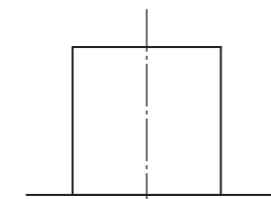
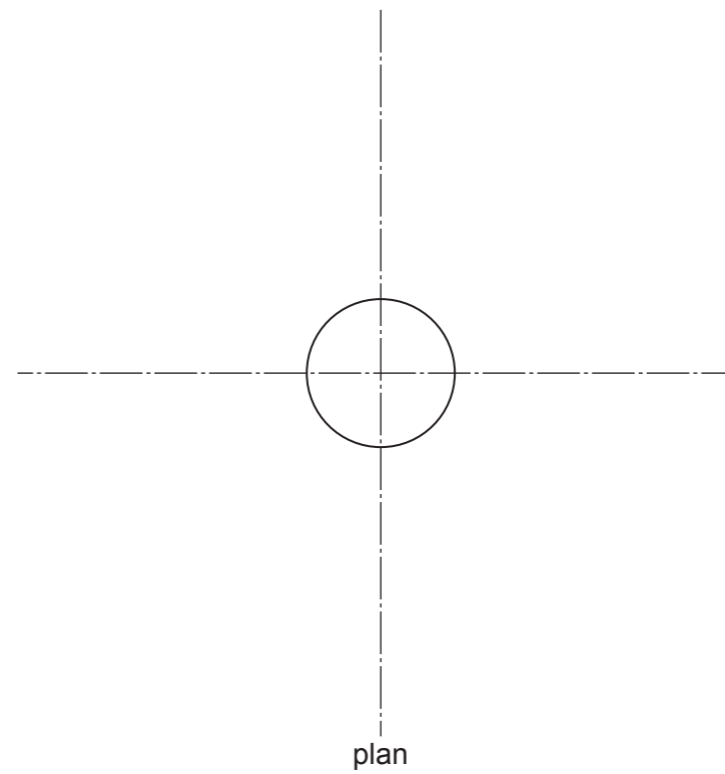
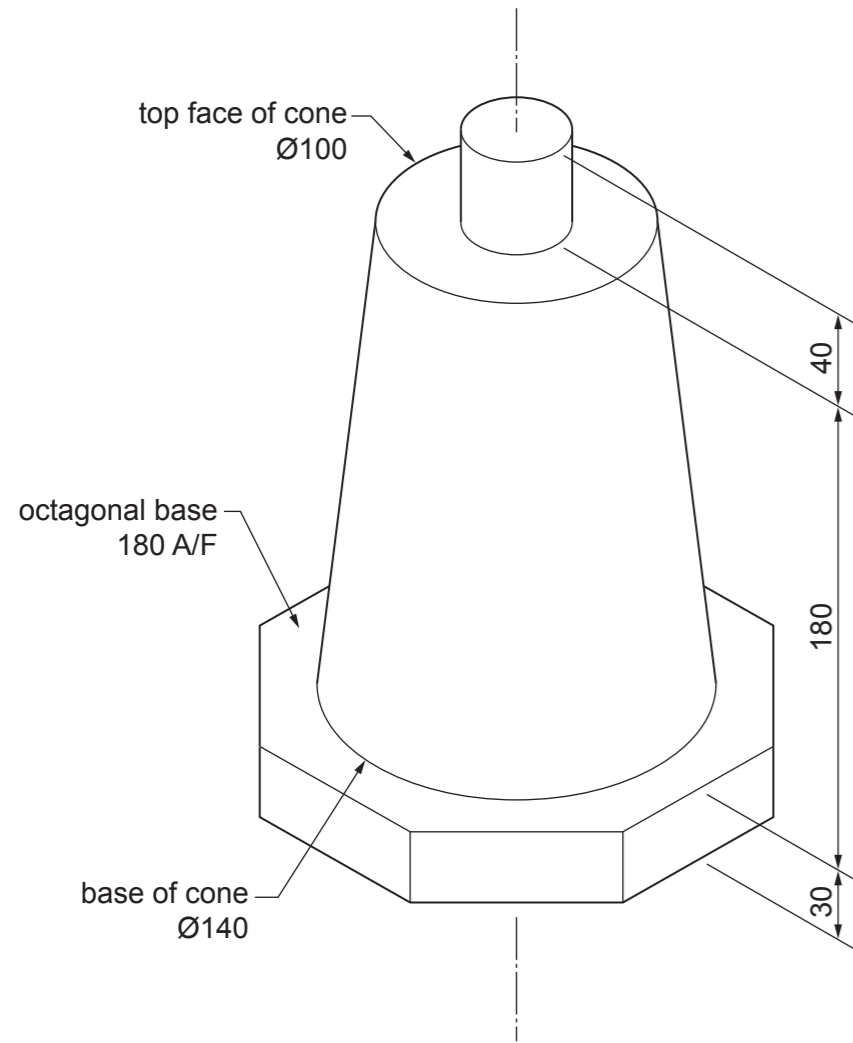


