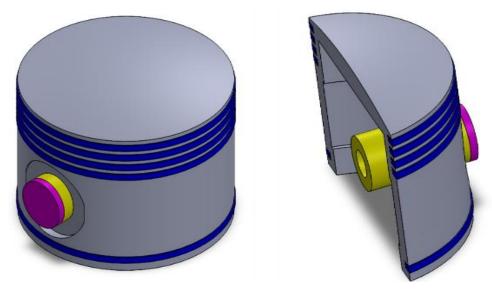
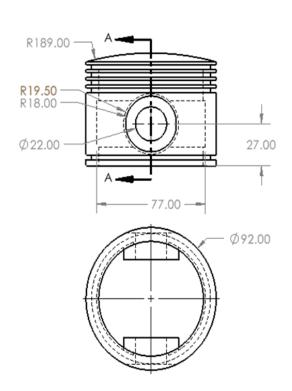
# Mechanical Engineering Drawing (MIC – 201) Department of Mechanical and Industrial Engineering Indian Institute of Technology, Roorkee

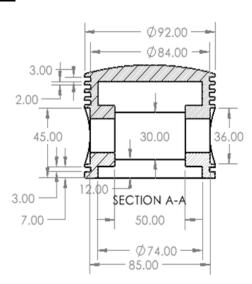
### Tutorial – 15

- 1) Using the following dimensions, design a **Piston assembly** in Solid Works and submit the following results.
  - i. An isometric view and the exploded isometric view with proper ballooning and BOM.
  - ii. Show the Orthographic view of Piston Assembly.



#### **Piston Assembly**





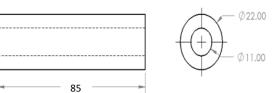
Total Marks: 30

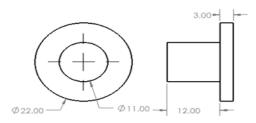
1. Piston

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#### **Mechanical Engineering Drawing (MIC – 201)**

Department of Mechanical and Industrial Engineering Indian Institute of Technology, Roorkee

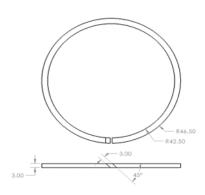




Total Marks: 30

2. Piston Pin

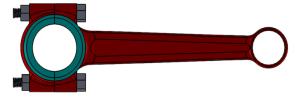
3. Piston pin Plug



### 4. Piston ring

Part No.	Name	Material	Quantity
1	Piston	Al-alloy	1
2	Piston Pin	HCS	1
3	Piston Pin plug	HCS	2
4	Piston ring	Cl	5

- 2) Using the following dimensions, design a **Connecting rod** assembly in Solid Works and submit the following results.
  - i. An isometric view of connecting rod assembly and the exploded isometric view with proper ballooning and BOM.
  - ii. Show the orthotropic view of each part of connecting rod with proper dimensioning.
- iii. Give the isometric view and exploded view of **piston with connecting rod assembly**.



Connecting rod assembly

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### **Mechanical Engineering Drawing (MIC – 201)**

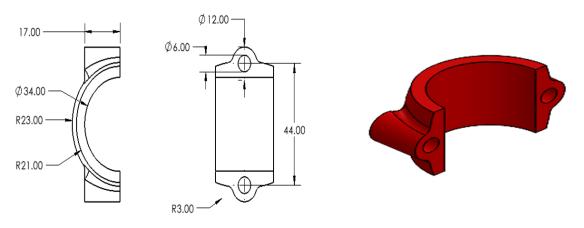
Department of Mechanical and Industrial Engineering Indian Institute of Technology, Roorkee

-R7 R4-18.00 28.00 - 5.00 11.00 30.00 100.00 - 5.00 4.00 11.00 11.00 4.00 11.00 **SECTION B-B SECTION A-A** 145.00 Ø24.00 R14 R8 Ø22.00 R21.00 — R17.00

Total Marks: 30

R13.00

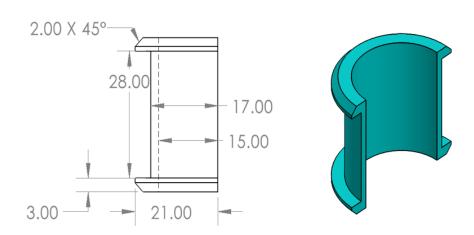
### 1. Connecting rod



2. Connecting cap

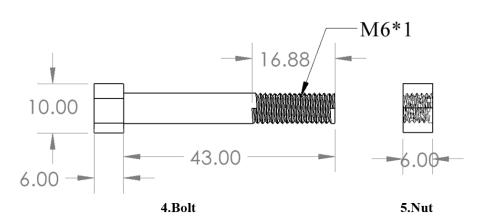
### **Mechanical Engineering Drawing (MIC – 201)**

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Total Marks: 30

### 3. Bearing Brass



Part No.	Name	Quantity
1	<b>Connecting rod</b>	1
2	Connecting cap	1
3	Bearing brass	2
4	Bolt	2
5	Nut	2



Assembly of piston and connecting rod