

Wizz Air Prep

Info/Feedback

V4 - February 25

Table of Contents

WIZZ AIR	4
F24 NOTES	12
FRESH NEWS	14
HUMAN RESOURCES	16
SCENARIOS	19
GROUP EXERCISE	20
TECHNICAL INTERVIEW	21
UNANSWERED	35
SCENARIOS	38
UNANSWERED SCENARIOS	41
FORMER AIRPLANE	42
ATPL	43
UNANSWERED	57
MATH	60
UNANSWERED	63

DISCLAIMER

This document has been compiled for study purposes only and is based on feedback from various online sources and discussion groups. None of the information contained herein has been sourced directly from the Wizz Air assessment itself.

I do not take responsibility for the accuracy, reliability, or correctness of any of the information in this document. The answers and details provided are for personal study and preparation only—they should not be considered official, validated, or endorsed by Wizz Air or any other organisation.

This document is **not to be used for flight operations** or as a reference for real-world decision-making. It is solely intended as a study aid, and any reliance on its content is at your own discretion and risk.

I am not liable for any consequences, direct or indirect, resulting from the use of this document. If you have any concerns or require official information, always refer to the airline's official documentation and guidelines.

To whoever finds this document helpful: good luck, study well, and I hope to see you in the skies someday. **Stay focused, stay sharp and fly safe!**

WIZZ AIR

- Wizz Air's information is updated frequently and may have changed by the time of read. Always refer to the latest official reports for the most accurate data.

1. Which subsidiaries or AOCs does Wizz Air have/Is the Wizz Air Holdings PLC composed of, and what are their callsigns?

- Wizz Air Hungary (WAH) -> founded 2003 -> 'Wizz Air' (W6/WZZ) [HA]
- Wizz Air UK (WUK) -> founded in 2017 -> 'Wizz Go' (W9/WUK) [G]
- Wizz Air Abu Dhabi (WAD) -> founded in 2020 -> 'Wizz Sky' (5W/WAZ) [A6]
- Wizz Air Malta (WAM) -> founded in 2022 -> 'Wizz Air Malta' (W4/WMT) [9H]

2. What is the Wizz Air ICAO and IATA code?

ICAO: WZZ, IATA: W6, Call sign: "Wizz Air"

3. Who is the CEO of Wizz Air?

- József Váradi - Hungarian, 59 yo (co-Founder of Wizz Air 2003)
- Master's degree in economics from the Budapest University of Economic Sciences - 1989
- Master of Laws Degree from the University of London - 2014
- 2001 – 2003 Malev's CEO
- EY "Entrepreneur of the Year" in 2018

4. Who is the CFO of Wizz Air?

Ian Malin – British, 48 yo (Joined October 2022, Unical Aviation + AJW before)

5. Who is the COO of Wizz Air?

Diarmuid O'Conghaile – Irish, 57 yo (Joined November 2022 for MD of Wizz Air Malta. Irish CAA and Ryanair before)

6. Who is the chairman of the board of directors?

William A. Franke – American, 85 yo (Joined 2015, Founder/Manager of Indigo Partners - has 23,9% of Wizz Air shares)

7. Who is the pilot recruitment supervisor?

Yasmim Dias – Brazilian (Joined March 2023, Sebrae before)

8. Who is the Officer and Managing Director of Wizz Air Abu Dhabi?

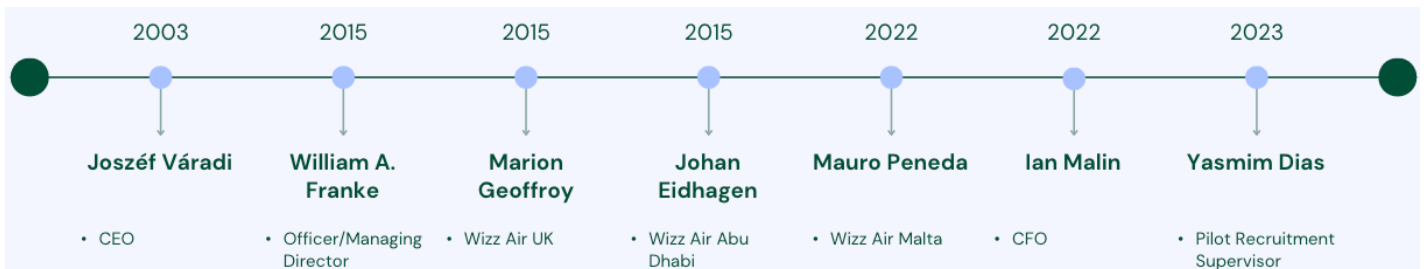
Johan Eidhagen – Swedish, 49 yo (Joined January 2015, Nokia before)

9. Who is the Managing Director of Wizz Air UK?

Marion Geoffroy – French, 50 yo (Joined March 2015, Air France – KLM before)

10. Who is the Managing Director of Wizz Air Malta?

Mauro Peneda – Portuguese, ~40 yo (Joined 2022, Latam before – IST/MIT)



11. What date was Hungary Limited founded on?

September 2003 (by 6 people, including József Várdi)

