

CBCS SCHEME

BAE/BAS306A

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Third Semester B.E./B.Tech. Degree Examination, Dec.2023/Jan.2024

Introduction to Drone Technology

Time: 3 hrs.

Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.

2. M : Marks , L: Bloom's level , C: Course outcomes.

Module – 1			M	L	C
Q.1	a.	Define DRONE and briefly explain the history and development of drones.	10	L2	CO1
	b.	Illustrate the overview and working of a drone system.	10	L2	CO1
OR					
Q.2	a.	Explain the following unmanned vehicles. i) UGV ii) UAV iii) UAS iv) UUAS.	12	L2	CO1
	b.	Discuss the various applications of drones.	8	L2	CO1
Module – 2					
Q.3	a.	Explain the primary components of a drone and provide a detailed description of their functions in drone operation.	10	L2	CO2
	b.	Describe the architecture of micro controller and its functions in drones.	10	L2	CO2
OR					
Q.4	a.	List and explain the various sensors commonly integrated into drones and their function.	10	L2	CO2
	b.	Write a note on following systems: i) Flight controllers ii) Telemetry iii) Camera iv) Transmitter.	10	L1	CO2
Module – 3					
Q.5	a.	Identify different DGCA rules for drones.	10	L3	CO3
	b.	Explain DGCI regulation for drones in different zones.	10	L3	CO3
OR					
Q.6	a.	Express the pilot licensing requirements.	10	L3	CO3
	b.	Explain the NPNT compliance for UAVs.	10	L3	CO3
Module – 4					
Q.7	a.	Elaborate the design configuration of drones.	10	L3	CO4
	b.	List the different types of batteries used in drone. Explain any 2 types.	10	L3	CO4

OR

Q.8	a.	Construct with PV and TS diagram of 4 stroke petrol engine and describe the working.	10	L3	CO4
	b.	Describe the mini turbine used in drone.	10	L2	CO4
Module – 5					
Q.9	a.	Discuss the importance of tuning and testing a drones.	10	L2	CO5
	b.	Explain the manufacturing constraints for building drones.	10	L2	CO5
OR					
Q.10	a.	Explain and testing of a basic drone with any one case study.	10	L2	CO5
	b.	Illustrate the use of simulator training and application.	10	L3	CO5
