

SEC - D

8. Explain the welding techniques used and the effect of welding temperature on weldability of metals. (20)
9. Explain automation of welding automation of welding automation. Classification of welding automation. (20)

Roll No.

22619

**M.Tech. 1st Semester (MAE)
CBCS Scheme Examination-
December, 2016**

**DESIGN AND METALLURGY OF WELDED
JOINTS**

Paper : MTMA21D2

Time : 3 hours

Max. Marks : 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard will be entertained after the examination.

Note : Attempt **five** questions in all, selecting **one** question from each Section. Q. No. 1 is **compulsory**. All questions carry equal marks.

1. Answer the following :

(a) List the various weld defects (7)

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- (b) Cruciform tes (7)
- (c) HAZ (6)

SECTION - A

2. Describe the corrosion analysis of welded joints with the help of suitable example. (20)
3. What are the stresses induced in the welding and effect of these stresses on welding? (20)

SECTION - B

4. What are the methods to control the welding defects and suggest ways to improve weld? (20)

5. What do you mean by prediction in welding and the effect of distortion on welding? (20)

SECTION - C

6. Explain the destructive testing of welding. What are the failures that occur during welding? (20)
7. Explain the following :
- (a) Hydrogen Induced Cracking test. (10)
- (b) What do you mean by MPI? (10)