

Roll Www.FirstRanker.com

www.FirstRanker.com5

## **B. TECH.**

# THEORY EXAMINATION (SEM–VIII) 2016-17 ADVANCED WELDING TECHNOLOGY

Time : 3 Hours

Max. Marks : 100

Note : Be precise in your answer. In case of numerical problem assume data wherever not provided.

## SECTION – A

### **1.** Attempt all parts of the following questions:

- (a) What is deformation resistance welding?
- (b) Compare vacuum brazing with welding.
- (c) How radial friction welding is used to join collars to shafts and tubes?
- (d) What are the advantages of constricting plasma in PAW?
- (e) What are the effects of gases in welding?
- (f) What are the main factors affecting the welding design?
- (g) Define dilution.
- (h) Name any four weld defects.
- (i) What are the factors that cause slag inclusion?
- (j) Give two examples of adhesives and mention its general characteristics

#### **SECTION – B**

#### 2. Attempt any five of the following questions:

- (a) What are the different joint designs in adhesive bonding? Explain how a good joint design can be selected?
- (b) Explain the welding symbol with an example.
- (c) Explain the process of Needle Arc Micro Plasma Welding.
- (d) Describe the reasons that fatigue failure generally occur in HAZ of welds instead of through the weld bead itself.
- (e) Explain how different process parameter influence Laser Beam Welding.
- (f) With suitable sketch explain the process of TIG welding. What are its disadvantages?
- (g) What are the different joint designs in adhesive bonding? Explain how a good joint design can be selected?
- (h) Describe Principle of operation of EBW (Electron beam welding). What are the possible problem or difficulties and how it can be dealt with? Write down the advantage and limitation.

#### **SECTION – C**

#### Attempt any two of the following questions:

- **3** (i) What are the different joint designs in adhesive bonding? Explain how a good joint design can be selected?
  - (ii) Explain how the weld quality of different welded joints can be determined?

### 4 Explain the following:

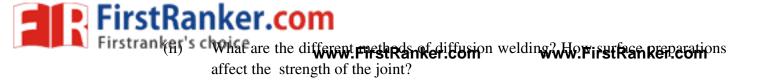
- (i) Dye Penetrant Testing
- (ii) Inspection of welds.
- (iii) Discontinuities in welds and their causes.
- 5 (i) Explain With neat labeled sketch the working of Ultra sonic Welding.

#### www.FirstRanker.com

# $2 \ge 15 = 30$

#### $5 \ge 10 = 50$

 $10 \ge 2 = 20$ 



www.firstRanker.com