



CBCS SCHEME

BAE/BAS456B

Question Paper Version : A

Fourth Semester B.E./B.Tech. Degree Examination, June/July 2026 Drone Pilot Training

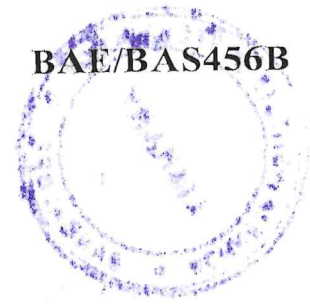
Time: 1 hr.

Max. Marks: 50

INSTRUCTIONS TO THE CANDIDATES

1. Answer all the **fifty** questions, each question carries one mark.
2. Use only **Black ball point pen** for writing / darkening the circles.
3. **For each question, after selecting your answer, darken the appropriate circle corresponding to the same question number on the OMR sheet.**
4. Darkening two circles for the same question makes the answer invalid.
5. **Damaging/overwriting, using whiteners** on the **OMR** sheets are strictly prohibited.

1. Which organization is responsible for regulating civil aviation in India?
a) ISRO b) HAL c) DRDO d) DGCA
2. What is the full form of DGCA?
a) Directorate of General Civil Aviation
b) Director of Government Civil Aviation
c) Directorate General of Civil Aviation
d) Department of Government Civil Aviation
3. Which category of drones needs mandatory UIN (Unique Identification Number)?
a) Nano b) Micro c) Small and above d) Toy Drones
4. What is the weight limit of a Nano category drone as per DGCA?
a) Less than 500g
b) Less than or equal to 250g
c) Less than 2 kg
d) Less than 1 kg
5. The Remote pilot needs to be of least how many years old?
a) 14 b) 16 c) 18 d) 21
6. Which of these zones restrict drone flying?
a) Green zone b) Orange zone c) Red zone d) Blue zone



7. Which ministry oversees DGCA?
 - a) Ministry of Defence
 - b) Ministry of Home Affairs
 - c) Ministry of Civil Aviation
 - d) Ministry of Science and Technology
8. Which of the following increases lift?
 - a) Reducing Angle of Attack
 - b) Decreasing Airspeed
 - c) Reducing camber
 - d) Increasing Wing Area
9. Drag caused by the production of lift is called
 - a) Induced drag
 - b) Form drag
 - c) Parasite drag
 - d) Wave drag
10. What is the function of the propeller in a fixed wing UAV
 - a) Generate lift
 - b) Reduce drag
 - c) Provide stability
 - d) Generate thrust
11. What is wing loading?
 - a) Weight per unit wing area
 - b) Total Aircraft Weight
 - c) Lift per unit area
 - d) Drag per unit area
12. What does "Angle of Attack" refer to?
 - a) Wind direction
 - b) Angle between chord line and relative wind
 - c) Pitch angle
 - d) Angle of Yaw
13. Which of the following increases induced drag?
 - a) Higher speed
 - b) Higher lift generation
 - c) Lower weight
 - d) Lower altitude
14. What is the function of the empennage (tail) in a fixed-wing UAV?
 - a) Generate lift
 - b) Generate thrust
 - c) Provide stability and control
 - d) Carry battery
15. What is the benefit of a high aspect ratio wing?
 - a) Faster speed
 - b) Improved Aerodynamic efficiency
 - c) Less lift
 - d) More drag

16. What is the critical angle of attack?
 - a) Angle where max speed is achieved
 - b) Angle where stall begins
 - c) Landing angle
 - d) Climb angle
17. What happens when all motors in a quadcopter spin at the same speed?
 - a) The drone Yaws
 - b) It rolls
 - c) It hovers
 - d) It flips
18. Why do quadcopters have counter rotating propellers?
 - a) For symmetry
 - b) To balance torque
 - c) For more speed
 - d) For noise reduction
19. Why are multi-rotors ideal for aerial photography?
 - a) Fast flying
 - b) Stable hovering and control
 - c) Loud motors
 - d) Long endurance
20. Why are light weight frames preferred in multi rotor design?
 - a) Better camera control
 - b) Improved lift to weight ratio
 - c) Easier to colour
 - d) Stronger drag
21. What effect does a damaged propeller have on flight?
 - a) No impact
 - b) Causes vibration and imbalance
 - c) Improves stability
 - d) Increases endurance
22. What is the study of atmospheric conditions called?
 - a) Astronomy
 - b) Geology
 - c) Meteorology
 - d) Topography
23. What is the instrument used to measure wind speed?
 - a) Barometer
 - b) Anemometer
 - c) Thermometer
 - d) Altimeter
24. How does cold air affect drone performance?
 - a) Reduce life
 - b) Slows the drone
 - c) Increases air density and lift
 - d) Reduces battery power only
25. What happens to battery efficiency in cold weather?
 - a) Increases
 - b) Decreases
 - c) No effect
 - d) Becomes unstable

