

CBCS SCHEME

BAE456B/BAS456B

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Question Paper Version : C

Fourth Semester B.E./B.Tech. Degree Examination, June/July 2025 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.

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1. In payload utilization, what is the primary application of a multispectral camera on a drone?
 - a) Terrain Mapping
 - b) Wildlife monitoring
 - c) Crop health assessment
 - d) Real time video streaming
 2. Primary function of drone GPS system
 - a) Video feed
 - b) To maintain altitude
 - c) Navigation and position
 - d) Control drone camera
 3. In Image/video interpretation, what does NDVI stand for?
 - a) Normalized difference vegetation index
 - b) Normalized Digital Video Integration
 - c) Near-Infrared Digital Vegetation Index
 - d) National Digital Video Initiative
 4. What is the significance of the term "Pay load capacity" in drone operations?
 - a) Maximum altitude a drone can reach
 - b) Maximum speed a drone can achieve
 - c) Maximum weight a drone can carry
 - d) Maximum battery life of a drone

5. What is the purpose of LiDAR technology in payload installation on drones?
 - a) Capture high resolution image
 - b) Measure distances and create detailed maps
 - c) Record video footage
 - d) Enhance communication signals
6. _____ Sensor can penetrate observant, such as smoke, fog and haze.
 - a) Temperature
 - b) IR sensor
 - c) Camera
 - d) Thermal Imaging
7. Which is the commonly used sensor for obstacle detection?
 - a) SONAR
 - b) RADAR
 - c) LiDAR
 - d) All of these
8. Photogrammetry creates dynamic, measurable documents using system of ____
 - a) UAV mounted sensors
 - b) GIS Mapping
 - c) Both of the above
 - d) None of these
9. The term LiPO refers to ____
 - a) Linear polarizer
 - b) Lithium polymer
 - c) Low pressure
 - d) Local positioning
10. What is the primary factor influencing the stability of a fixed wing aircraft during flight?
 - a) Engine power
 - b) Wing size
 - c) Center gravity
 - d) Altitude
11. Civil Aviation requirements are published by ____
 - a) DGCA
 - b) AAI
 - c) ICAO
 - d) IATA
12. The full form of CAR ____
 - a) Civil Aviation Requirement
 - b) Civil Aviation Regulation
 - c) Central Aviation Regulation
 - d) Central Aviation Requirement
13. What is the primary purpose of ATC procedure?
 - a) Ensuring Aircraft Safety
 - b) Monitoring weather conditions
 - c) Conducting pilot training program
 - d) Managing airport finances
14. The primary purpose of obtaining the UIN for drone as per DGCA rules is ____
 - a) To operate drone in controlled air space
 - b) To ensure insurance coverage for the drone
 - c) To track and identify the drone owner
 - d) To participate in drone racing events

15. According to DGCA's Drone Regulations 2021, what category do drones weighing less than 250 gms fall into _____
a) NANO b) MICRO c) SMALL d) MEDIUM
16. What does the term FPV stand for ?
a) Fixed position view b) First Person view
c) Fast precision vision d) Flight position verification.
17. The aerospace map for drone is freely available on the _____ platform
a) NEOSKY b) Digital sky c) Air sky d) Data sky
18. Standardization of ATM service is ensured by?
a) FAA b) DGCA c) ICAO d) IAO
19. Fixed wing UAV's are suited for _____ Inspection application.
a) Circular b) Linear c) Varying Topography d) Low altitude
20. How does the Indian Drone Airspace is zonalised?
a) Red, Blue, Green b) White, Black, Violet
c) Red, Yellow, Green d) Yellow, Green, White
21. Flight mode that allows the drone to automatically follow and track a subject _____
a) Follow Me Mode
b) Orbit Mode
c) Acro Mode
d) Waypoint Mode
22. What is the primary benefit of incorporating weather simulation in flight training?
a) Simulating emergency procedures
b) Enhancing communication signals
c) Providing exposure to various weather condition
d) Analyzing aerodynamic characteristics
23. Purpose of windsock in the airport _____
a) Indicate wind direction and speed
b) Measure air temperature
c) Display airport status
d) Signal emergency conditions
24. What is the function of Geofencing?
a) Control drone speed
b) Restrict drone operations in certain areas
c) Adjust drone altitude
d) Enhance camera stabilizer
25. _____ color has a the largest frequency is visible spectrum.
a) Green
b) Violet
c) Blue
d) Yellow.

