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NATIONAL BUSINESS AND TECHNICAL EXAMINATIONS BOARD
NATIONAL CERTIFICATE EXAMINATION
GENERAL WOOD WORK

Attempt FOUR questions only
All questions carry equal marks

- 1a. Define conversion of timber
- a. Conversion of timber: The term conversion of timber is the breaking down or sawing up of logs into commercial sizes.
- b. State the method of conversion that would be best for boards required:
- (i) for packing cases
 - (ii) for flooring
 - (iii) to show growth ring figure
 - (i) to season quickly
 - (ii) to show ray figure.

	Item for conversion	Best method of conversion
i.	For packing cases	Through and through sawing
ii.	For flooring	Quarter or rift sawing
iii.	To show growth ring figure	Taugential sawing
iv.	To season quickly	Through and through sawing
v.	To show ray figure	Quarter sawing

- 2a. Explain the term “preservation of timber”
- 2a. The term “preservation of timber” is any treatment given to timber by the use of the various preservatives to prolong the life span of the timber against destructive agents like termites, wood pests, borers etc.
- b. List and explain any THREE methods used in applying preservatives
- (i) Application by hand brush/spray gun.
Preservatives is commonly applied by brush and spray gun. The preservatives should be liberally applied and any shakes or cracks in the surface should be filled. Two or three coats are necessary and each coat should be allowed to dry before the next is applied.
 - (ii) By dipping
 - (iii) By steeping

- (ii) **By dipping:** This is the submerging of timber in a preservative tank for a short time. The size of the tank is governed by the size and shapes of timber units to be dipped. After the timbers are dipped, the units are placed on a draining rack. Usually of corrugated sheets to drain off.
- (iii) **Steeping:** This method of applying preservatives consists of submerging timber in a tank of either hot or cold preservatives for a period of two or four hours.

Dipping and steeping methods are more effective than application by hand brush. When seasoned timber are placed in a tank and held in position with bars, cold creosote is run into the tank to cover up the timber and is gradually heated to 94⁰C. After being maintained at this temperature for one hour or three hours, the heat is turned off and the preservative is allowed to cool. The liquid is then pumped back to the storage tank and the timber removed.

3a. What is veneer?

a. Veneer is a thin layer or sheet sliced from wood and is usually of uniform thickness.

b. Name and write brief notes on any THREE methods of veneers used in construction.

- (i) knife cutting
- (ii) rotary cutting
- (iii) saw cut

(i) **Knife cutting:** A squared log is fastened to a machine bed. As the bed moves up and down, a sharp knife slices off the veneers grain and figure patterns. They are used as face veneer.

(ii) **Rotary Cutting:** A round log is turned in a lathe. While it is turning, a sharp knife peels off the veneer. This passes over a long bench where it is cut up into lengths by a second knife called a guillotine.

(iii) **Saw cut:** Veneers cut under this method are the stoutest and most costly. They are the most costly because about 50% (percent) of the log disappear in dust. This method is seldom used today because of this reason.

4a. Differentiate between face plate turning and turning between centres.

a. Face plate turning is fixed permanently and it hold the item to be turned while turning between centres refers the action of moving items being turned on the lathe machine

b. List five parts of a lathe machine

- b. Five parts of a lathe machine are as follow:
- (i) Drive pulley
 - (ii) Chuck or screw chuck
 - (iii) Tail stock
 - (iv) Tool rest holder
 - (v) Auger
5. Explain the following technical terms:
- (i) Carcass
 - (ii) Pocketing
 - (iii) Keying
 - (iv) Wedging
 - (v) Shooting
- (i) Carcass: This is a body or the „bare bones of a boxlike construction. Any wide boards joined together to make such articles as boxes, cupboards, side boards etc for a carcass. In other words, it is the skeleton of a job before it is covered up with plywood or other similar materials.
- (ii) Pocketing: This refers to an opening in a wall in which a beam is to be inserted. It also refers to a situation where a piece of wood is buried into another. This also refers to a situation where a hole is cut for a wood screw to occupy.
- (iii) Keying: Keying is a special hard wood piece let into a joint to strengthen it, such as double dovetail key or a feather, or a small slip let into a mitre joint.
- (iv) Wedging: This is when two tapered pieces of wood are in timbering, centering or in formwork for decking as means of easing and adjustment.
- (v) Shooting: Shooting refers to the planning of an end of a piece of wood or an end grain of wood sometimes in conjunction with a shooting board.