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Question Paper Code : X10022

B.E./B.Tech. DEGREE EXAMINATIONS NOVEMBER / DECEMBER 2020

Seventh Semester

Aeronautical Engineering

AE8006 UAV Systems

(Regulations 2017)

Time: 3 Hours

Answer ALL Questions

Max. Marks 100

<u>PART- A (10 x 2 = 20 Marks)</u>

- 1. Give two applications of UAVs?
- 2. Differentiate RC model aircraft and Drones.
- 3. List out the elements of UAV.
- 4. Define disc loading for a rotary wing.
- 5. What is Radio tracking?
- 6. Define Radar tracking.
- 7. What are the factors involved in the selection of the airframe?
- 8. What is auto pilot system?
- 9. Define MAV with two applications.
- 10. What are the airframe options available for MAV?

<u>PART- B (5 x 13 = 65 Marks)</u>

11.	a)	Explain on categories of system, based upon air vehicle types.	13
	b)	Why do we need UAV? Discuss in detail.	13
12.	a)	Discuss about the functional structure of Air vehicle in UAV system. OR	13
	b)	Describe the preliminary design and detailed design phases of UAVs.	13
13.	a)	What kind of different sensors are used to measure the height of UAV? Discuss them briefly.	13
		OR	
	b)	Explain about height and altitude sensors used in UAV.	13
14.	a)	Describe the payload consideration for the design of UAVs.	13
		OR	
	b)	Discuss the importance of considering environmental conditions during the selection of UAV system.	13

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15.	a)Awhatare herdifferer sites of MPVol Diterentried. Schools		
	b) Explain on multi-agent communication and interoperability.	13	

<u>PART- C (1 x 15 = 15 Marks)</u>

16.	a)	Explain the control commands of hover flight and cruise flight of tail rotor aircraft.	15
		OR	
	b)	Explain on navigation system for UAVs.	15