26. _____ is logical process to make observation and interpretation
a) Interface b) Inference c) Interference d) Impair
27. MSL means _____
a) Mean Sea Level b) Mid Sea Level
c) Mean Seal Layer d) Mild Sea Layer
28. What is the primary purpose of flight simulator training?
a) To simulate real world flight conditions for pilot practice
b) To teach drone maintenance procedures
c) To control air traffic control simulations
d) To analyze meteorological data
29. In image/video interpretation, what does the term "orthomosaic" refer to?
a) Three dimensional mapping
b) Panoramic images stitched together
c) Infrared Imagery
d) Thermal Imaging
30. In final test theory, what is the purpose of a preflight checklist?
a) Evaluate payload performance
b) Analyze weather conditions
c) Ensure proper functioning of the drone
d) Conduct image analysis before flight
31. What is the function of an anemometer?
a) Measure air pressure
b) Measure wind speed
c) Measure temperature
d) Measure humidity
32. In aviation, what is the purpose of squawking a transponder code?
a) Initiating engine shutdown
b) Communicating with ATC
c) Requesting in flight catering
d) Indicating fuel status
33. What does "mayday" refers in radio call?
a) Reporting a navigational error
b) Declaring an emergency
c) Requesting a change of altitude
d) Requesting landing clearance
34. Purpose of return to home features in drone operation is _____
a) Capture high resolution images
b) Return the drone to its take off point automatically
c) Record real time video footage
d) Enhance communication signals

35. What is the significance of the term PAPI in aviation?
a) Pilot's Approach path Indicator
b) Personal Aircraft position Indicator
c) Primary Altitude path Indicator
d) Precision Approach path Indicator
36. IMU Stands for ____
a) Inertia Measurement Unit
b) Indian Medical Unit
c) Indian Meteorological Unit
d) Imperial Metering Unit
37. In meteorology, what does the term 'dew point' represent
a) The temperature at which air becomes saturated with moisture
b) The point of maximum air pressure
c) The point of minimum humidity
d) The temperature at which clouds form
38. What does the term "Crosswind Landing" refer to?
a) Landing into the wind to minimize drift
b) Landing with a tailwind for increased speed
c) Landing under autopilot control
d) Landing during adverse weather conditions
39. Ground Effect refers to ____
a) The impact of weather on flight performance
b) The influence of ground proximity on lift and drag
c) The simulation of take-off procedures
d) The communication between pilots and Air traffic controller
40. Autopilot feature refers to
a) Simulate emergency procedures
b) Allow the aircraft to fly automatically without manual control
c) Simulate air traffic control communication
d) Analyze aerodynamic characteristics
41. As per the guidelines, the drone cannot be flown more than ____ ft vertically.
a) 100 b) 200 c) 500 d) 400
42. The combination of Ailerons and Elevators is called ____
a) Aleron b) Spoiler c) Elevon d) Rudder
43. Skidding outwards in a turn is caused by ____
a) Insufficient banking b) Excess power c) Excess Bank d) Over turn
44. If the weight of a fixed wing UAV increases, the gliding range will ____ as well as the rate of descent ____
a) Remain same, increase
b) Increases, Increases
c) Remain same, decreases
d) Decreases, Increases

45. What is the purpose of gimbals in drones?
a) Capturing aerial photos
b) Control of drone's altitude
c) Stabilize the camera during flight
d) Improve GPS accuracy
46. If the angle of attack and other factors remaining constant and airspeed is doubled, the lift will increase by ____ times.
a) 2 b) 3 c) 1/2 d) 4
47. CTR stands for ____
a) Closed Target Reconnaissance b) Clear
c) Correction d) Control zone
48. In multirotor operations, what is the primary mechanism for controlling, the aircraft's attitude?
a) Aileron b) Elevator c) Flaps d) Rotor speed variation
49. What does the term 'METAR' stand for in meteorology?
a) Meteorological Alert and Reporting
b) Meteorological Aerodrome Report
c) Meteorological Emergency Tracking and Response
d) Meteorological Elevation and Range
50. What is the purpose of a barometer in meteorology?
a) Measure wind speed
b) Measure Air pressure
c) Measure humidity
d) Measure temperature

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