12. When was the first flight and route?

On the 19th of May 2004 -> Katowice to London Luton

13. How many destinations does Wizz Air fly to?

- F24 - 208 Airplanes, 924+ operated routes, 50+ countries, 200+ destinations
- Website – 207 Planes, 8200+ people, 190+ Airports in 54 countries, 750+ Routes

14. When did Wizz Air carry 10 million passengers for the first time?

- 2008
- Yearly -> 5M in 2006, 10M in 2008, 15M in 2014
- Total -> 100M in 2015, 200M in 2019, 300M in 2022

15. When did Wizz Air receive its 50th Aircraft?

2014 (100th in 2018, 200th in 2024)

16. What is the passenger number from last year?

51,1M on F23 -> 62M on F24 (21.3% increase)

17. When was Wizz Air Holdings Plc. listed on the London Stock Exchange (LSE)?

On the 25th of February 2015 (FTSE 250 index) (Carried 100M Pax)

18. Describe Wizz Air's fleet

- Aircrafts in service -> 208 (F24 – March 2024)
- 40 x A320ceo (180/186 seats) -> 2 pilots, 4 cabin crew
- 6 x A320neo (186 seats) -> 2 pilots, 4 cabin crew
- 41 x A321ceo (230 seats) -> 2 pilots, 5 cabin crew
- 121 x A321neo (239 seats) -> 2 pilots, 5 cabin crew
- Orders -> 326 units (goal is to become a 50-aircraft airline group by 2030)
- 13x A320neo
- 266x A321neo
- 47x A321xlr (239 seats) -> 2 pilots, 5 cabin crew (In Sep24 was announced that from 2Jun25, 1st route from Milan Malpensa to Abu Dhabi will be operated as a daily service)
- Planned to have 229 aircraft in 2025 and 299 in 2026
- Average fleet age -> 4.3 years (Europe's newest fleet)
- NEO Fleet 61% -> 25% fuel efficiency, 16% range, -25% emissions improvement from CEO

19. What are the A320 and A321 differences?

Aircraft	A320-200	A320neo	A321ceo	A321neo
Max Speed	903 km/h	903 km/h	903 km/h	903 km/h
Econo. Speed	840 km/h	840 km/h	840 km/h	840 km/h
Length	37,57 m	37.57	44,51 m	44,51 m
Wingspan	35.08 m	35.08 m	35.08 m	35.08 m
Pax Cap.	180/186	186	230	239
Crew	2+4	2 + 4	2+5	2+5
Range	3300 NM	3400 NM	3200 NM	4000 NM
MTOM	78 T	79 T	93 T	97 T

20. What does CEO/NEO mean?

- CEO -> Current Engine Option
- NEO -> New Engine Option

21. What engines are installed on Wizz Air aircraft (bypass ratio)?

- CEO - International Aero (IAE) V2500 – 4.5:1
- NEO - Pratt & Whitney PW1100G-JM geared turbofan ("GTF") – 12.5:1

22. What is the Wizz Air workforce?

8200+ employees globally (100 different nationalities)

