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# B.M.S. College of Engineering, Bengaluru-560019

**Autonomous Institute Affiliated to VTU**

## June 2025 Semester End Main Examinations

**Programme: B.E.** **Semester: III**

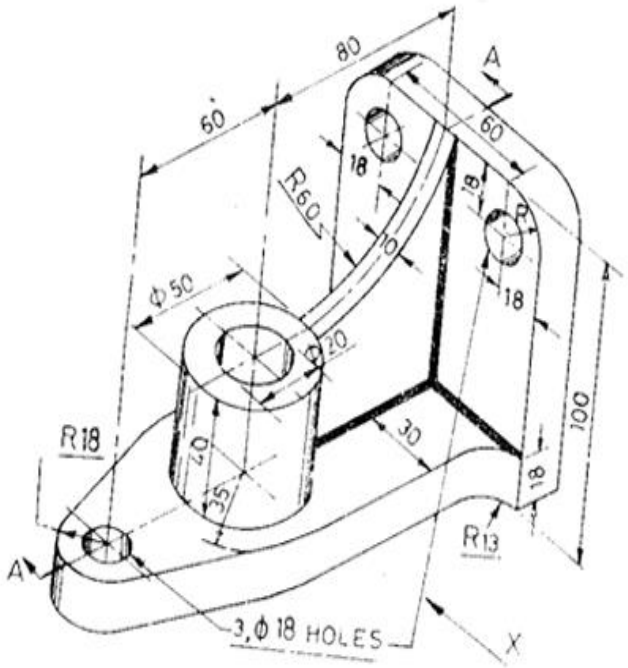
**Branch: Aerospace Engineering** **Duration: 3 hrs.**

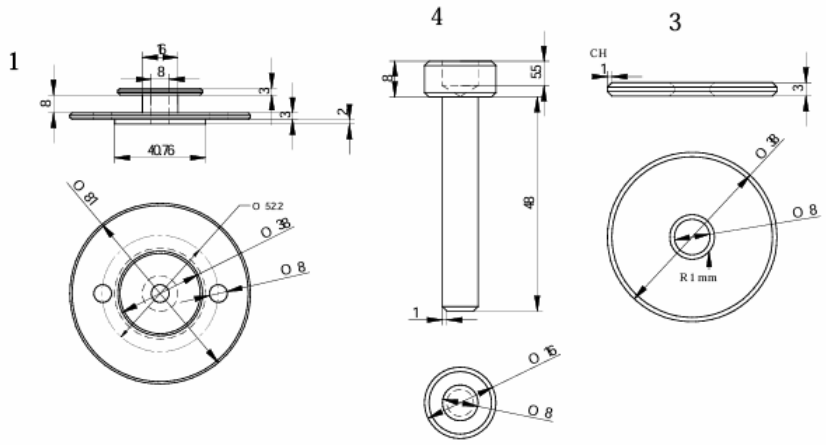
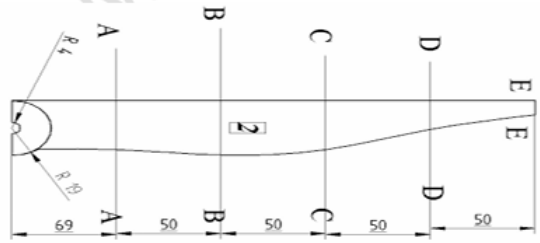
**Course Code: 23AS3PCASD** **Max Marks: 100**

