PRERNA AVIATION

DGCA CPL Practice Paper 18

Technical General - Aircraft Systems

QUESTION PAPER

2026-reviewed sectional practice. Not an official DGCA paper or a verified full-length latest-pattern mock.

25 MCQs • 25 marks • Suggested practice time: 40 minutes

Choose one answer. Practice scoring: +1 correct; 0 incorrect or blank. Count, timing and scoring are editorial practice settings, not a verified official exam pattern. Attempt this set without a calculator. Use the stated assumptions.

Name: _____ Date: _____ Score: ____ / 25

01. An alternator produces electricity by:

A. Compressing cabin air
B. Electromagnetic induction
C. Evaporating hydraulic fluid
D. Changing fuel into static pressure

02. A rectifier converts:

A. Electrical energy directly to fuel
B. Direct current to hydraulic pressure
C. Alternating current to direct current
D. Low pressure to high altitude

03. An inverter is used to convert:

A. Static pressure to total pressure
B. AC to DC only
C. Fuel pressure to oil pressure
D. DC electrical power to AC electrical power

04. A transformer operating normally requires a changing magnetic field and is commonly used with:

A. Hydraulic fluid
B. Alternating current
C. Steady direct current alone
D. A constant mechanical spring load only

05. A conventional transformer has twice as many turns on the secondary as on the primary. Ideally, secondary voltage is:

A. Twice primary voltage
B. Four times primary voltage
C. Unchanged
D. Half primary voltage

06. A battery rated 20 Ah supplies a constant 5 A in an ideal calculation. Nominal discharge time is:

A. 4 hours
B. 15 minutes
C. 100 hours
D. 25 hours

07. Connecting identical batteries in parallel, with correct polarity and compatible condition, ideally increases:

A. Available ampere-hour capacity while voltage stays the same
B. Voltage while ampere-hour capacity stays the same
C. Resistance to infinity
D. Voltage to zero

08. A short circuit is characterised by an unintended path of:

A. Infinite resistance that always stops all current
B. Perfect insulation
C. Very low resistance that can produce excessive current
D. Normal load resistance in every case

09. An open circuit usually prevents current because:

A. The conducting path is interrupted
B. Voltage becomes hydraulic pressure
C. Resistance becomes exactly zero
D. Every load automatically receives twice normal current

10. A circuit breaker trips repeatedly. The appropriate general principle is to:

A. Replace it with wire
B. Hold it closed to prevent interruption
C. Follow the aircraft's approved procedure rather than repeatedly resetting it
D. Assume repeated trips prove the system is healthy

11. A busbar in an aircraft electrical system is principally:

A. An engine fuel nozzle
B. A pitot drain
C. A hydraulic reservoir
D. A common distribution point for electrical power

12. Hydraulic fluid is useful for transmitting force because it is:

A. Unaffected by temperature
B. Always electrically non-conductive under every condition
C. Relatively incompressible
D. Highly compressible like a gas

13. A hydraulic reservoir primarily provides:

A. A substitute for the electrical battery
B. A supply of system fluid and space for volume changes
C. The aircraft's magnetic reference
D. Only compressed oxygen for passengers

14. A hydraulic relief valve is intended mainly to:

A. Prevent every possible fluid leak
B. Increase pressure without limit
C. Limit excessive system pressure
D. Measure aircraft heading

15. A non-return or check valve normally permits fluid flow:

A. Only when the aircraft is inverted
B. Only after the fluid freezes
C. Equally in both directions in every condition
D. In one direction

16. Pneumatic systems transmit power using:

A. Only electrical resistance
B. Only gravitational potential energy
C. Only incompressible liquid
D. Compressed gas

17. In a pressurised aircraft, cabin differential pressure is:

A. Indicated altitude minus true airspeed
B. Fuel pressure minus oil pressure
C. Cabin temperature minus outside temperature
D. Cabin pressure minus outside atmospheric pressure

18. As a pressurised aircraft climbs while cabin altitude remains constant, cabin differential pressure generally:

A. Remains unchanged in every case
B. Increases
C. Becomes a temperature measurement
D. Decreases to zero

19. A cabin safety valve helps protect the structure against:

A. Only incorrect magnetic headings

B. Low tyre tread depth

C. Excessive positive or negative pressure differential, according to its design

D. Incorrect fuel grade

20. Anti-icing and de-icing differ because anti-icing primarily:

A. Means the same thing in every system

B. Prevents ice accumulation, while de-icing removes accumulated ice

C. Removes old paint while de-icing adds paint

D. Works only on runways

21. An electrically heated pitot head is intended to:

A. Create artificial ground speed

B. Measure fuel density

C. Correct magnetic compass errors

D. Reduce the risk of ice blocking pressure sensing

22. A fuel vent helps prevent:

A. An excessive pressure difference as fuel is used or temperature changes

B. All water contamination regardless of handling

C. Any need for a fuel quantity gauge

D. Every engine ignition fault

23. Water in aviation fuel is undesirable partly because it can:

A. Replace the need for lubrication

B. Always evaporate harmlessly before reaching the engine

C. Interrupt fuel flow or contribute to icing and corrosion

D. Increase the guaranteed energy content of the fuel

24. A centrifugal pump's impeller primarily adds energy to fluid by:

A. Reducing all fluid velocity to zero

B. Rotational motion

C. Changing latitude

D. Magnetic variation

25. A filter bypass valve may allow fluid to continue flowing when a filter is severely restricted, but the trade-off can be:

A. Flow of unfiltered fluid

B. Conversion of the fluid to gas

C. Guaranteed improved filtration

D. Permanent elimination of contamination