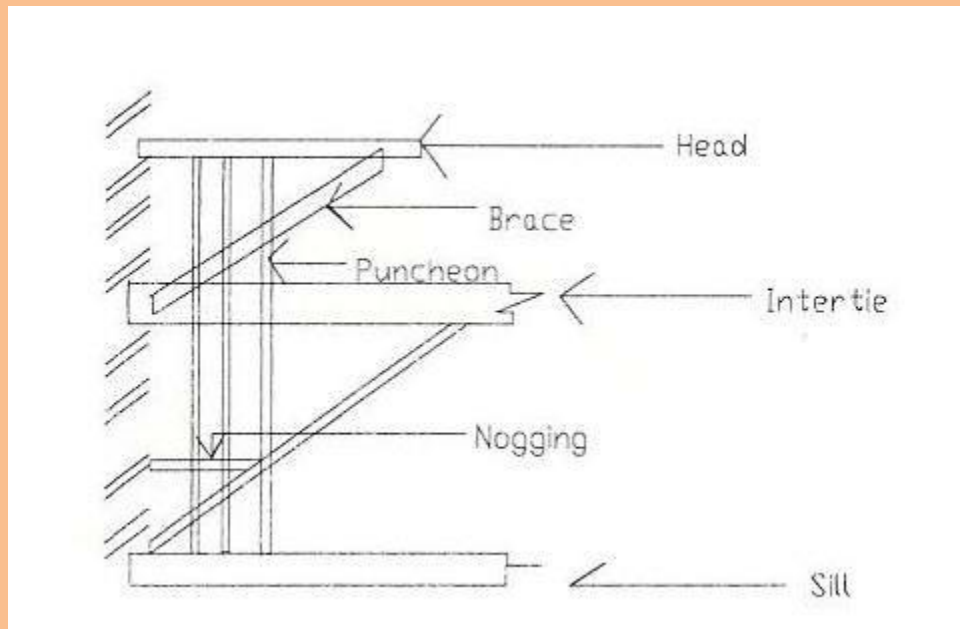


A drawing showing formwork to cast a concrete window cill



- 6 a. In a simple but neat sketch, show the position of a puncheon in a partition
b. Also name THREE other surrounding members.

6. A partial elevation of Framed partition showing puncheon



- 6b. i. brace
ii. head
iii. nogging