

GANPAT UNIVERSITY**B. Tech. Semester: VIII Mechanical Engineering****Regular Examination April – June 2015****Welding Technology 2ME805/2****Time: 3 Hours / As per Scheme****Total Marks: 70**

Instruction: 1. Figure on right indicates marks for the each question
2. Draw neat and labeled figures & sketches, if required.

Section - I			
Que. - 1	a	Explain the function of Electrodes coating and types associate with SMAW	6
	b	Define metal transfer and explain types of metal transfer associate with GMAW process	6
OR			
Que. - 1	a	What do you mean by solid phase welding? Explain the Friction Welding process, applications, limitations & advantages.	6
	b	Explain SAW and its variables, advantages, limitations and applications	6
Que. - 2	a	Explain the differences between GTAW and PAW & advantages of PAW over GTAW.	6
	b	Define shielding, name types of shielding & explain the role of the shielding gases in arc welding.	5
OR			
Que. - 2	a	Explain the CC and CV characteristics of welding power sources	6
	b	Draw the schematic GTAW torch construction and explain function of each part.	5
Que. - 3		Explain the meaning of 'defects' and 'discontinuity'. 'All defects are discontinuity but all discontinuities are not defects? Explain. Name the different discontinuity and explain their types, cause and remedies.	12
Section - II			
Que. - 4		Define welding and name the different heat sources for welding and explain EBW in detail including process, applications, and limitations.	12
OR			
Que. - 4		Define underwater welding (process, applications & limitations) and name the different techniques of the underwater welding and explain the typical problems associated with underwater welding	12
Que. - 5	a	Define NDT and name the various methods of NDT, explain MPT	6
	b	Explain the metallurgical phenomena associate with fusion zone, HAZ & parent metal of weldment.	5
OR			
Que. - 5	a	Define welding polarity and its selection for various arc welding processes	6
	b	Explain the role of thermal properties of metal on welding distortion	5
Que. - 6		Define welding distortion, explain the types of welding distortion and its control	12