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Total No. of Pages : 03

Total No. of Questions : 06

B.Tech. (AE) (2018 Batch) (Sem.-3)

**MACHINE DRAWING**

Subject Code : BTAE-304-18

M.Code : 76402

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTIONS TO CANDIDATES :**

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains THREE questions carrying FIVE marks each and students have to attempt any TWO questions.
3. SECTION-C contains TWO questions carrying THIRTY marks each and students have to attempt any ONE questions.
4. Assume any missing data suitably.

**SECTION-A****1. Write briefly :**

- a) Draw the symbol of third angle projection system.
- b) What is fullering in the context of rivets?
- c) What is the difference between allowance and clearance?
- d) Draw free hand any two head forms of rivets.
- e) What is the function of connecting rod in IC engine?
- f) What is the necessity of conventional representation of screw threads?
- g) What is a flexible coupling? What are its advantages?
- h) Differentiate between pitch and lead of a screw thread.
- i) Explain the unidirectional system of dimensioning.
- j) Sketch the basic symbols of Single and Double-U butt welds.

**SECTION-B**

2. Draw free hand the two views of a hexagonal nut of size M30. Mark the various proportions in terms of its diameter "d"?
3. Draw free hand the sectional front view and top view of a knuckle joint on proportionate scale.
4. Draw free hand the plan and sectional elevation of a double riveted butt joint (zig-zag type) on proportionate scale.

### SECTION-C

5. Figure 1 shows the details of a crane hook. Assemble the parts and draw (a) front view full in section (b) right side view. Also prepare bill of materials.

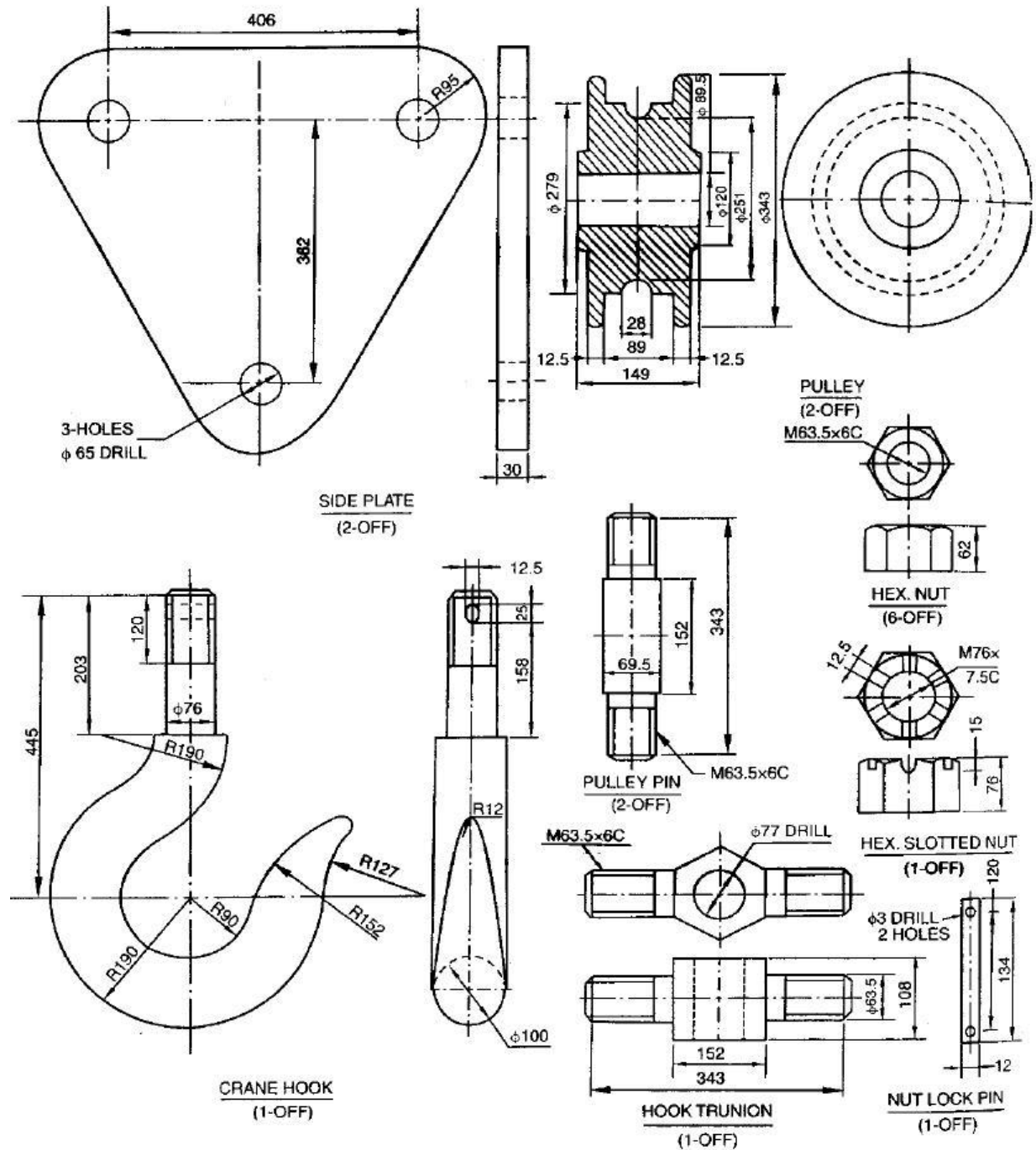


Fig. 1

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