

DGCA CPL Practice Paper 01

Air Navigation — Set A

QUESTION PAPER

Original educational practice set. Not an official DGCA paper or a full-length examination simulation.

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

Choose one answer per question. Practice scoring: +1 for a correct answer; 0 for an incorrect or blank answer. This timing and scoring are for this practice set only. A calculator may be used for practice. Use the assumptions stated in each question.

Name: _____ Date: _____ Score: ____ / 25

01. An aircraft covers 156 NM in 1 hour 12 minutes. What is its average ground speed?

- | | |
|-----------|-----------|
| A. 112 kt | B. 130 kt |
| C. 156 kt | D. 187 kt |

02. At a constant ground speed of 144 kt, how far is an aircraft expected to travel in 25 minutes?

- | | |
|------------|----------|
| A. 57.6 NM | B. 60 NM |
| C. 36 NM | D. 72 NM |

03. A leg is 210 NM long. Ground speed is 140 kt. What is the flight time?

- | | |
|---------------|---------------|
| A. 1 h 40 min | B. 2 h 10 min |
| C. 1 h 30 min | D. 1 h 20 min |

04. True airspeed is 125 kt with a direct headwind of 20 kt. Ignoring other effects, what is ground speed?

- | | |
|-----------|-----------|
| A. 105 kt | B. 100 kt |
| C. 145 kt | D. 125 kt |

05. An aircraft needs a ground speed of 150 kt and has a direct tailwind of 18 kt. Required TAS is:

- | | |
|-----------|-----------|
| A. 132 kt | B. 168 kt |
| C. 150 kt | D. 128 kt |

06. Using the 1-in-60 approximation, an aircraft is 3 NM right of track after 45 NM along track. What is the approximate track error?

- | | |
|--------------------|--------------------|
| A. 2 degrees right | B. 4 degrees left |
| C. 4 degrees right | D. 6 degrees right |

07. An aircraft is 4 NM right of track with 40 NM remaining along the planned line. Using 1-in-60, what closing angle is needed toward the destination, excluding any existing track error correction?

- | | |
|-------------------|--------------------|
| A. 4 degrees left | B. 6 degrees right |
| C. 6 degrees left | D. 10 degrees left |

08. A true heading of 095 degrees is required. Variation is 7 degrees east and compass deviation is 2 degrees west. What compass heading should be used?

- A. 100 degrees
- B. 104 degrees
- C. 086 degrees
- D. 090 degrees

09. Compass heading is 250 degrees, deviation 3 degrees east and variation 6 degrees west. What is true heading?

- A. 247 degrees
- B. 253 degrees
- C. 259 degrees
- D. 241 degrees

10. What is the reciprocal of a bearing of 028 degrees?

- A. 208 degrees
- B. 332 degrees
- C. 152 degrees
- D. 118 degrees

11. A position is 1 degree 24 minutes north of another position on the same meridian. What is their approximate separation?

- A. 124 NM
- B. 60 NM
- C. 144 NM
- D. 84 NM

12. At latitude 60 degrees N, two positions differ by 4 degrees of longitude. Using distance along the parallel = difference in longitude x 60 x cos(latitude), find the distance.

- A. 60 NM
- B. 120 NM
- C. 208 NM
- D. 240 NM

13. Local mean time at 045 degrees E is 1500. What is UTC?

- A. 1530
- B. 1800
- C. 1400
- D. 1200

14. At 1800 UTC, what is local mean time at 075 degrees W?

- A. 2300
- B. 1300
- C. 0100 next day
- D. 1700

15. A flight leaves at 2245 UTC and lasts 2 hours 35 minutes. What is its arrival time in UTC?

- A. 0110 next day
- B. 2520 same day
- C. 0120 next day
- D. 0020 next day

16. A fuel flow of 32 litres per hour is maintained for 1 hour 45 minutes. How much fuel is used?

- A. 46.4 litres
- B. 56 litres
- C. 48 litres
- D. 64 litres

17. Usable fuel is 150 litres. A specified planning reserve of 30 litres must remain untouched. At 40 litres per hour, what time is available before entering that reserve?

- A. 4 hours
- B. 2 h 30 min
- C. 3 h 45 min
- D. 3 hours

18. For an exercise, trip fuel is 84 litres, taxi fuel 6 litres and a specified reserve 28 litres. What is the total planned fuel?
- A. 90 litres
B. 112 litres
C. 106 litres
D. 118 litres
19. On a 1:500,000 chart, a distance measures 7.4 cm. Using 1 NM = 1.852 km, what is the approximate distance?
- A. 40 NM
B. 10 NM
C. 20 NM
D. 37 NM
20. Which line crosses all meridians at a constant angle?
- A. Every small circle
B. Rhumb line
C. Every great circle
D. A magnetic meridian only
21. Ignoring terrain and airspace restrictions, the shortest surface route between two non-antipodal points on a sphere follows:
- A. The shorter great-circle arc
B. Any constant-heading line
C. The longer great-circle arc
D. Any constant-latitude parallel
22. The usual practical advantage of a Mercator chart for plotting a constant true course is that:
- A. Polar areas are undistorted
B. Every great circle is straight
C. Rhumb lines are straight
D. All distances share one scale everywhere
23. True track is 090 degrees and a wind blows from the north. To maintain that track, the aircraft must generally point:
- A. North of east
B. Exactly east regardless of wind
C. South of east
D. Exactly west
24. A planned leg is 90 NM. After 20 minutes, 40 NM has been covered. If this ground speed continues, how much time remains?
- A. 40 minutes
B. 35 minutes
C. 30 minutes
D. 25 minutes
25. Two aircraft depart the same point on opposite straight tracks at 110 kt and 130 kt ground speed. How far apart are they after 15 minutes?
- A. 120 NM
B. 60 NM
C. 30 NM
D. 240 NM