23. What is the number of bases?

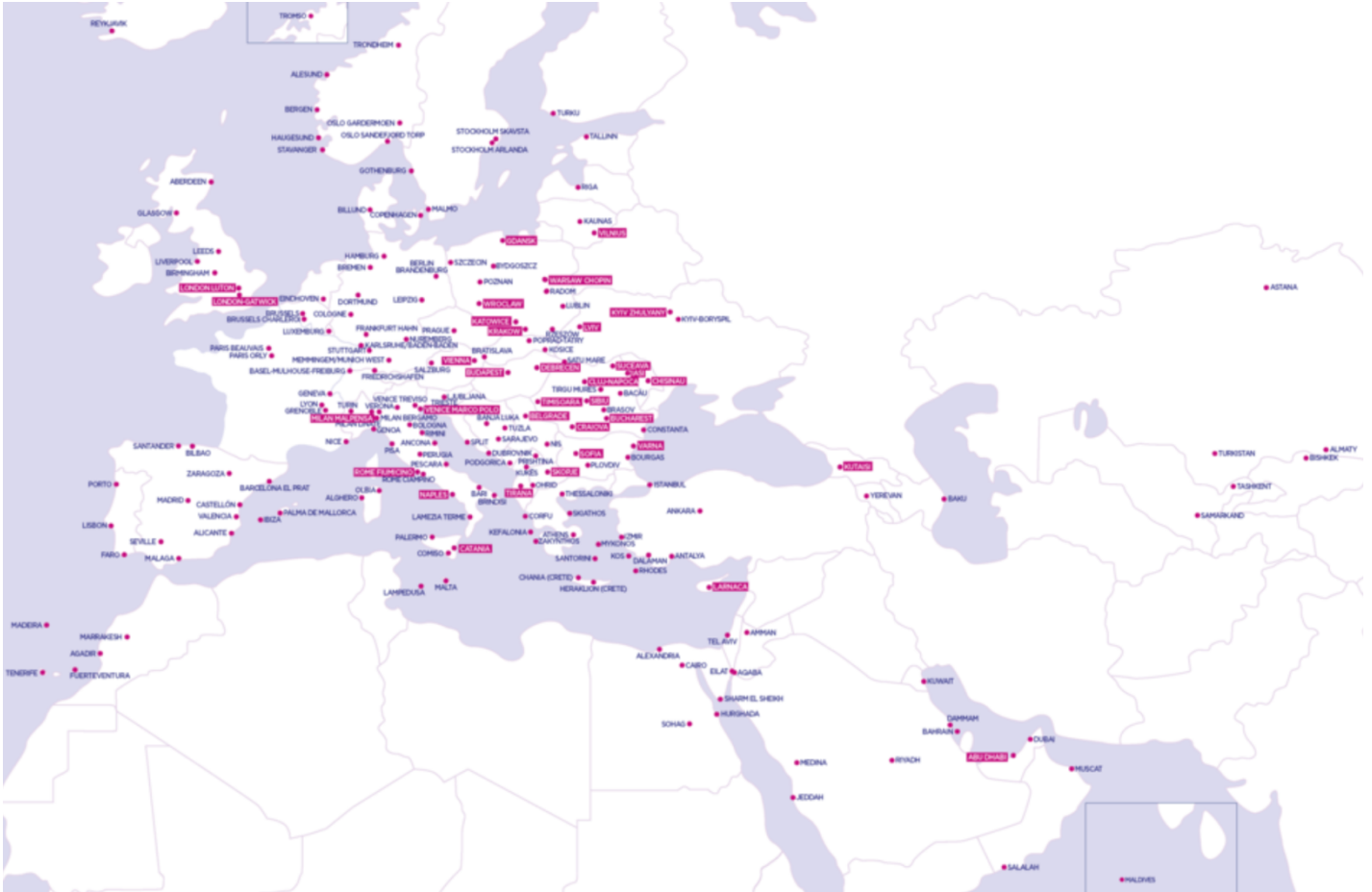
- In general -> 30 bases in 15 countries (Feb 2025)
- 34 bases (not including seasonal summer bases):
- In Romania -> 8 bases (Bucharest OTP, Bacau, Cluj, Craiova, Iasi, Sibiu, Timisoara, Suceava) (Feb 2023)
- In Italy -> 5 bases (Milan MXP, Rome FCO, Catania, Naples, Venice VCE)
- In Poland -> 5 bases (Katowice, Krakow, Warsaw, Gdansk, Wroclaw) (Jan 23)
- In Hungary -> 2 bases (Budapest OTP, Debrecen)
- In Bulgaria -> 2 bases (Sofia, Varna)
- In the UK -> 2 bases (London LTN, LGW)
- In Ukraine -> 2 bases (Kyiv, Lviv) -> SUSPENDED!
- In Austria -> 1 base (Vienna)
- In Albania -> 1 base (Tirana)
- In Cyprus -> 1 base (Larnaca)
- In Georgia -> 1 base (Kutaisi)
- In Lithuania -> 1 base (Vilnius)
- In North Macedonia -> 1 base (Skopje)
- In Moldavia -> 1 base (Chisinau)
- In Serbia -> 1 base (Belgrade)
- In UAE -> 1 base (Abu Dhabi)

24. What is the most Northern, Eastern, Southern, Western destination?

- Northern -> Tromsø, Norway
- Eastern -> Almaty, Kazakhstan
- Southern -> Malé, Maldives
- Western -> Reykjavik, Iceland

25. What is the most Northern, Eastern, Southern, Western base?

- Northern -> Vilnius, Lithuania
- Eastern -> Abu Dhabi, UAE
- Southern -> Abu Dhabi, UAE
- Western -> London Luton, UK



26. Where are the Wizz Air operation and financial headquarters located?

- Operational -> Budapest, Laurus Offices (*Laurus Irodaház*), Building B since 2015
- Financial -> Geneva

27. Where are Wizz Air's current training centres?

Hungary (2018) and Rome (only opened in May 2024, near the airport with 3 full-flight simulators and 4800+ pilots yearly)

28. What is the core of Wizz Air's values? (PIDIS)

- Positivity -> we are optimistic, happy, inspired and an inspiring team
- Inclusivity -> we collaborate together to achieve our goals
- Dedication -> we have an entrepreneurial 'can-do' attitude -> we take individuals and are accountable for everything we do

- Integrity -> We hold ourselves to the highest possible standards of business ethics in everything we do
- Sustainability -> We strive to be the greenest choice in air travel and work hard to continuously decrease our environmental footprint

29. What does Wizz Air's business model look like?

- Young, efficient and uniform fleet
- Lowest emission per passenger km
- Point-to-point network (No connecting flights)
- Secondary airports
- High revenue from ancillary products
- Low-cost distribution
- Outsourced business model
- High seat density and load factor (No business class)
- High aircraft utilisation
- High employee engagement/productivity
- Ticketless travel + direct booking
- Pay for what matters
- LOWEST COST



30. What was Wizz Air's last reported net profit?

365.9 million euro - F24 (increase 164%, -535.1M F23)

31. What is Wizz Air's current CEE market share?

27% - F24 (increase 3%, 24% F23 (+5.0% vs F22 and +6.5% vs F20))

32. In June 2022, Wizz Air was named as the Most Sustainable Low-Cost Airline at the?

World Finance Sustainability Awards - Wizz Air was named as the Most Sustainable Low-Cost Airline at the World Finance Sustainability Awards 2022 for helping to bring about transformative change, and for being continuously committed to sustainability, specifically its ambitious fleet renewal programme and other fuel-saving initiatives. The airline is proud to have the lowest carbon emissions per passenger kilometre in Europe and has pledged to further reduce emissions by 25% by 2030, in comparison to 2019 levels.

