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(Pages 2)

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Reg. No.

FIFTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION, DECEMBER 2010

ME 04 505—METAL CUTTING AND FORMING

Abrasive Jet Machining (AJM) process and disc

Time: Three Hours

Part A

- I. 1 Explain the concept of ray diagram.
 - 2 What is meant by tolerance? Compare tolerance with fits.
 - 3 Compare orthogonal cutting with oblique cutting.
 - 4 What are the different types of cutting fluids used in machining and mention the advantages of cutting fluids?
 - 5 Write short notes on progressive dies.
 - 6 Explain the basic principle of fixtures.
 - 7 What is the principle of spark generator?
 - 8 What are the process characteristics of Travel wire EDM?

 $(8 \times 5 = 40 \text{ marks})$

Part B

II. (a) Explain the hydraulic drive mechanism with neat sketch and compare with mechanical drive mechanism.

Or

- (b) Explain the optical measurement method for threads and gears.
- III. (a) (i) Explain in detail about merchant's cycle.

(12 marks)

(ii) What is machinability?

(3 marks)

Or

(b) Explain the different types of milling operations and its related milling cutters.

(15 marks)

IV. (a) (i) Explain about scrap-strip layout.

(8 marks)

(ii) Write merits and demerits of Press working operations.

(7 marks)

Or

(b) Explain the different types of presses for sheet metal operation.

(15 marks)

Turn over

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V. (a) (i) Explain the Electrolyte s	systems in Electro chemical process.
office of the second se	(8 marks)
(ii) How Non-traditional ma	chining process helps in surface super finishing?
156	(7 marks)
	MIR 04 505 - METAL CURONG AND
(b) Explain the principle of Abrand disadvantages.	rasive Jet Machining (AJM) process and discuss its advantages
TURNATIV	merkeib ver to appears and male (15 marks)
	$4 \times 15 = 60 \text{ markel}$
	What is meant by tolerance? Compare tolerance with
	Compare orthogonal cutting with oblique cutting.
achining and mention the advantages	4 What are the different types of cutting fluids used in in of cutting fluids ?
	5 Write short notes on progressive dies:
	6 Explain the basic principle of fixtures.
	T. What is the principle of spark generator 2.
	8 What are the process characteristics of Travel wire ED
(8 × 5 = 40 marks)	
	Part B
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	(ii) What is machinability?
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	(b) Explain the different types of milling operations and its
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(7 marks)	TO SHIP OF SALES OF SALES OF SALES OF SALES OF SALES
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