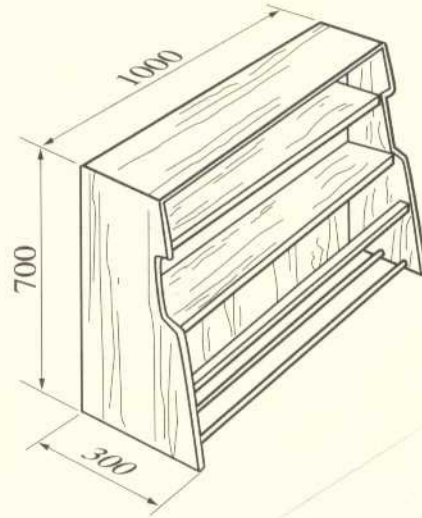


Question 5 (20 marks)

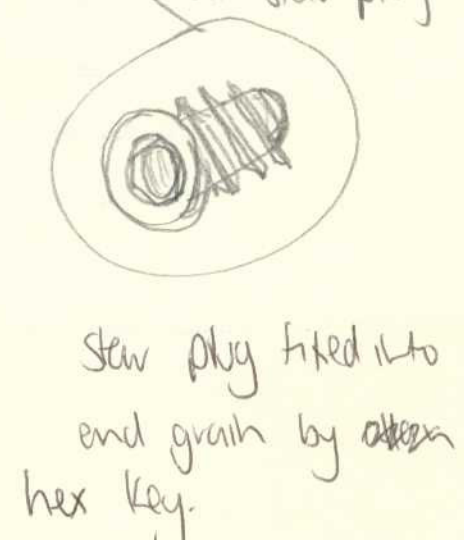
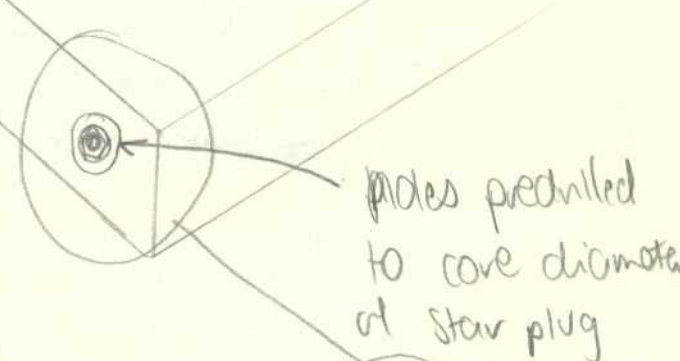
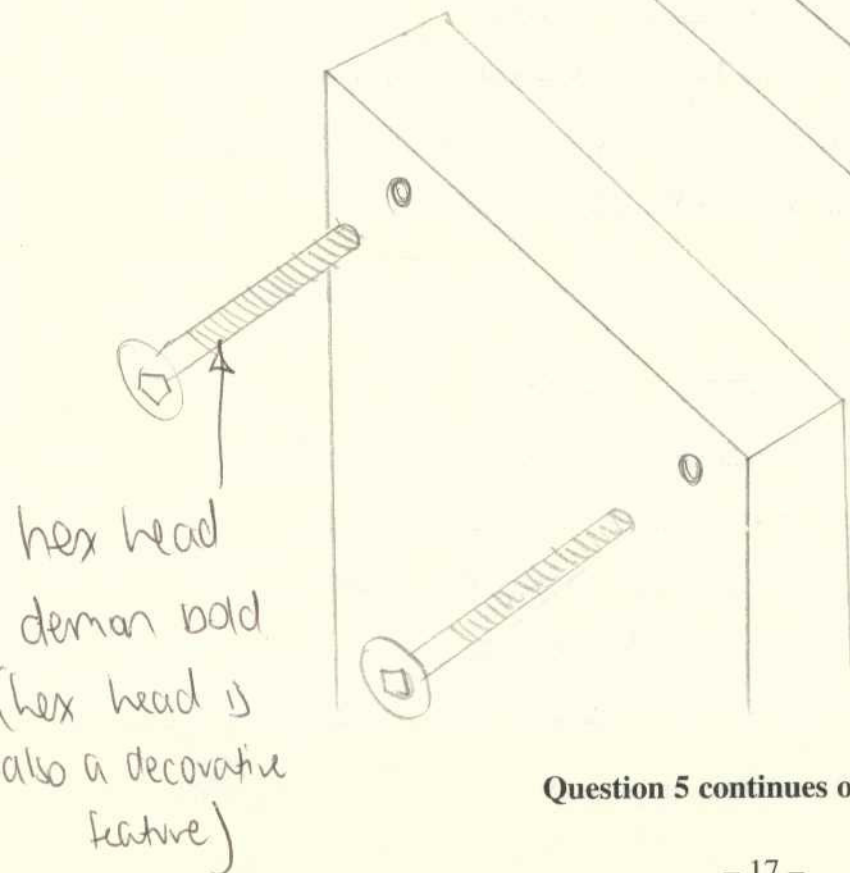
The wall unit shown is mass-produced from 18 mm thick veneered medium-density fibreboard, and assembled using cabinet hardware fittings.



