



# CBCS SCHEME

17MA43

## Fourth Semester B.E. Degree Examination, June/July 2019 Joining Process

Time: 3 hrs.

Max. Marks: 100

**Note:** Answer any FIVE full questions, choosing ONE full question from each module.

### Module-1

- 1 a. Explain the applications, advantages and limitations of welding. (10 Marks)  
b. Explain the basic principles of sound welding design. (10 Marks)

OR

- 2 a. Explain the heat flow in Arc welding. (10 Marks)  
b. Define Weldability. Explain the factors effecting weldability. (10 Marks)

### Module-2

- 3 a. Explain the safety recommendation for installation and operation of arc welding equipments. (10 Marks)  
b. With neat sketch, explain submerged arc welding. (10 Marks)

OR

- 4 a. Explain Oxy – acetylene welding with a neat sketch. (10 Marks)  
b. Explain forward and backward welding. (10 Marks)

### Module-3

- 5 a. Explain variables in resistance welding. (10 Marks)  
b. Sketch and explain explosive welding. (10 Marks)

OR

- 6 a. Explain Metallurgical difficulties in welding meteorite stainless steels. (10 Marks)  
b. What are constitution diagram? Explain austenitic stainless steel welding. (10 Marks)

### Module-4

- 7 a. Explain metallurgical aspects of soldering. (10 Marks)  
b. Explain the application, advantages and limitations of soldering. (10 Marks)

OR

- 8 a. Explain the steps involved in adhesive binding. (10 Marks)  
b. Explain the applications, advantages and limitations of adhesive binding. (10 Marks)

### Module-5

- 9 a. Explain the function of different zones during welding. (10 Marks)  
b. What is HAZ? Explain residual stresses in welding. (10 Marks)

OR

- 10 a. Explain the types of welding defect. (10 Marks)  
b. Explain welding procedure qualification and performance qualification. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.