

Code : M-401

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IV Semester Diploma Examination, April/May 2008
MECHANICAL ENGINEERING BOARD
MANUFACTURING TECHNOLOGY

Time : 3 Hours]

[Max. Marks : 100

- Instructions :** (1) Section-I is *compulsory*.
(2) Answer any **two** full questions each from Section-II, III, IV.

SECTION – I

1. (a) Fill in the blanks with correct words : 5
(i) In a powder metallurgy the articles are produced by _____ and _____.
(ii) The stock removed by acids of alkalis is called _____.
(iii) NC machines responds to the _____ signal from the controller.
(iv) The general nomenclature of tools used in presser are called _____ and _____.
(v) The grades in a grinding wheel refers to _____.
- (b) Explain briefly HERF. 5

SECTION – II

2. (a) Explain with a neat sketch working & internal centre less grinding. 6
(b) Explain the meaning of Glazing and loading in grinding wheels. 6
(c) Explain Silicate bonding process. 3
3. (a) Explain with a schematic diagram : Super Finishing 7
(b) Explain with a block diagram the working of fly press. 8

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| 4. | (a) | Explain briefly gear shaping. | 5 |
| | (b) | How they gears are made by powder metallurgy. | 5 |
| | (c) | Explain gear hobbling. | 5 |

SECTION – III

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| 5. | (a) | What is chemical milling ? How it is done ? | 6 |
| | (b) | Briefly describe the working principle of EDM process. | 6 |
| | (c) | State the advantages of EDM. | 3 |
| 6. | (a) | Explain briefly working Fay Automatic. | 5 |
| | (b) | Explain with a sketch working & pawl type transfer mechanism. | 5 |
| | (c) | Outline the advantages and disadvantages of using transfer machine in manufacturing. | 5 |
| 7. | (a) | Explain closed loop system in NC machine. | 6 |
| | (b) | Explain contouring system in NC machine. | 5 |
| | (c) | List the advantages of transfer machine. | 4 |

SECTION – IV

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| 8. | (a) | What is blending of powder. | 4 |
| | (b) | Explain secondary operations in powder metallurgy. | 6 |
| | (c) | Write a note on mounting the grinding wheel. | 5 |
| 9. | (a) | State the purpose of material handling equipment. | 5 |
| | (b) | Explain belt conveyor. | 5 |
| | (c) | Explain hydraulic drive in a power press. | 5 |
| 10. | (a) | State the advantage and disadvantages of L.B.M. | 6 |
| | (b) | Explain with a neat sketch the working of eccentric drive mechanism in a press. | 6 |
| | (c) | State the limitations of USM. | 3 |