USN		15AE32
	Third Semester B.E. Degree Examination, Dec.201	7/Jan. 2018

T.	A large	Max. Marks: 80
ımı	e: 3 hrs.  Note: Answer any FIVE full questions, choosing ONE full question from each ma	dule.
1	<ul> <li>a. Discuss the evaluation process in the development of modern aircra</li> <li>b. Explain with neat sketches the high lift devices.</li> </ul>	ft. (08 Marks) (08 Marks)
2	a. Explain the different types of aircraft construction. b. Discuss in detail about the developments in the material for an aircraft construction.	(08 Marks) rafts. (08 Marks)
3	a. Write in detail about the airfoil nomenclature, with sketches. b. Explain about: i) Aerodynamic centre ii) Center of pressure.	(08 Marks) (08 Marks)
4	a. Explain how does a pressure distribution over a wing section occub. Discuss: i) Aspect ratio ii) Mach number iii) Supersonic flip	r. (08 Marks) ght effects. (08 Marks)
5	b. Compare merits and demerits of Turboprop, Tana 3	
	OR  a. Explain the working principle of Scramjet engine. How does scra	mjet differ from ramjet? (08 Mark
6	b. Briefly explain the working of Turbojet engines.	(08 Mark
,	7 a. Describe effects of flips and slats on wings. b. Explain static and dynamic stability.	(08 Marl (08 Marl
	8 a. Briefly explain: i) Control tabs ii) Gliding iii) Landing b. What are forces acting on an aircraft in flight?	iv) Turning. (08 Mar (08 Mar
	<ul> <li>9 a. What are the requirements of a typical pneumatic system of an b. Describe a typical hydraulic system of a light passenger aircraft</li> </ul>	aircraft? (08 Mai , with a neat sketch. (08 Ma
	OR	
	10 a. List various flight instruments and explain in detail about.	(08 Ma

## OR

- iii) Landing iv) Turning. (08 Marks) ii) Gliding i) Control tabs (08 Marks) Briefly explain:
  - What are forces acting on an aircraft in flight?

# Module-5

- What are the requirements of a typical pneumatic system of an aircraft? (08 Marks) Describe a typical hydraulic system of a light passenger aircraft, with a neat sketch. 9 a. (08 Marks)
  - b.

## OR

- List various flight instruments and explain in detail about. 10
  - i) Altimeter ii) Air speed indicator.
  - Discuss the application of navigation instrument employed in an aircraft.

(08 Marks) (08 Marks)