

**ANURAG Engineering College****(An Autonomous Institution)****III B.Tech II Semester Supplementary Examinations, Dec–2023/Jan-2024****ADVANCED ENGINEERING MATERIALS****(CIVIL ENGINEERING)****Time: 3 Hours****Max.Marks:75****Section – A (Short Answer type questions)****(25 Marks)****Answer All Questions**

	<b>Course Outcome</b>	<b>B.T Level</b>	<b>Marks</b>
1. Define Ferrous and Non Ferrous material with examples.	CO1	L1	2M
2. What is meant by alloying elements?	CO1	L1	3M
3. Explain Heat Treatment and its stages.	CO2	L2	2M
4. What are bronzes? List some use of bronzes.	CO2	L1	3M
5. Define Polymeric Material with Examples.	CO3	L1	2M
6. List the plastic additives.	CO3	L2	3M
7. What are engineering ceramics?	CO4	L1	2M
8. Explain Composite materials.	CO4	L2	3M
9. Define Super Alloys with Applications.	CO5	L1	2M
10. Write any three applications of Beryllides.	CO5	L2	3M

**Section B (Essay Questions)****Answer all questions, each question carries equal marks.****(5 x 10M = 50M)**

11. A) Explain the classification of Cast Irons with neat diagrams and Applications.	CO1	L3	10M
<b>OR</b>			
B) Classify the ferrous metals. Write the two applications of each.	CO1	L2	10M
12. A) Classify Cast Alloys and Aluminum with their properties.	CO2	L2	10M
<b>OR</b>			
B) Compare the properties of ferrous and non-ferrous metals.	CO2	L3	10M
13. A) Classify Plastics with their Application.	CO3	L2	10M
<b>OR</b>			
B) What is plastic? List the general properties of plastic.	CO3	L2	10M
14. A) Make use of neat sketch Explain ceramics materials with suitable applications.	CO4	L3	10M
<b>OR</b>			
B) Make use of neat sketch explain any two fabrication methods of fibre-reinforced composites.	CO4	L3	10M
15. A) Discuss the classification of inter metallic's with their Applications.	CO5	L3	10M
<b>OR</b>			
B) List the properties, selection and engineering application of Nickel based super alloys.	CO5	L1&L3	10M