33. Name Wizz Air Awards?

- “Value Airline of the Year” -> 2016 by Air Transport World
- Highest 7-star safety ranking -> 2018 by AirlineRatings.com
- Best low-cost airline in Europe -> 2020 by AirlineRatings.com
- “Airline of the Year” -> 2020 by Air Transport World
- Airline of the year award -> 2021 at Airline Economics Aviation 100 Awards
- Most sustainable low-cost airline -> 2021/22/23 at World Finance Sustainability Awards
- Global environmental sustainability airline of the year -> 2022/2023 at CAPA’s World Aviation Awards
- World’s 2nd Youngest Aircraft Fleet -> 2023 by CH-Aviation
- Strategic Investment of the Year – Europe -> 2023 SAF Investor Awards
- “B” score in the climate ranking -> 2023 Carbon Disclosure Project (CDP)

34. Wizz Air is involved in two certified climate projects: (1) what, and (2) where is this project located?

1. Landfill Gas Extraction and Electricity Generation, Istanbul, Turkey
2. TIST Program in Uganda

At the time of writing (February 2023):

Wizz Air is currently involved in:

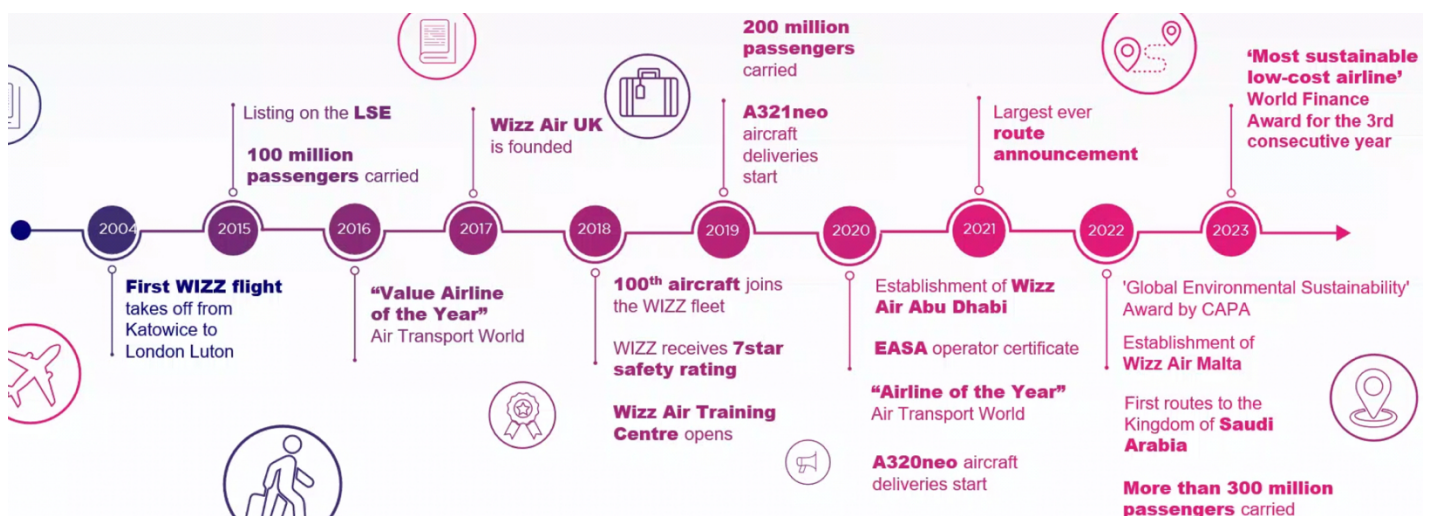
Landfill Gas Extraction and Electricity Generation Istanbul, Turkey:

This project converts methane emissions from landfill waste into electricity in Turkey. It involves developing and constructing two waste-to-energy facilities at both the Odayeri and Komurcuoda landfill sites, which capture the methane gas released from landfill waste and use it to generate electricity. The project objective is to build, operate, and maintain these two landfill waste-to-energy systems, consisting of landfill gas (LFG) collection systems, flaring stations, and gas engines coupled with generators to produce electricity. The gas engines will combust the landfill gas to produce electricity, and any excess LFG will be flared.

