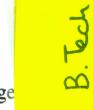
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## Dec., 2018 **B.Tech. V Semester** AIRCRAFT ENGINE OPERATION AND MAINTENANCE (ME-315C)

Time : 3 Hours]

[Max. Marks: 75

Instructions :

- It is compulsory to answer all the questions (1.5 marks (i) each) of Part-A in short.
- Answer any four questions from Part-B in detail. (ii)
- (iii) Different sub-parts of a question are to be attempted adjacent to each other.

		PART-A	CO
1	(a)	What is Fuselage?	1.5 CO1
	(b)	What are main components of Empennage?	1.5 CO1
	(c)	What is second law of thermodynamics?	1.5 CO1
	(d)	d) Write main components of Engine of aircraft.	
			1.5 CO1
	(e)	What is engine indicating system?	1.5 CO2
	(f)	What is carburettor icing?	1.5 CO2
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(g) Write main components of lubrication system of aircraft.

1.5 CO3

- (h) What is "Full authority digital electronic engine control"
  1.5 CO4
  1.5 CO4
- (i) What is Viscous Drag? 1.5 CO3
- (j) What is role of ATC ? 1.5 CO2

## PART-B

- (a) Write main components of an aircraft and explain each in detail.
   8 CO1
  - (b) What is airfoil? Write the shapes of airfoil and explain the forces Acting in Flight.7 CO1
- (a) What is flight stability? Explain its dynamics with neat sketch.
  8 CO1
  - (b) Explain Brayton Air standard cycles with application in aviation engineering.
     7 CO1
- 4. (a) Explain the Gas turbine used in aircraft. What is after burning gas turbine cycle? 8 CO2
  - (b) Classify the combustion chamber. Explain the types of nozzle with neat sketch.7 CO2
- 5. (a) Explain the fuel system of an aircraft engine. What is thrust reverser? 8 CO3
  - (b) Describe the environmental control system and engine indicating system of an aircraft engine. 7 CO3



- 6. (a) What are the Standard practices used in aero engine maintenance? 8 CO4
  - (b) Write the basic checks to be performed on an aircraft before it takeoff. 7 CO4
- 7. Write short notes on the following :
  - (a) Characteristics of turbo-prop propulsion. 5 CO2
  - (b) Environmental control system and engine indicating system. 5 CO3
  - (c) Special features of military aircraft. 5 CO1