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**200963**

**DIPLOMA**

**Press Tool and Die Maintenance and Stamping**

**Subject: Introduction to Press tools, Dies and Moulds**

**Subject Code: NDME-106**

**Semester: Second**

**September 2020**

**Theory (External): 35 Marks**

**Time: 03 hours**

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**INSTRUCTIONS TO THE STUDENTS**

1. Read the questions carefully and write the answers in the answer sheets.
2. Wherever necessary, the diagram drawn should be neat and properly labelled.
3. This questions paper comprises of 8 questions out of which student need to attempt any 4 questions.
4. All questions carry equal marks.
5. The time allotted will be 3 hours for examinations including time of downloading of question paper to emailing of answer books to the concerned Dean/IC.

## ESSAY TYPE QUESTIONS

1. What are press tools? Give its classification and applications. Give relationship for the energy required for cutting.
2. (a) What usually defines a compound die?  
(b) How clearance is typically determined between the punch and die for die-cutting operations.
3. Describe an arch type press and for what type of work it is designed? How does a double acting press operate and for what type of work it is used?
4. Differentiate between blanking and piercing dies. What special precaution should be taken while designing piercing punch?
5. Describe solid forming die and block and pad forming die. What is the field of application of each and in what respect they differ? Explain the essential movements of each.
6. Define bending operation. How the spring back in bending operation can be corrected?
7. Explain the various methods of retaining piercing punches.
8. A sheet of 75 m diameter is to be drawn and its height has to be 200 mm. How many drawing operations would be required if there were no annealing operations in between? Assume reduction of 50, 40, 30 % etc., for each draw without annealing. Also determine the height of each draw.

\*\*\*\*END OF PAPER\*\*\*\*