**Section A**

Answer **all** questions in this section.

**A1** A stand for a table lamp is shown below.



Complete the half size orthographic views of the table lamp stand in the space provided to the right by drawing:

- (a) the front view of the stand [5]
- (b) the plan of the stand. [6]

For  
Examiner's  
use

**0445/51** May/June 2020 **1 hour**  
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Centre Number .....

Candidate Number .....

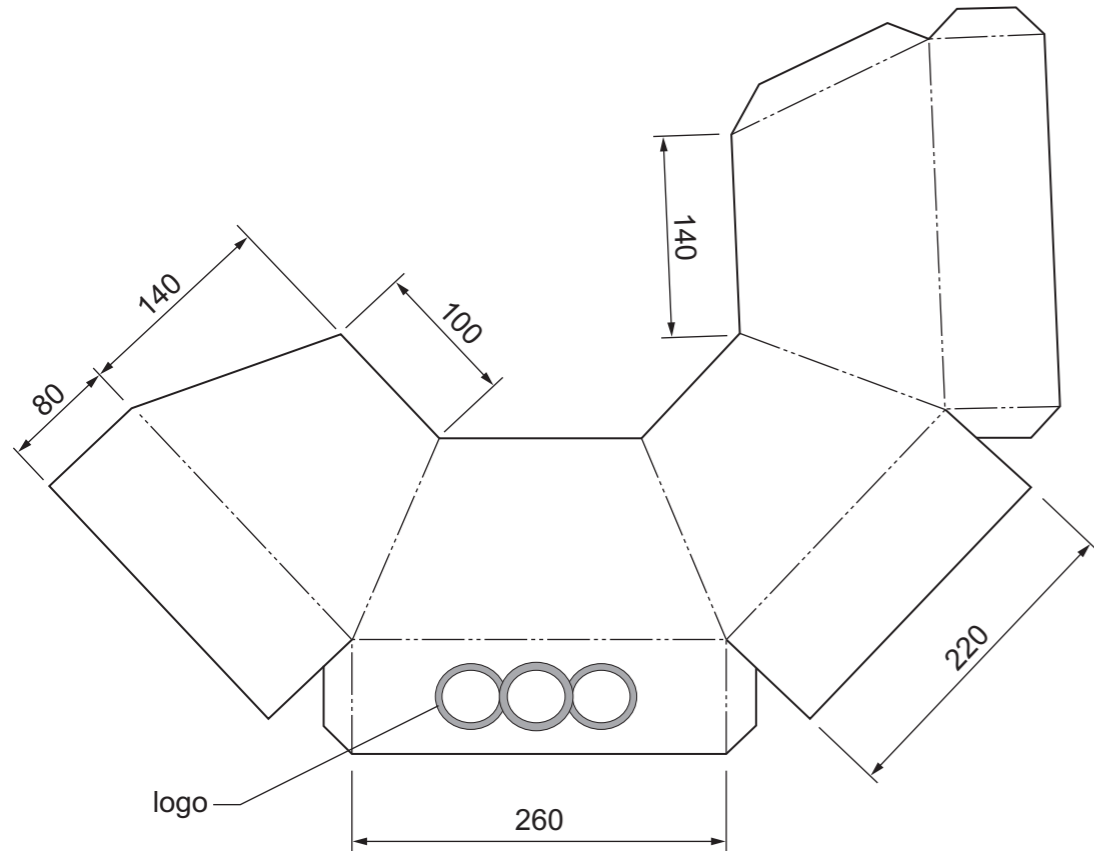
Candidate Surname .....

