

Name:	
Enrolment No:	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, Dec 2020

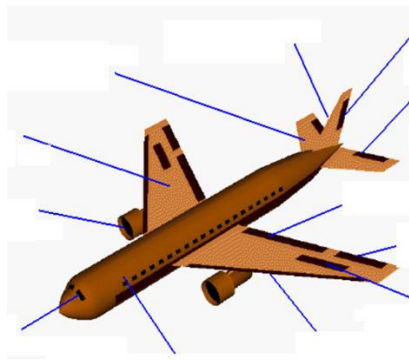
Course: Introduction to Aerospace Engineering	Semester: III
Program: B.Tech, ASE/ASE+AVE	Time 03 hrs.
Course Code: ASEG2004	Max. Marks: 100

Instructions: All questions are compulsory, Make use of sketches wherever required.

SECTION A

S. No.	Question	Marks	CO
Q1.	Write a short note on Pre WRIGHT era?	5	CO1
Q2.	Differentiate between Monoplane and Bi-plane?	5	CO1
Q3.	What do you understand by the term High Lift devices ? Explain the different high lift devices ?	5	CO2
Q4.	Write a brief note on span wise flow variation and downwash	5	CO2
Q5.	Differentiate between air breathing and non air breathing engines?	5	CO4
Q6.	Define the term Safe Life and Fail Safe?	5	CO3

SECTION B

Q7.	<p>In the figure shown below , name all the parts marked below and List the Primary and Secondary control Surfaces and their functions.</p> <div style="text-align: center;">  </div>	10	CO1
Q8	The principle of jet propulsion can be illustrated by a toy balloon ? Explain it in detail.	10	CO4
Q9	Explain the following NACA Series A) NACA 2415 B) NACA 23012	10	CO2
Q10	What are the general loads acting on an aircraft. Define Limit load and ultimate Load ?	10	CO3
Q11	What are the broad general category of external loads acting on the conventional aircraft. Explain it in detail	10	CO3

SECTION-C

Q 12	a) Draw with a neat sketch a typical Gas turbine engine and explain the function of each components in detail? b) What do you understand by multi staging of rocket engines, With a neat Sketch show different types of multistage in Rockets	10 10	CO4
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