And

TIST Program in Uganda:

- -25% -> Wizz Air is committed to further reducing its CO2 emissions by 25% until 2030



F24 NOTES

200+ destinations

50+ countries

924 Routes

208 Airplanes

62M pax (increase 21%, 51,1M F23)

5.1B revenue (increase 30%, 3.9B F23)

437.9 M Operating Profit (increase 194%, -466,8M F23)

365.9M Net Income (increase 164%, -535.1 F23)

4,17€ Cents Cask (increase 5%, 3,98 F23)

2,38€ Cents ex-fuel cask (decrease 8%, 2,58€ F23)

CEE Market share – 27% (increase 3%, 24% F23 (+5.0% vs F22 and +6.5% vs F20))

Biggest Market Shares:

59% Moldova, 58% Albania, 52% Romania

109,250 tons CO2 reduced

SAF – Sustainable Aviation Fuel (in development)

Grounding of almost ¼ of fleet (NEO) – 47 to 50 Aircraft -> Pratt & Whitney PW1000G GTF (Engines were manufactured with contaminated metal powder that makes the parts more susceptible to corrosion and cracks)

New aircraft deliveries, existing fleet lease extensions, securing additional aircraft capacity from the market and delivering higher utilisation.

Young fuel-efficient fleet (age 4.3 years)

High-density seating (224 average seat count)

Company goals:

- Deliver an average of 20 per cent annual growth in capacity in the long term
- Deliver 13 to 15 per cent net income margin
- Reduce our CO2 emissions intensity by 25 per cent by F30. The main ESG-related metrics are integrated into our key performance measures year on year.

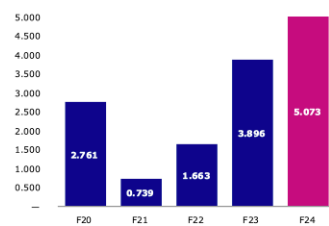
Strategic priorities:

- A focused ultra-low-cost, low-fare business model
- Increasing and diversifying our geographical footprint
- Delivering leading sustainability in accordance with the Company's ESG strategy
- Enabling our business by creating the leading digital platform
- Continuing to run a highly engaged, agile and entrepreneurial organisation

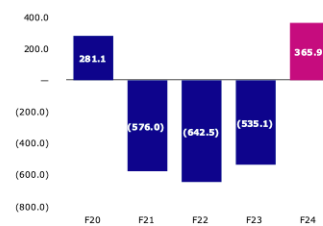
	March 2024 Actual	March 2025 Planned	March 2026 Planned
A320ceo (180/186 seats) (9x extensions)	40	34	21
A320neo (186 seats)	6	6	9
A321ceo (230 seats) (4x+11x extensions)	41	41	40
A321neo (239 seats)	121	147	219
A321neo XLR (239 seats)	—	1	10
Fleet size (with finalised extensions)	208	229	299

HIGHLIGHTS AND COMPANY OVERVIEW

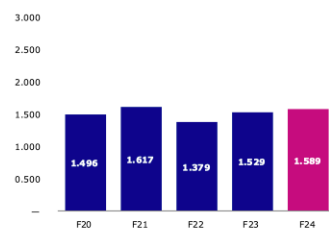
€5.1B REVENUE



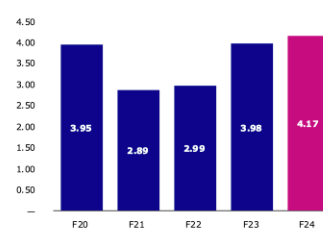
€365.9M NET INCOME



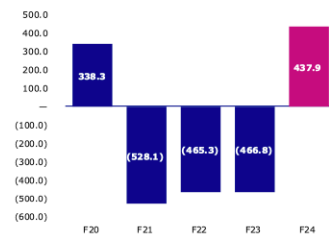
€1.6B TOTAL CASH^{1,2}



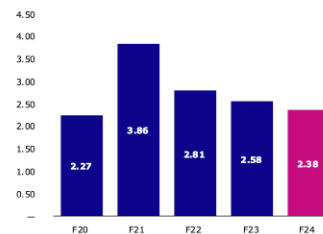
4.17 CENTS RASK



€437.9M OPERATING PROFIT



2.38 CENTS EX-FUEL CASK



FRESH NEWS

Geneva, 31 December 2024 (LSE) - Wizz Air Holdings Plc ("Wizz Air" or "the Company") today announces that it has entered into a commercial support agreement with Pratt & Whitney in relation to the continued grounding of aircraft owing to powder metal issues in the PW1100G-JM geared turbofan ("GTF") engines. The Company is projecting a continued grounding of around 40 Airbus A320NEO family aircraft through F26 due to inspections required on its GTF fleet. The commercial support from Pratt & Whitney, which extends through the end of calendar year 2026, includes both operational support and a compensation package covering the Company's direct costs associated with the aircraft that have been grounded or are expected to be grounded and is on terms consistent with levels of support currently being received by the Company.

The Company continues to take proactive action to mitigate the financial and operational impact of the grounded aircraft and will continue to work with Pratt & Whitney to ensure that aircraft are returned to operation as soon as possible. During F26, the Company expects to return to growth by taking 50 new Airbus A321NEO deliveries and grow seat capacity by about 20%. These additional latest technology aircraft will take the type's share of the WIZZ fleet to 77%, as the Company continues its retirement of A320CEO family aircraft, further bolstering its fuel-efficient operations and its market-leading sustainability credentials.