Other Names .....

**[Turn over]**

**A2** The shade for the lamp is made from thin card.

The development (net) of the lampshade is shown below.



Complete the half scale isometric view of the assembled lampshade in the space provided. [11]

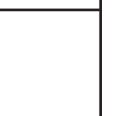
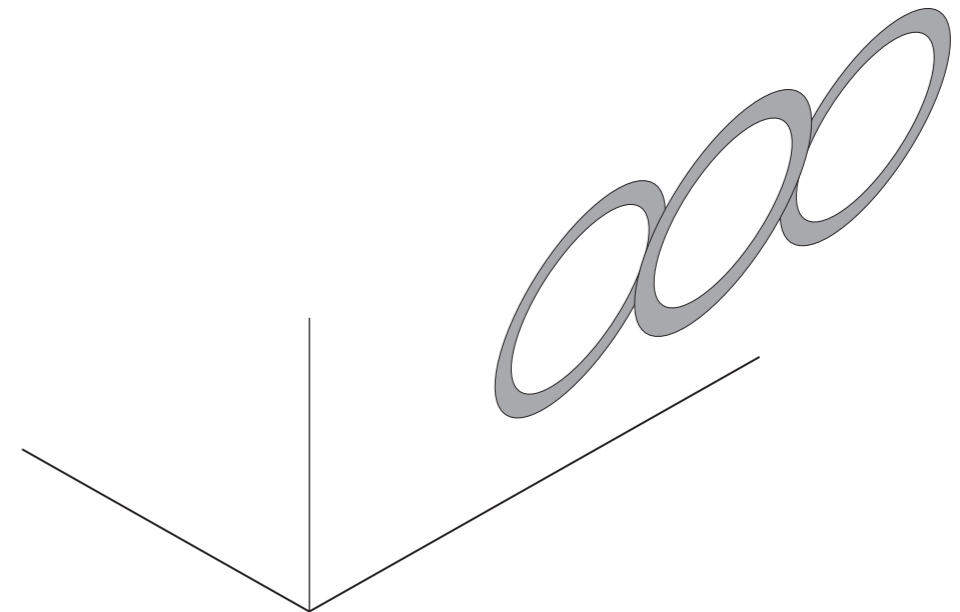
**A3** The logo design on the lampshade will be printed with a thermochromic ink.

(i) Explain how thermochromic ink works.

.....  
.....  
..... [2]

(ii) State **one** other method that could be used to make the logo design on the lampshade more appealing.

