

THIRD SEMESTER DIPLOMA EXAMINATION IN AUTOMOBILE ENGINEERING  
March 2013

**PRODUCTION PROCESS OF AUTOMOBILE COMPONENTS**

Maximum Marks : 100

Time : 3 Hrs

**PART- A**

(Maximum marks: 10)

- I. Answer the following questions in one or two sentences. Each question carries two marks
- |                                | Marks |
|--------------------------------|-------|
| 1 What is casting?             |       |
| 2 What is loam sand?           |       |
| 3 What is squeezing operation? |       |
| 4 What is resistance welding?  |       |
| 5 Define shaping process?      |       |
- [5x2 =10]

**PART - B**

(maximum marks : 30)

- II Answer any five of the following questions. Each question carries 6 marks
- |  |  |
|--|--|
| 1 List any 6 types of patterns?                                |  |
| 2 Write 6 advantages of green sand moulding                    |  |
| 3 Describe the bending process using ram type machine?         |  |
| 4 With the help of sketch explain tube extrusion?              |  |
| 5 Write 3 advantages and 3 applications of brazing?            |  |
| 6 List the 6 characteristics of general purpose machine tools? |  |
| 7 List 6 advantages of NC machines?                            |  |
- [5x6=30]

**PART - C**

(maximum marks : 60)

(Answer one full question from each unit. Each question carries 15 marks)

- UNIT I
- |   |     |
|---|-----|
| III a Describe the true centrifugal casting process | [8] |
| b List 7 sand casting defects?                      | [7] |
- OR**
- |   |     |
|---|-----|
| IV a Describe the shell moulding process?           | [8] |
| b List the requirements of a good pattern material? | [7] |
- UNIT II**
- |   |     |
|---|-----|
| V a Describe the L-D process of steel making? | [8] |
| b List advantages of forging                  | [7] |
- OR**
- |  |     |
|--|-----|
| VI a Sketch and explain Gap frame press and Arch frame press used for cold working | [8] |
| b List advantages of hot working?  | [7] |
- UNIT III**
- |   |     |
|---|-----|
| VII a Describe the submerged arc welding      | [8] |
| b List advantages of metal inert gas welding? | [7] |
- OR**
- |   |     |
|---|-----|
| VIII a Describe thermit welding                             | [8] |
| b List 5 advantages and 2 limitations of resistance welding | [7] |
- UNIT IV**
- |  |     |
|--|-----|
| IX a Sketch a horizontal shaper and mark their parts   | [8] |
| b Find the angle at which the compound rest should be set up to turn taper on the work piece having length of 200mm, larger diameter 45mm, and smaller diameter 30mm | [7] |
- OR**
- |  |     |
|--|-----|
| X a Write short notes on (1) Gear milling (2) Gear hobbing   | [8] |
| b List advantages of CNC system over conventional NC system? | [7] |