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# INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

B.Tech IV Semester End Examinations (Regular), November– 2020

Regulation: IARE–R18

## AIRCRAFT PRODUCTION TECHNOLOGY

Time: 2 Hours

(AE)

Max Marks: 70

Answer any Four Questions from Part A

Answer any Five Questions from Part B

### PART – A

1. Explain annealing heat treatment and describe where annealing is practically applicable? [5M]
2. What is difference between bending and shearing? [5M]
3. Differentiate between solid riveting and blind riveting? [5M]
4. Classify the different types of cutting tools used in all types of machining operations. [5M]
5. Explain the role of fiber in composites? Write some of the important fibers. [5M]
6. What are ferrite, pearlite, and austenite. What are the applications of them? [5M]
7. What are the different types of welding process? Explain their applications. [5M]
8. List the different types of bending operation. Write down the applications. [5M]

### PART – B

9. Classify stainless steels. What are the changes which happen in the properties of materials? [10M]
10. How corrosion can be prevented? Explain it with using one method? [10M]
11. Discuss about the penetrates used in dye casting. What are the limitations of dye casting? [10M]
12. What are the main differences between MIG, TIG and PIG welding techniques? Explain where plasma welding is applicable? [10M]
13. Elaborate about the operations punching, blanking and drawing cupping? [10M]
14. Explain the tools used in shearing operation. With neat sketches explain the bending and shearing operations? [10M]
15. How electric discharge machining will work and lists down some electrodes and dielectric used? [10M]
16. What are the various materials of which electrodes are made of electro discharge machining process and what are their advantages? [10M]
17. Differentiate between alloys and composite materials? Give their properties and load of impacts on them. [10M]
18. List down the important components of an aircraft where composite materials were replaced metals. [10M]