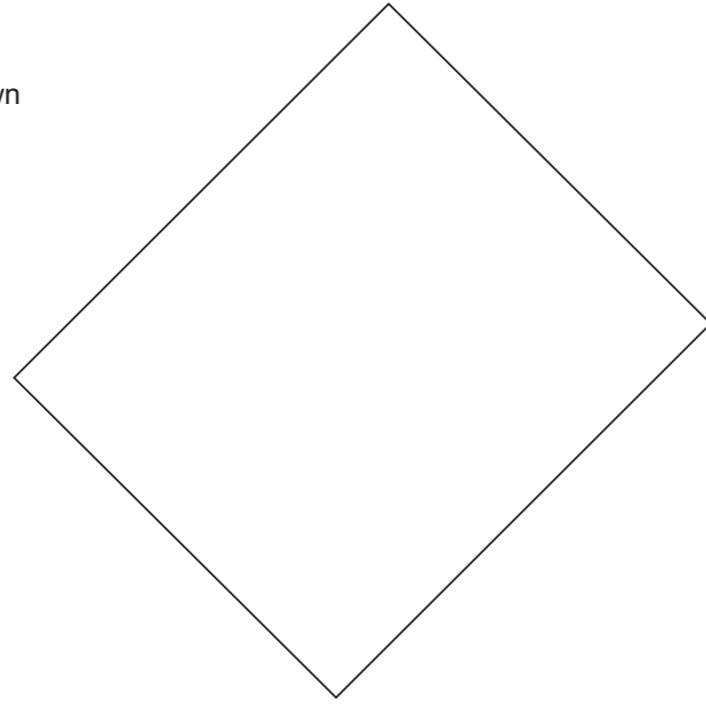
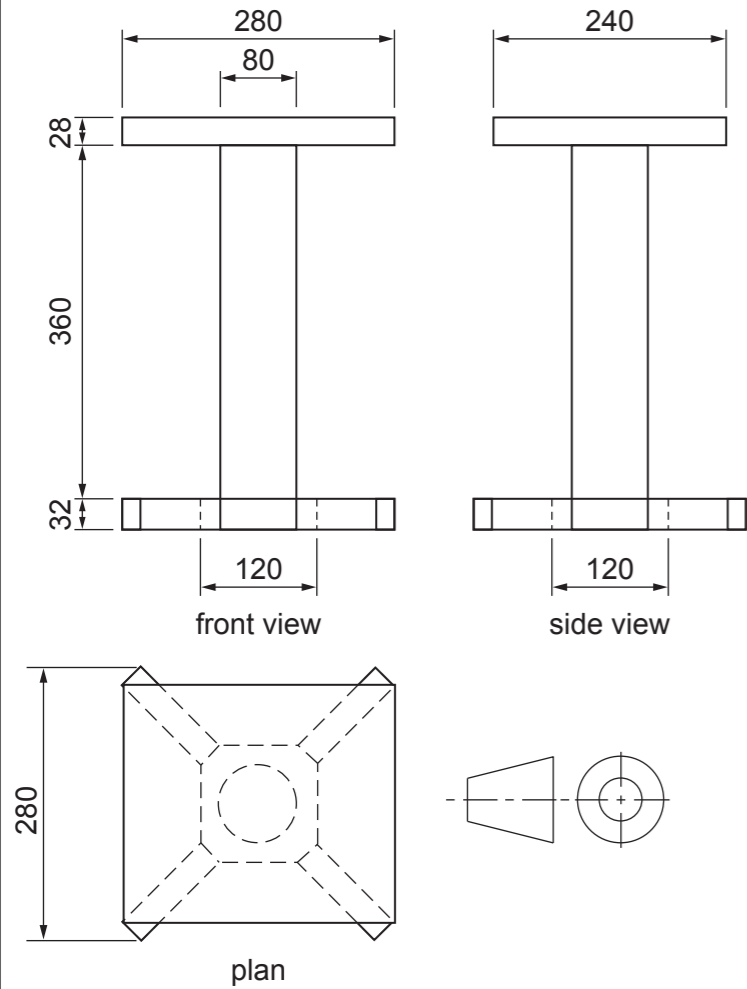
..... [1]



**Section B**

Answer **either** question **B4** or **B5**.

