

Reg No.: \_\_\_\_\_

Name: \_\_\_\_\_

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**  
**FOURTH SEMESTER B.TECH DEGREE EXAMINATION, APRIL 2018**

**Course Code: MP208**

**Course Name: METAL JOINING TECHNOLOGY (MP, PE)**

Max. Marks: 100

Duration: 3 Hours

**PART A**

*Answer any three full questions, each carries 10 marks.*

Marks

- |   |   |      |
|---|---|------|
| 1 | a) Explain the selection of welding process.  | (4)  |
|   | b) Explain the use of pulsed arc welding process.   | (6)  |
| 2 | a) Explain about residual stresses in weld.   | (5)  |
|   | b) Mention the basic weld symbols used in welding process.  | (5)  |
| 3 | Explain the working principle TIG welding process. Also state its process advantages, limitations and applications. | (10) |
| 4 | Explain the working of shielded metal arc welding. Mention the process parameters that affects during welding.      | 10)  |

**PART B**

*Answer any three full questions, each carries 10 marks.*

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|---|---|------|
| 5 | Distinguish forge welding and friction welding with a schematic diagram.  | (10) |
| 6 | Explain the working principle, process parameters and application of explosive welding with the help of neat diagram. | (10) |
| 7 | a) Explain the different types of flame in oxy acetylene welding.   | (6)  |
|   | b) Explain the most commonly used gases for welding purpose.  | (4)  |
| 8 | Explain the working principle of Electron beam welding. Mention its disadvantages.                                    | (10) |

**PART C**

*Answer any four full questions, each carries 10 marks.*

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|----|---|------|
| 9  | Explain the working principle of diffusion bonding. List any four applications. | (10) |
| 10 | Differentiate the brazing and soldering process.                                | (10) |
| 11 | Explain the working of oxygen cutting process and its application.              | (10) |
| 12 | Explain the underwater welding process. Explain its types.                      | (10) |
| 13 | Why modern welding techniques are sophisticated than conventional welding?      | (10) |
| 14 | Explain the space welding process. Mention its importance in space technology.  | (10) |

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