- (a) Identify and sketch a cabinet hardware fitting that would be suitable for this purpose.

2

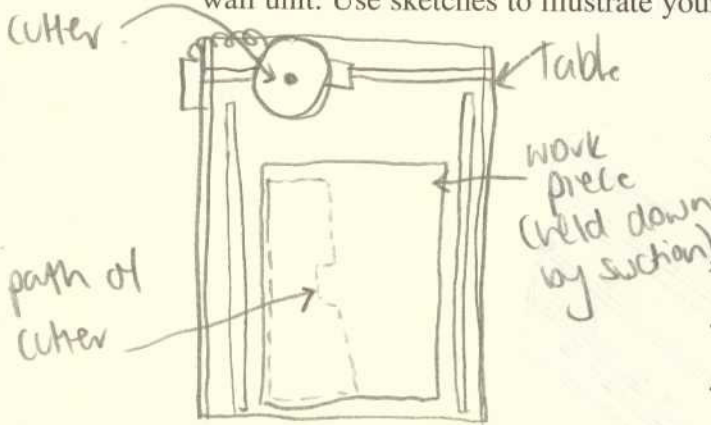
Star plug + demon bolt



Question 5 continues on page 18

Question 5 (continued)

- (b) Describe a suitable manufacturing method for mass-producing the sides of the wall unit. Use sketches to illustrate your answer. 4



Using a CNC router.  
 a computer controlled  
 cutter is guided  
 above ground the shape  
 desired with minimal  
 waste. The design is worked  
 out and converted in advance

view from above

- (c) Preference was given to medium density fibreboard (MDF) when designing this unit. 3

Discuss the advantages and disadvantages of using MDF over other manufactured boards for this purpose.

Adv. - no grain therefore no possibility for  
 shrinkage and or warping under natural conditions.  
 - readily available in sheet form  
 - doesn't chip as readily as chipboard when cut.  
 disadv. - particles can be hazardous to health.  
 at proper dust extraction required.

- (d) Discuss the reasons why the manufacturer decided to market the wall unit using cabinet hardware fittings. 3

The manufacturer may have decided  
 the unit to be transported and sold  
 in knock-down form, with minimal  
 assembly required consumers may be able  
 to do it. Thus the manufacturer can  
 focus on producing more instead of assembling them for  
 sale.

Question 5 continues on page 19

## Question 5 (continued)

- (e) Describe the processes the manufacturer would follow to ensure that quality was maintained throughout the mass-production of the wall unit.

8

Is First of all the manufacture would ensure only the best pieces of MDF are utilized.

In the production of the sides, they would be cut out on a CNC router, totally computer controlled, eliminating human error thus maximising efficiency and quality.

The top and shelves would be accurately cut on a radial arm saw. Evidently the blade is sharp and perpendicular to the pieces. A jig may be used to achieve the length eliminating error and increasing quality again. ~~The fittings may be applied~~ The knock-down fittings may be applied using a template for pre-drilling to ensure accuracy regards so that the two holes line up. And holes drilled accurately for dowels to support the shelves. With the backing being cut out accurately to fit the back snugly. mass production at this workplace is achieved and apparent through the quality achieved and minimal unaided working by ~~the~~ manufacturers.

End of paper