

### SECTION-D

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

Q.23 Explain the steps involved in the electroplating process and its applications. (CO4)

Q.24 Describe the purpose of indexing in gear manufacturing and compare simple and differential indexing. (CO3)

Q.25 Explain the following processes:

- a) Galvanizing and metal spraying (CO4)
- b) Blackening Technique and Shot Blasting technique (CO5)

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Roll No. ....

**2nd Year/ Advance Diploma in Tool & Die Making**

**Subject : Workshop Technology-II**

Time : 3 Hrs.

M.M. : 60

### SECTION-A

**Note:** Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 Which of the following is NOT a common grinding wheel abrasive? (CO1)

- a) Aluminum oxide      b) Silicon carbide
- c) Diamond              d) Copper

Q.2 What is the function of indexing in gear cutting techniques? (CO2)

- a) Holding the workpiece
- b) Rotating the workpiece
- c) Dividing the workpiece into equal parts
- d) Measuring the workpiece

Q.3 What is the primary function of a Pantograph machine? (CO3)

- a) To duplicate drawings or shapes
- b) To cut metal sheets
- c) To grind tools
- d) To polish surfaces

- Q.4 In jig boring, what is the purpose of a jig? (CO3)  
 a) To hold the boring tool  
 b) To locate and guide, the tool  
 c) To cool the workpiece  
 d) To measure the hole diameter
- Q.5 Which finishing operation is used to improve surface smoothness? (CO4)  
 a) Polishing                      b) Lapping  
 c) Honing                         d) Grinding
- Q.6 What is the main advantage of shot blasting over other surface treatment methods? (CO4)  
 a) High precision  
 b) Minimal material removal  
 c) Low cost  
 d) Minimal noise

#### SECTION-B

**Note:** Objective/ Completion type questions. All questions are compulsory. (6x1=6)

- Q.7 Rack and pinion converts linear motion into rotary motion (True/False). (CO2)
- Q.8 Grinding operations involve the removal of material from a workpiece using abrasive particles. (True/False) (CO1)
- Q.9 Copy milling machines are used for duplicating \_\_\_\_\_ shapes. (CO3)
- Q.10 What is the primary purpose of a pantograph machine? (CO3)
- Q.11 Jig boring machines are used for precision \_\_\_\_\_ operations. (CO3)
- Q.12 What materials are typically used for honing?(CO5)

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#### SECTION-C

**Note:** Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

- Q.13 Explain the concept of grinding operations and their importance in machining. (CO1)
- Q.14 Describe the process of hard chrome plating.(CO5)
- Q.15 Explain the role of cutting parameters (Speed, Feed, Depth of cut) in grinding operations. (CO1)
- Q.16 Explain the concept of Pantograph and its operation. (CO3)
- Q.17 What are the different types of gears used in power transmission. (CO2)
- Q.18 Describe the main parts and functions of a jig boring machine. (CO3)
- Q.19 Explain the process of copy milling and its advantages (CO3)
- Q.20 Explain the different work holding devices used in jig grinding. (CO3)
- Q.21 Describe the main components of a pantograph machine and its applications. (CO3)
- Q.22 Discuss polishing, lapping, and honing in the context of material finishing. (CO5)

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