

Seat No: _____

Enrollment No: _____

PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
M. Tech., Summer 2017-18 Examination

Semester: 2

Subject Code: 03208152

Subject Name: Advance Welding Technology

Date: 21-05-2018

Time: 02:00PM to 04:30PM

Total Marks: 60

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

- Q.1** A) What is the importance of welding? Write its merits, demerits and applications? **(05)**
B) Classify welding processes. **(05)**
C) Write short note on "Fracture toughness test". **(05)**
- Q.2 Answer the following questions.** (Attempt any three) (Each five mark) **(15)**
A) Write short note on "Welding fumes and their effect on the environment".
B) Write role of WPS, WPQ and PQR in quality assurance in welding.
C) Write short note on 'Welding of Plastics and Ceramics'.
D) Differentiate between brazing and Soldering.
- Q.3** A) How do you specify an electrode? What is the difference between a consumable electrode and a non-consumable electrode in arc welding? **(07)**
B) Explain the Principle of Laser Beam Welding process with neat sketch, its process parameters, merits-demerits and applications. **(08)**

OR

- B) Explain the Principle of Electron beam welding process with neat sketch, its process parameters, merits-demerits and applications. **(08)**
- Q.4** A) Explain with neat sketch the Plasma Arc Welding process. Compare and contrast between un-transferred and transferred plasma arc process and discuss its process parameters, merits-demerits and applications **(07)**

OR

- A) Explain Shielded metal arc welding process with neat sketch. **(07)**
B) Explain the various forces affecting the transfer of material in welding. Also describe the different modes of metal transfer in welding process. **(08)**