**B4** Orthographic views of a display table for a lamp are shown below.

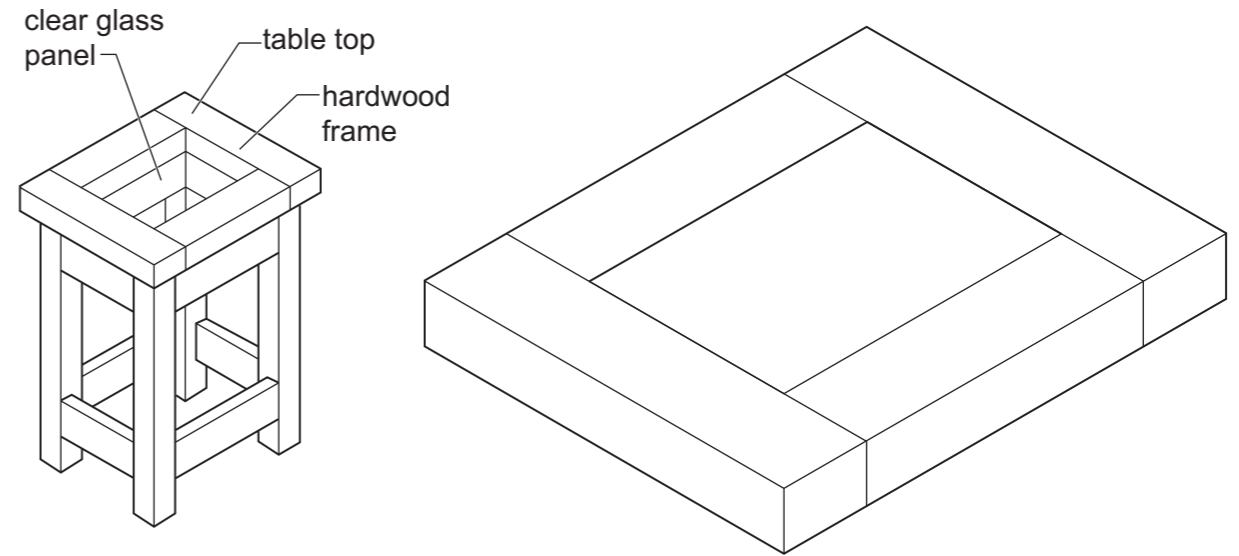


(a) Complete the planometric view of the display table to a scale of 1:4. [15]

(b) Another display table is shown below. The table top is made from hardwood with a clear glass panel in the centre.

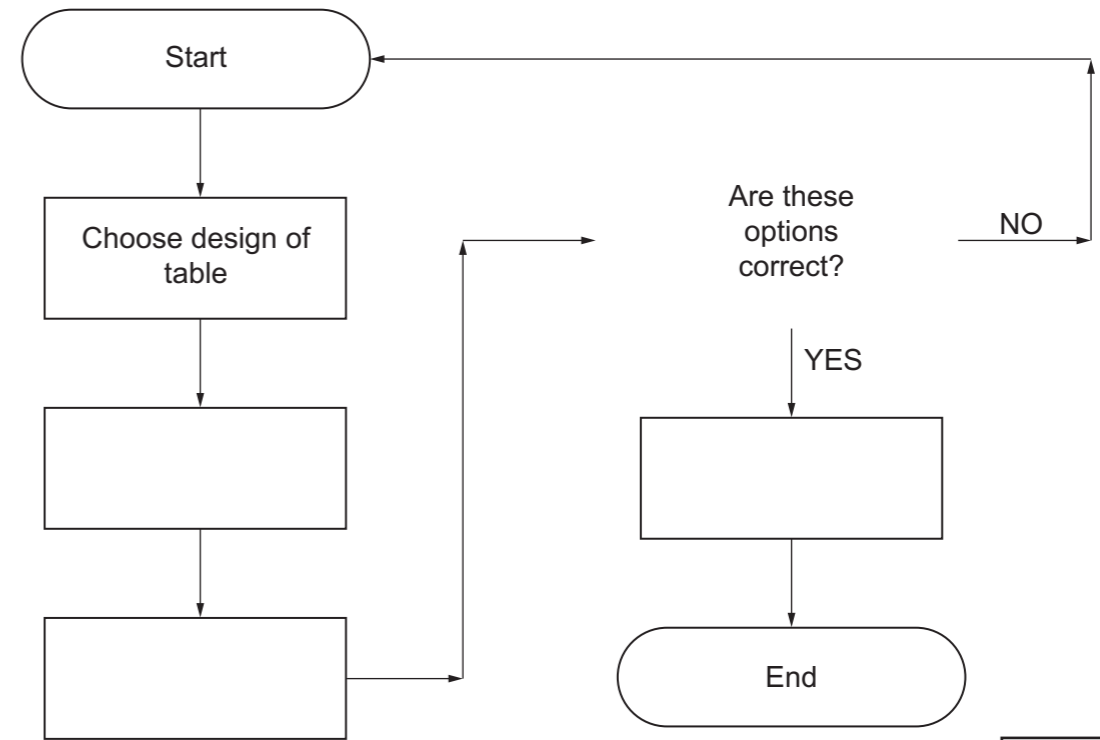
On the enlarged view of the table top below:

- (i) render the outer frame to look like hardwood [4]
- (ii) render the centre panel to look like clear glass. [2]



(c) Customers can order and buy tables online by choosing the design, size and wood type, before confirming their purchase and paying online.

