DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

MGM's, Jawaharlal Nehru Engineering College, Aurangabad

Mid Semester Examination – Oct. 2019

Course: S.Y. B. Tech in ___ Mechanical Engineering.   **Sem: III**

Subject Name: : MSM   **Subject Code:** BT-MEC302   **Max Marks:** 20

Date:- 0 /10/2019   **Duration:- 1 Hr.**

Instructions to the Students:

1. Draw neat sketch wherever necessary
2. Assume suitable data if required
3. Figures to right indicates full marks

		(Level/CO)	Marks
Q. 1	Choose the correct answer. Answer the following.	**L1 CO1**	**6X1**
1	What is the co-ordination number of FCC structure?	L1,L2 CO1,CO2	
2	Which crystal structure material BCC or FCC shows more ductility for easy formability?	L1,L3 CO2	
3	In actual application which stress true or engineering stress should be considered?	L2,L3 CO2	
4	In what conditions brittle materials show better performance in tensile or compressive loaded application?	L1 CO3	
5	What is phase?	L1,L2 CO3	
6	What is significance of degree of freedom in Gibb's phase rule?	L1,L4 CO3	
Q.2	**Solve Any Two of the following.**		**3 X 2**
(A)	What are different critical temperatures on Fe-C equilibrium diagram and what changes occurs at that temperature?	L1,L3 CO3	
(B)	In what way Hume – Rothery's rule decides regarding solid solubility?	L1,L2 CO1	
(C)	What is miller indices ?explain it with example	L1,L3 CO3	
Q.3	**Solve Any One of the following.**		**1 x 8**
(A)	Draw a neat sketch of Fe-C equilibrium diagram and explain different phases on it	L4,L3 CO3	
(B)	With neat sketch explain the construction of TTT diagram for eutectoid steel		

*** End ***