Wizz Air, one of the most sustainable European airlines, operates a fleet of over 220 Airbus A320 and A321 aircraft. A team of dedicated aviation professionals delivers superior service and very low fares, making Wizz Air the preferred choice of 62 million passengers in the financial year ended 31 March 2024. Wizz Air is listed on the London Stock Exchange under the ticker WIZZ. The company was recently named the World's Top 5 Safest Low-Cost Airlines 2024 by airlineratings.com, the world's only safety and product rating agency, and was named Airline of the Year by Air Transport Awards in 2019 and in 2023. Wizz Air has also been recognised as the "Most Sustainable Low-Cost Airline" within the World Finance Sustainability Awards in 2021-2024, the "Global Environmental Sustainability Airline Group of the Year" in 2022-2023 and the "EMEA Environmental Sustainability Airline Group of the Year" in 2024 by the CAPA-Centre for Aviation Awards for Excellence.

JAN 25 (Reuters) - Wizz reported a third-quarter operating loss of 75.9 million euros (\$79 million), compared with a loss of 180.4 million euros a year earlier.

The London-listed carrier now expects net income in a range of 250 million euros to 300 million euros for the year ending March, compared with its previous forecast of between 350 million and 450 million euros.

JAN 25 (Aero Space Global News) - Despite facing operational headwinds Hungarian low-cost carrier (LCC), Wizz Air, expects to return to growth in 2026 after agreeing a support and compensation deal with US engine manufacturer Pratt & Whitney.

Ongoing engine issues have led to Wizz Air having to ground some of its fleet, with 40 of the LCCs A320neo aircraft expected to stay grounded through fiscal year 2026.

Commercial and operational support

The deal with Pratt & Whitney will see the engine supplier carry out the required checks and provide commercial support to Wizz Air. This includes operational assistance and a compensation package to address the direct costs associated with the grounded aircraft. Operating an all-irbus fleet, the grounding of Wizz Air's aircraft follows Pratt & Whitney's 2023 announcement that more than 1,000 engines needed to be removed from Airbus aircraft and checked for microscopic cracks.

A statement from Wizz Air read: “The company continues to take action to mitigate the impact of the grounded aircraft and continues to work with Pratt & Whitney to return them to operation as soon as possible.”

On course for growth

Wizz’s operations have also been impacted by the conflict in the Middle East. However, despite these headwinds, the airline still plans to double its fleet to 500 aircraft by 2030 under its “WIZZ 500 vision” and is targeting 20% passenger growth over the next year. The airline, which currently operates a fleet of just over 200 aircraft, is due to take delivery of 50 new A321neo aircraft in 2025-26.

Last month the airline added a 14th aircraft, an Airbus A321neo, to its base at Warsaw Chopin and launched three new routes from the Polish capital to Dortmund in Germany, Bucharest in Romania and Pisa in Italy. Two more A321neo aircraft are set to join the airline’s Warsaw fleet in summer 2025.

FEB 25 (Aerotime) - Today, it’s flourished into a widespread airline group, with 226 aircraft spread across four active subsidiaries. Wizz Air UK now sports a fleet of 18, while upstart Wizz Air Abu Dhabi has 12. Wizz Air Malta has 97 aircraft on its books, and the original Wizz Air in Hungary has a fleet of 99.

In its 20 years of operation, Wizz has never had a fatal accident. In fact, the only serious incident recorded was in 2013, when a landing gear failure saw one of its A320s crash land at Fiumicino Airport (FCO). Passengers were evacuated via emergency slides, but nobody was seriously hurt.

[Aviation Herald Article](#)

HUMAN RESOURCES

1. Tell us a little bit about yourself. (2 mins)
2. Why did you become a pilot?
3. Why aviation?
4. Are you the only pilot in your family?
5. Tell us short about your aviation experience?
6. Any jobs right now?
7. Why did you leave your last job?
8. What have you been doing since leaving your last job?
9. What do you find hard in your current job?
10. Any hobbies?
11. Where do you see yourself in 5 years' time?
12. What do you want to do in the future?
13. What is your base preference? (why)-> might be 2 from either WAH or WAM
14. What is your notice period?
15. What do you know about Wizz Air?
16. Why should Wizz hire you?
17. What should a good pilot be?
18. What are the benefits for Wizz Air from you?
19. Why would you consider yourself the best First Officer for this role?
20. Where do you think your level is inside Wizz? (in other words, how good I think I am)
21. Why do you want to come and work with Wizz Air?
22. Why not work at your national flag airline?
23. Did you apply to any other airlines?
24. What are your expectations from Wizz Air?
25. Please tell me about your long-term career goals for Wizz Air.
26. What can be challenging for you when working with us?
27. What would have to happen to make me not accept the job?
28. What challenge do you think we are facing now?
29. Why Airbus and not Boeing?
30. What are your top 3 strengths?
31. What are your top 3 weaknesses?
32. Please tell me the top 3 of your greatest weaknesses related to Wizz Air? And how do you improve them?
33. What are your best/worst qualities?
34. What are the top 3 skills for Wizz Air?
35. Can you give us an example where you showed leadership and teamwork?
36. Tell us about the most challenging situation you have encountered (must not be aviation related).
37. Tell us about a time when someone didn't agree with you?

