

Model Question Paper
Total Duration (H:M):3:00
Course: Advanced Welding (BMET-061)
Maximum Marks: 100

Q.No	Questions	Marks	CO	BL	PI
1a	Differentiate between TIG and MIG welding.	6	CO1	L2	
1b	Write note on Schacfflar Diagram.	6	CO2	L3	
1c	What is HAZ in welding? Why a weld usually fails in HAZ area?	8	CO4	L3	
2a	Write note on life prediction of welded structures.	6	CO5	L1	
2b	Differentiate between Soldering and Brazing.	6	CO1	L2	
2c	Discuss thermal and mechanical treatments of welds.	8	CO2	L2	
3a	What are the causes of residual stresses in welding?	6	CO4	L2	
3b	Define weldability of material and the factors on which weldability depends.	6	CO1	L2	
3c	Explain principle and operation of LASER beam welding with a neat sketch and also discuss its advantages, limitations and applications.	8	CO3	L3	
4a	Explain the term 'transferred modes' and 'non transferred modes' used in plasma arc welding. What is 'plasma'? Describe plasma arc welding.	10	CO3	L3	
4b	What is ultrasonic waves/vibration and how it is generated and what are its applications? Describe ultrasonic welding?	10	CO3	L3	
4c	Explain the effect of recrystallization and grain structure on weld properties.	10	CO4	L3	
5a	What do you mean by underwater welding and write when and where it is important? Describe wet under water welding and describe how arc stability can be improved in it?	10	CO4	L2	
5b	Describe principle, working and application of Electron beam welding. What are the possible problems/difficulties in it and how it can be dealt with?	10	CO1	L2	
5c	Write the problems and solutions/steps/precautions to be taken (i) For welding of cast irons. (ii) For welding of stainless steels.	10	CO2	L3	
6a	Briefly describe various defects and distortion in welding and its causes and remedies?	10	CO4	L3	
6b	Explain radiography, ultrasonic and magnetic particles inspection test used to inspect welding joints.	10	CO4	L3	