Enrolment No:	UPES

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, Dec 2019

Course: Aircraft Systems and Maintenance — **Semester: V**
Program: B. Tech Aerospace Engineering — **Time: 03 Hrs**
Course Code: ASEG 3006 — **Max. Marks: 100**

SECTION A (4x5=20 Marks)

S. No.		Marks	CO
Q1	Explain *flight control* system of a 4-seater passenger aircraft.	5	CO1
Q2	Which type of *Oxygen system* is used in MiG 23 aircraft and why?	5	CO2
Q3	Which *lubrication system* and *starting systems* are used in R29 Jet engine of MiG 23 aircraft.	5	CO3
Q4	Explain *monocoque* and *semi-monocoque* construction of aircraft.	5	CO4
	SECTION B (4x10=40 Marks)		
Q5	Compare different types of control surface Tabs used in aircrafts.	10	CO1
Q6	What is the need of aircraft *cabin pressurization?* What are the components of typical cabin pressurization system? Explain them briefly.	10	CO2
Q7	What are different types of aircraft reciprocating engines? Explain *fuel injection* system of a reciprocating Engine.	10	CO3
Q8	Explain aircraft *assembly* and *rigging* methods. or What are aircraft *Balancing* and *Inspection* techniques?	10	CO4
	SECTION-C (2x20=40 Marks)		
Q 09	What are the advantages and disadvantages of VOR and DME? Explain functional details of each of these systems. **Or** What is the purpose of using Landing gears in aircraft? What are different types of aircraft Landing gears? Compare merits and demerits of different Landing gears.	20	CO1
Q10	Explain different types of Aircraft Inspections required for proper maintenance and safety of different aircrafts.	20	CO4