38. How do you manage a conflict?
39. How do you work under pressure?
40. How do you manage stress or emergency situations?
41. Describe the most stressful situation (in-flight) you faced and how you managed it.
42. Would you lie if you had to?
43. Have you ever lied before?
44. Would you give compliments to someone just to make them feel good?
45. What is a good co-pilot/captain?
46. What is sustainability to you?
47. Do you know pilots at Wizz Air? Who are they?
48. How did you prepare for this assessment?
49. What platform have you used to prepare for this?
50. Have you ever had an Emergency?
51. How did you deal with it?
52. What was challenging/difficult about your training?
53. Any issues with instructors?
54. Who have been your role models, or who has had the most influence on you?
55. What are some goals that you had that were never achieved, and how did you deal with it?
56. Tell me about your greatest achievement (non-aviation related)
57. We have a 5:30 am show every morning. How do you feel about that?
58. What have you learned from your past jobs that is related to Wizz Air?
59. What makes a good pilot?
60. When was the last time you admitted you did something wrong?
61. What was your last unusual situation?
62. Tell me, in just one sentence, why you are here today?
63. What do you think our passengers expect from us?
64. What can we expect from you? How long can we expect you to stay with us?
65. Why did you wait so long to apply? Did you apply in the past? Were you interviewed?
66. How do you assess/compare our airline with our closest competitor?
67. What negative and positive things have you heard about us?
68. Do you think you will make some mistakes while flying for us? What do you believe will be the biggest challenge you will face flying for us? Why?
69. Do you think flying is dangerous? Why?
70. What do you enjoy most about flying? Least? Dislike?
71. What do you think of your chief pilot? The calibre of pilots you fly with. Were you ever unfairly criticised or treated by your chief pilot? Was the chief pilot or a captain ever hostile to you?
72. Tell me about a time(s) your company pressured you to "press the limits" or bend the rules.
73. Have you ever broken the rules?
74. Tell me about a time you broke a rule.
75. Who is the best pilot you've ever flown with? Why him?
76. Who is your aviation icon? Why?
77. What are the most important job responsibilities and qualities of a first officer/captain?
78. What are the more complex and challenging aspects of your job?

79. Define and describe a successful flight.
80. When did you have to correct a captain? Describe the circumstances and outcome. Have you ever had a conflict with a captain? How did you handle it? How was it resolved? Who was the most difficult captain you had to deal with?
81. What was the last argument/disagreement you had with someone? Last time you lost your cool?
82. What was your greatest failure, and how did you manage it?
83. When was the last time you admitted you did something wrong? Ever take the blame for something someone else did wrong?
84. What motivates you?
85. What conflicts and/or disagreements have you had with crew members in flight? On the ground? Ever been involved in or witnessed an argument or personality conflict in the cockpit? What did it concern? Who was involved? Did you play mediator?
86. How do you avoid arguments and personality conflicts?
87. Ever had a strong disagreement with your commanding officer/evaluator/captain/chief pilot? How was it resolved?
88. What sources of information did you use to inform yourself about Wizz Air? What stood out as particularly interesting or of concern to you? What specifically your application?
89. No success / no longer flying, medical reason
90. What do you understand by the low-cost business model (ULLC)? What, in your opinion, are the pros and cons of this business model?
91. What is the most important for you in CRM?
92. What would you do if your captain doesn't follow company rules?
93. In your opinion, what are the traits of a bad Captain?
94. How have you felt before your first solo?
95. What is your favourite airport?
96. What is your resignation period at your current job?

SCENARIOS

- Captain/recruiter tries to stress you during these questions until you don't know how to proceed. If you select a way of proceeding, explain your decision and point of view.

97. What would you do if the cabin crew was discussing with a passenger and was crying, and the captain was outside doing the walkaround?
98. You see a crying cabin crew in the briefing room. What would you do? Would you let him/her fly?
99. We are flying together. My family is on board and my son is 6 y/o and wants to stay in the cockpit with us from take-off to landing. What will you do?
100. How do you cope with a captain who will not follow the SOPs?
101. The captain is doing or is about to do something against the regulations. What do you do?
102. Captain taxing too fast, tell him, he doesn't want to slow down etc...
103. The captain continues an approach beyond minimums, he tells you that he's shot this approach 1,000 times, knows the area, and everything's fine. What will you do?
104. You are flying with me, and I'm late to the briefing room. Visibly tired and with red eyes, I say, "OK, let's go; we are late." What do you do?
105. Early morning your line captain comes to the briefing with clothes not ironed and smelling strongly of alcohol (Roleplay)
106. You are talking to the captain, and you smell alcohol. Although you didn't see him drinking, what would you do?
107. You find your captain drinking before a flight; how will you handle this?
108. Captain drinks alcohol 7h 45 min before flight -> what do you do?
109. The captain starts smoking at an inappropriate time (turnaround) -> what do you do?
110. József Varadi tells you to land at Luton due to an important business meeting. What would you do in the case of RVR 500m? What would you tell him?

