



B.E/B.TECH DEGREE EXAMINATIONS: NOV/DEC 2023

(Regulation 2018)

Fifth Semester

AERONAUTICAL ENGINEERING

U18AEE0013: Aircraft Maintenance Practices

COURSE OUTCOMES

- CO1:** Identify and maintain the equipment used in welding shop.
CO2: Apply the Inspection and Maintenance procedures for sheet metal, plastics and composite components.
CO3: Apply the Inspection and Maintenance procedures for various aircraft systems.
CO4: Identify the levels of maintenance including overhaul and extent of intervention and critical operations.
CO5: Apply methods of storage and handling of materials in shop floor.
CO6: Identify various trouble shooting processes available in aircraft industry.

Time: Three Hours

Maximum Marks: 100

Answer all the Questions:-

PART A (10 x 2 = 20 Marks)

(Answer not more than 40 words)

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|--|-----|-------------------|
| 1. What are the two principal functions of welding goggles? | CO1 | [K ₁] |
| 2. List the advantages of superimposing high-voltage, high-frequency current on the welding current. | CO1 | [K ₂] |
| 3. Classify the types Sheet-Metal damage. | CO2 | [K ₂] |
| 4. What is the purpose to increase the number of rows of rivets? | CO2 | [K ₁] |
| 5. List the benefits of Annealing Plastic. | CO2 | [K ₂] |
| 6. What is the effect of out of rigged aircraft? | CO3 | [K ₁] |
| 7. What is jacking points or pads? | CO4 | [K ₂] |
| 8. What is called static pressure test in pressurization system? | CO5 | [K ₂] |
| 9. State the Inspection and Maintenance procedure of Pneumatic-Mechanical Deicer Systems. | CO6 | [K ₁] |
| 10. List the steps in the troubleshooting process. | CO6 | [K ₁] |

Answer any FIVE Questions:-

PART B (5 x 16 = 80 Marks)

(Answer not more than 400 words)

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|--|----|-----|-------------------|
| 11. a) Explain the three types of inert-gas welding with its advantages. | 10 | CO1 | [K ₂] |
| b) Differentiate between welding, brazing and soldering. | 6 | CO1 | [K ₄] |

12.	Explain the following repairing procedure for a sheet metal.	16	CO2	[K ₂]
	(i) Sheet-Metal Ribs.			
	(ii) Cracked Structures.			
	(iii) Small Holes.			
13.	Explain in detail about the manufacturing and in-service damages in the composite components.	16	CO3	[K ₄]
14.	Illustrate the control surface rigging procedure in detail.	16	CO4	[K ₂]
15.	Explain the process of inspection and maintenance landing gear systems.	16	CO5	[K ₄]
16. a)	Explain	10	CO6	[K ₂]
	i) Fire protection systems.			
	ii) Position and warning system.			
b)	Explain the uses of trouble shooting charts.	6	CO6	[K ₄]