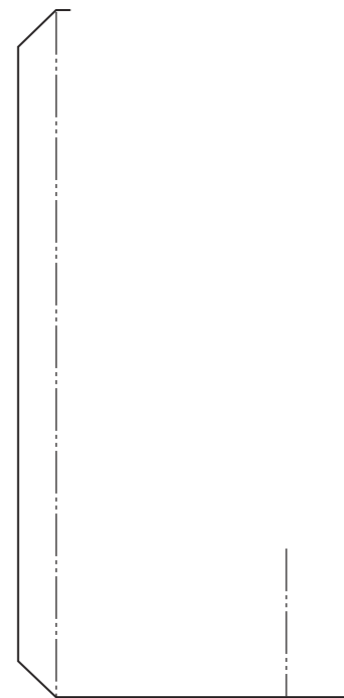
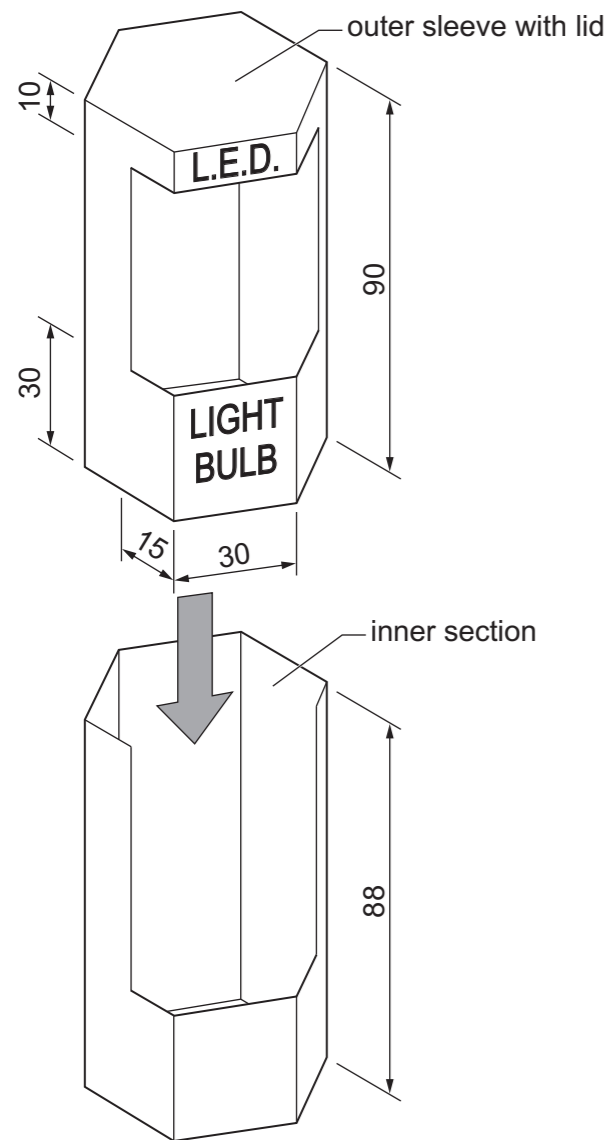
Complete the flowchart by adding the missing stages and the outline of the missing symbol. [4]



For Examiner's use

**B5** A package for a lightbulb is shown below. The package has an inner section that slides out from the outer sleeve.

**(a)** Complete the development (net) of the outer sleeve and lid of the package. [14]



**L.E.D.**

**LIGHT  
BULB**

development (net) of the outer sleeve and lid

**(b)** The lettering on the package is to be produced using a computer.

**(i)** Describe **two** ways that the appearance of the lettering could be altered using the computer.

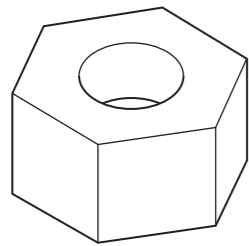
- 1 .....
- .....
- .....
- .....
- 2 .....
- .....
- .....
- ..... [4]

**(ii)** The packages for the lightbulb are to be manufactured in quantities of 10 000.

State a suitable method of printing the lettering onto the packages.

- .....
- ..... [1]

**(c)** The insert shown below fits into the bottom of the inner section to hold the bulb securely in place.



**(i)** Name a suitable material for the insert.

..... [1]

**(ii)** Describe a suitable method of producing the insert.

.....

..... [2]

**(d)** In use, the inner section of the package slips out of the outer sleeve too easily causing the bulb to drop out and break.

Use sketches and notes to show a method of securing the two parts of the package together without the use of adhesives. [3]