

## GUIDE LINES FOR THE WRITTEN TEST FOR THE BEST WELDING ENGINEER

To be very specific and to have uniformity in the selection, the following aspects shall be considered for setting up the question papers. **A maximum of three hours shall be given for the written tests .**

- ❖ Welding symbols; welding joint efficiency, applications & design of weld joints.
- ❖ Residual and thermal stresses in welded joints.
- ❖ \*Welding processes and principles of different materials, process variations and techniques.
- ❖ Power sources, duty cycles and applications.
- ❖ Welding defects, their causes and remedies; distortion and methods to reduce distortion in welded joints.
- ❖ Welding consumables – functions and classifications.
- ❖ Safety and Precautions.
- ❖ Materials and their behaviour; pre and post weld heat treatment.
- ❖ Equilibrium diagrams, micro-structural changes.
- ❖ WPS, PQR, Weld maps, Inspection and Testing.
- ❖ Repair welding and surfacing.
- ❖ Codes and Specifications.
- ❖ Welding costs and economics.