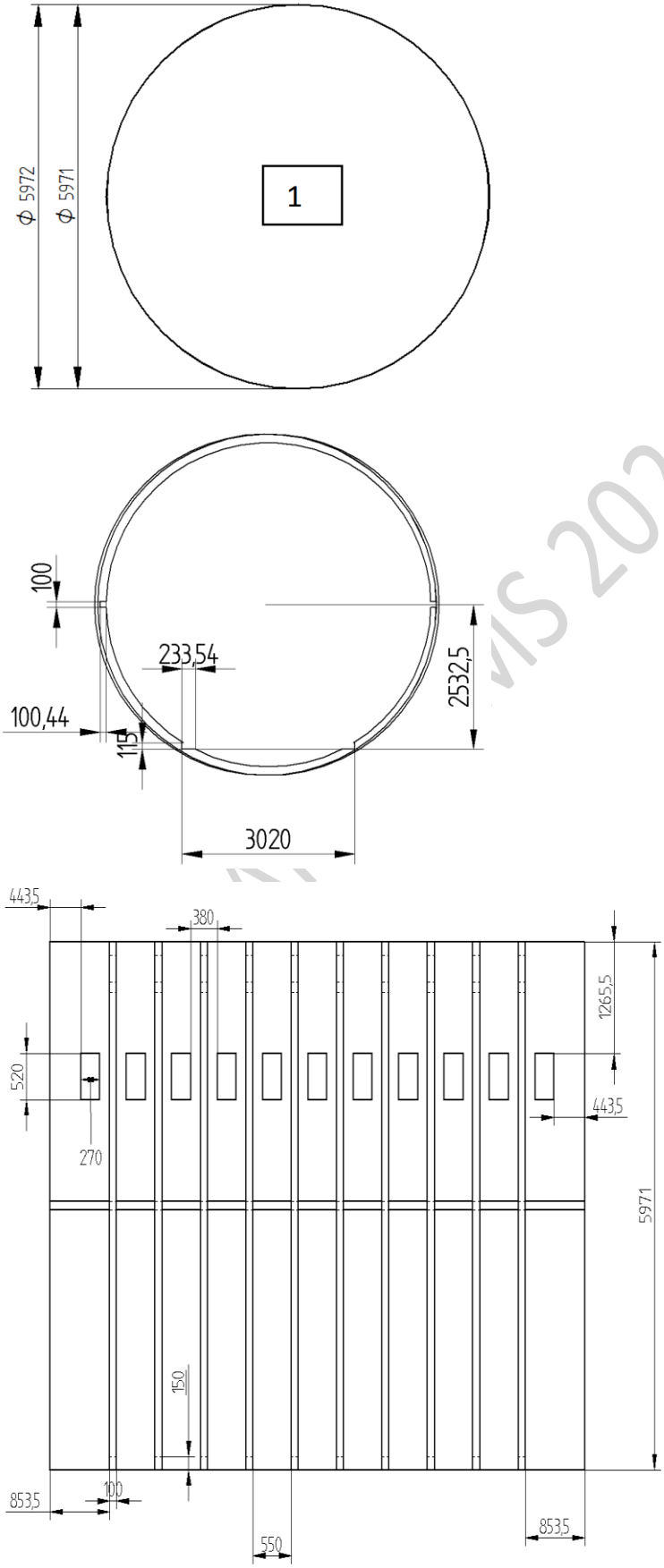
**Course: Aerospace Drafting**

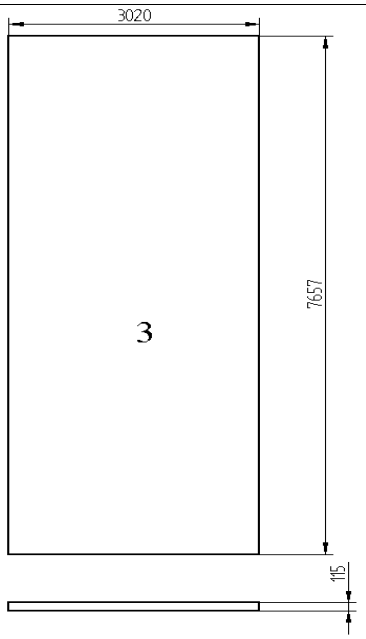
**Instructions**: 1. Answer any three full questions, choosing one full question from each part.
2. Missing data, if any, may be suitably assumed.