26. What is the primary function of an ESC (Electronic Speed Controller)?
 - a) Change the battery
 - b) Control the camera
 - c) Regulate motor speed
 - d) Adjust GPS
27. What component provides real-time orientation data to the flight controller?
 - a) ESC
 - b) GPS Module
 - c) IMU (Inertial Measurement Unit)
 - d) Antenna
28. Which type of battery is commonly used in drones?
 - a) Lead-acid
 - b) NiCd
 - c) LiPo (Lithium Polymer)
 - d) Alkaline
29. What is a gimbal used for a drone?
 - a) Increase speed
 - b) Stabilize the Camera
 - c) Control Landing
 - d) Improve battery life
30. How often should propellers be inspected?
 - a) Monthly
 - b) Weekly
 - c) Before every flight
 - d) Yearly
31. What is the function of flight controller?
 - a) Charge battery
 - b) Manage flight dynamics and stability
 - c) Record video
 - d) Distribute power
32. What is the best method to clean a drone?
 - a) Water spray
 - b) Wet cloth
 - c) Soap solution
 - d) Dry cloth and soft brush
33. Before flight, what test ensures GPS signal strength?
 - a) Satellite lock check
 - b) Tilt test
 - c) Altimeter test
 - d) Compass spin

34. Return to Home (RTH) is triggered when :
- a) Communication between drone and controller is lost
 - b) Drone battery is fully charged
 - c) Obstacle is detected
 - d) Drone lands
35. If your drone battery is critically low mid-flight, what should you do?
- a) Keep hovering
 - b) Increase altitude
 - c) Turn off sensors
 - d) Land immediately
36. Which software feature allows setting altitude/geofence limits to avoid emergencies?
- a) RTH
 - b) Gimbal control
 - c) Flight planning settings
 - d) Zoom
37. What must be considered when choosing a payload for a drone?
- a) Only colour for the payload
 - b) Weight, size and power requirements
 - c) Brand name
 - d) Flight duration
38. How does payload weight affect drone performance?
- a) It increases battery life
 - b) It increases speed
 - c) It improves camera quality
 - d) It decreases flight time and stability
39. What is the main objective of incorporating flight simulators into drone pilot training programs at the academic level?
- a) Safe skill development
 - b) High speed training
 - c) Drone assembly learning
 - d) Payload testing
40. Which of the following is not a standard functionality provided by most drone flight simulators?
- a) Simulated weather
 - b) Battery tracking
 - c) Environment selection
 - d) Crisis handling
41. How do simulators promote long term improvement in drone piloting skills?
- a) Practice repetition
 - b) Speed trails
 - c) Fewer hours
 - d) Encourage risks
42. What impact does simulator practice have on the accuracy and control of a drone pilot's maneuvers?
- a) Reduces accuracy
 - b) Avoids accuracy
 - c) Enhances precision
 - d) Basic only

43. How does GPS training using flight simulators support navigation learning in drone operations?
a) Battery check b) Skip GPS c) No GPS use d) Waypoint practice
44. What should a trainee do if they notice the drone is drifting uncontrollably during a flight lesson?
a) Increase the throttle to counter the drift
b) Adjust the controls slowly and regain control
c) Stop the drone motors immediately
d) Let the drone continue until it stabilizes
45. What is one of the key principles for safe drone flight during practical lessons?
a) Flying the drone at full throttle for maximum speed
b) Focusing on automated flight modes exclusively
c) Using the drone's highest possible altitude
d) Keeping the drone within visual line of sight
46. What is a primary concern when flying drones in areas with many obstacles during practical lessons?
a) Avoiding collisions with obstacles
b) Recording video footage
c) Battery drain
d) Navigating with GPS exclusively
47. Why is it important to practice flying in a straight line during practical lessons?
a) To increase battery life
b) To ensure stable drone flight and direction
c) To test the drone's maximum range
d) To practice high speed maneuvers
48. Which is one of the first emergency drills practiced during practical flying lessons?
a) Emergency Landing procedures
b) High-slips chase maneuvers
c) Aerial flips and spins
d) Flying in foggy conditions
49. Which of the following is typically the first skill taught in practical flying lessons?
a) High-speed maneuvering
b) Flying in tight spaces
c) Hovering in place
d) Flying autonomously
50. What is the importance of practicing drone control in confined spaces during lab lessons?
a) To increase battery life
b) To test drones endurance
c) To improve precision and maneuverability
d) To focus on high-speed performance.

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