



## UNIVERSITY OF RUHUNA

Faculty of Engineering

End-Semester 3 Examination in Engineering: July 2022

**Module Number: MN3305      Module Name: Marine Engineering Drawing**

**[Four Hours]**

**[Answer all parts of the question]**

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**Instructions:**

- This question paper has **one** question on **two** pages.
- The drawing should be in accordance with **B.S.308:1993** and hidden details should be omitted.
- Use an appropriate scale in producing the drawing.

**Q1.** Figure Q1 shows details of a crane hook. The side plates are held together by three 44 mm diameter studs, one of which is shown. The swivel block fits into two bushes which are secured to the side plates by three M10 set screws in their flanges. This hook is free to revolve in a 49 mm diameter bush fitted in the swivel block. A thrust washer exists between the M30 nut on the screwed end of the hook and the top of the bush.

(a) Draw following elevations of the **assembly** of the crane hook.

(i) **Sectional Front Elevation** through the horizontal centre line of the swivel block.

[30 Marks]

(ii) **End Elevation.**

[12 Marks]

(b) Complete the drawing by adding the following also.

(i) A parts list, with the parts clearly identified.

[03 Marks]

(ii) A title.

[01 Mark]

(iii) The projection symbol.

[01 Mark]

- (iv) Six main dimensions. [01 Mark]
- (v) Subtitles. [01 Mark]
- (vi) Scale and Spacing. [01 Mark]

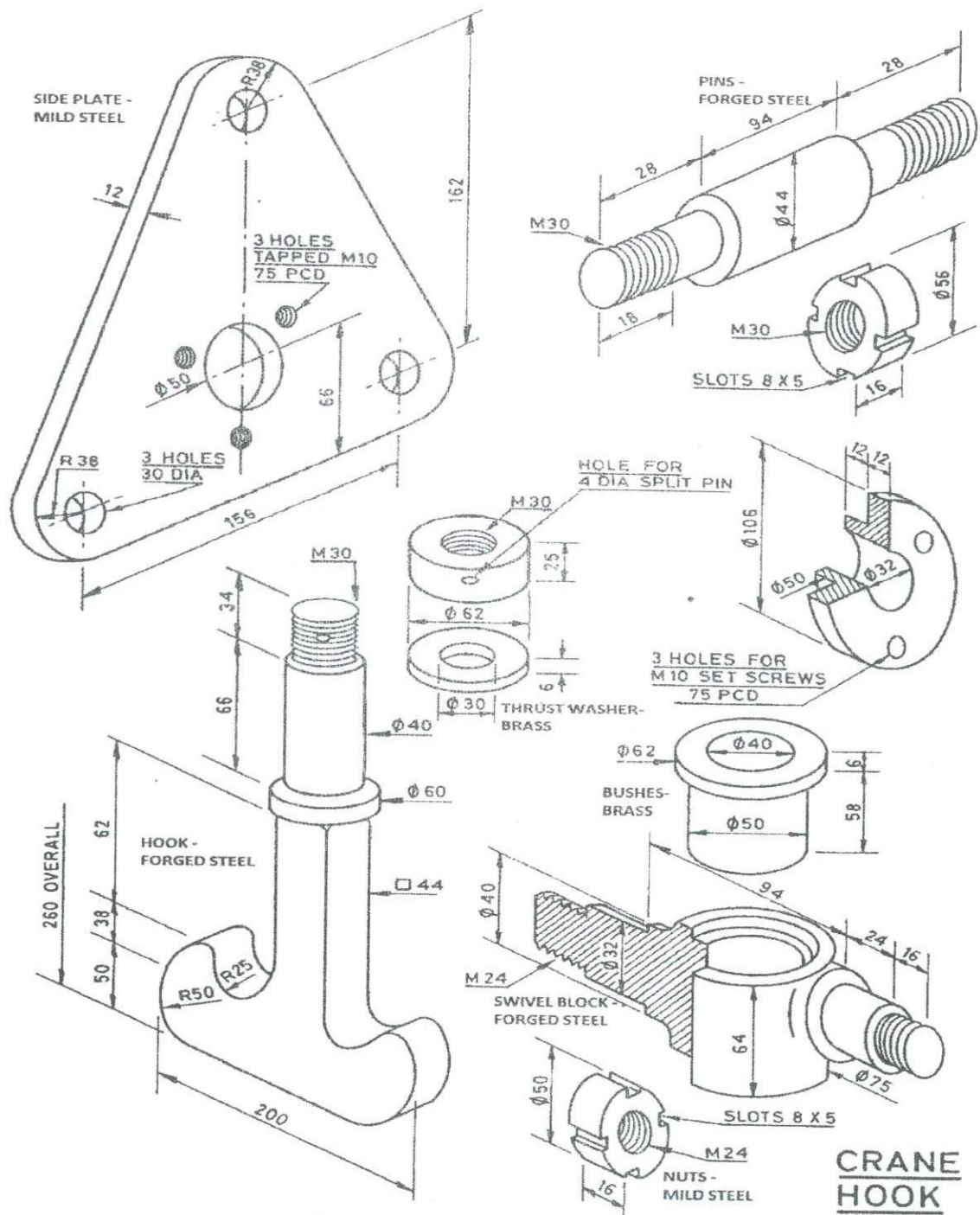


Figure Q1: Detailed parts of a crane hook