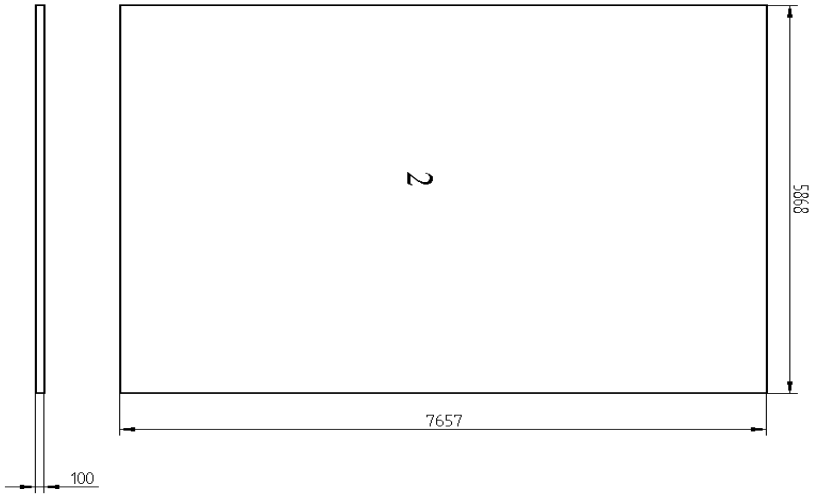
**Important Note:** Completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Revealing of identification, appeal to evaluator will be treated as malpractice.

| | | | PART -A | CO | PO | Marks |
|---|---|---|---|---|---|---|
| | 1 | | For the object shown (FIG.Q1) below draw the three views. Show all dimensions.<br>  <br><br>FIG.Q1 | CO1, CO2 | PO2 | **20** |
| | | | **OR** | | | |
| | 2 | | Draw the profile of the following threads and indicate all the dimensions.<br>i) ISO thread (Internal and External) having pitch 60mm,<br>ii) ACME thread having pitch 50mm. | CO1, CO2 | PO2 | **20** |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | **PART-B** | | | |
| | 3 | | Draw to 1:1 scale the top and sectional front views of a double riveted lap joint with zig –zag riveting. The thickness of the plates is 9 mm. Show at least three rivets in each row. Indicate all the dimensions. Use snap headed rivets. | *CO1, CO2* | *PO2* | **20** |
| | | | **OR** | | | |
| | 4 | | Draw to 1:1 scale the top and sectional front views of a double riveted butt joint with double cover plates and chain riveting. The thickness of the plates is 9 mm. Show at least three rivets in each row. Indicate all the dimensions. Use snap headed rivets. | *CO1, CO2* | *PO2* | **20** |
| | | | **PART-C** | | | |
| | 5 | | The details of the propeller and hub assembly are shown in the FIG.Q5. Draw front, top and left views of the assembly. Use suitable scale.<br>**Propeller and Hub**<br>  <br>Thickness of the blade (in mm)<br>Height of The HUB \| HUB \| A-A \| B-B \| C-C \| D-D \| E-E<br>34 \| 7 \| 7 \| 7 \| 7 \| 4 \| 2<br>CHORD \| CHORD \| CHORD \| CHORD \| CHORD \| CHORD<br>5 \| 5 \| 8 \| 8 \| 3 \| 1<br>Width \| 34 \| 38 \| 34 \| 20 \| 10<br>  <br>  <br>1.Mount Plate<br>2.Propeller<br>3.Face plate<br>4.Lock Bolt<br>FIG.Q5 | *CO3* | *PO3* | **60** |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | **OR** | | | |
| | 6 | | The Details of fuselage is shown in the fig. Q6. Draw front, top and left views of the assembly.   | *CO3* | *PO3* | **60** |




| Item Number | Title | Material | Quantity |
|---|---|---|---|
| 1 | CASING | Aluminum, 6061-T6 | 1 |
| 2 | CENTRE FLOORING | Aluminum, 6061-T6 | 1 |
| 3 | LOWER FLOORING | Aluminum, 6061-T6 | 1 |

Fig.Q6

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