GROUP EXERCISE

EXAMPLES

1. **Lisbon crystals**
2. **Einstein riddle**
3. **LEGO structure**
4. **Forest surviving**
5. **Mercedes and Coke**
6. **Colourful airplanes**

QUESTIONS

1. **What's your opinion/how do you feel about the group exercise?**
2. **Was there anybody who was lacking in support or was overwhelming to others?**
3. **Do you think something could be improved in the way you tried to resolve that riddle?**
4. **Do you think you were the leader of the group?**
5. **How much more time do you think you would need to solve the riddle?**
6. **Do you think it would be solved if there were more time available?**

TECHNICAL INTERVIEW

- References such as “Number 3, p. 5” refer to the original “Wizz Technical Interview – 2014 Autumn” document. Please consult that file for full context.

1. Tell me all you know about lift:

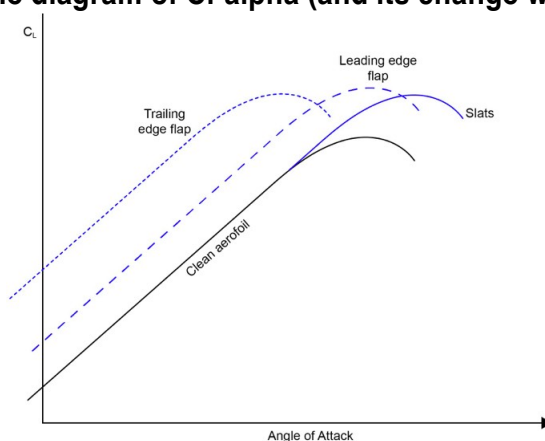
It is generated by the wings through a combination of Bernoulli's principle (faster moving air on top has lower pressure, air below has higher pressure -> lift) and Newton's third law (for every action, there is an equal and opposite reaction) -> calculated by $\frac{1}{2} \rho v^2 S C_L$ -> amount of lift depends on the airspeed, wing area, air density and AoA (look at lift formula) -> values change with:

- Flaps -> when extended C_L increases
- Increased AoA -> lift increases as long as the airflow stays attached to the surface (up until critical angle -> separation -> stall -> decrease in lift)
- Weight -> heavier aircraft need more lift (may need a higher airspeed or AoA to generate same amount of lift)
- Load factor -> during turns/manoeuvres -> n increases (requires lift) -> wings must generate extra lift to overcome increased effective weight
- Altitude -> in less dense air there is less lift produced -> higher airspeed or AoA needed

C_L depends on:

- Camber / Thickness
- Angle of Attack
- Aspect Ratio

2. Draw the diagram of C_L -alpha (and its change with flaps/slats):



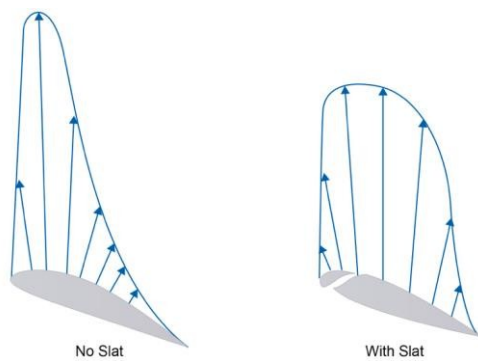
3. High lift devices (slats/flaps):

Number 3, p. 5

4. Draw a typical air foil, add a slat to it, what does this slat do?

Increases wing area and camber, energizes airflow to delay separation

- Types -> Kreuger, variable camber or slat (create slot)
- Always used in conjunction with trailing edge devices
- Increase effective camber without changing the position of the CP
- Provide only a modest increase in lift -> main purpose is to increase the stalling angle



5. What are V_X and V_Y ?

V_X -> Best angle of climb -> steepest climb with a slower rate (shorter horizontal distance).

V_Y -> best rate of climb -> fastest climb in terms of time (longer horizontal distance and).

V_Y is always higher than V_X

6. Coffin corner:

Number 6, p. 6

7. Deep stall:

Number 8, p. 6

8. Weight planning:

Number 14, p. 7

9. What if ZFM is over limit, but MTOM is not?

The aircraft's weight must be reduced (offloading passengers, cargo, other payload items) -> ZFM may not be exceeded since it's crucial to avoid over-stressing the aircraft structure and ensure safe flight

10. Minima for an alternate, when you don't need one or when you need two:

Number 20, p. 10

11. Approach categories:

Number 25, p. 12

Aircraft category	Vat	Range of speeds for initial approach (and reversal and racetrack procedures)	Range of final approach speeds	Maximum speeds for circling	Maximum speeds for intermediate missed approach	Maximum speeds for final missed approach
A	<91	90/150 (110)	70/110	100	100	110
B	91/120	120/180 (110)	85/130	135	130	150
C	121/140	160/240	115/160	180	160	240
D	141/165	185/250	130/185	205	185	265
E	166/210	185/250	155/230	240	230	275

12. What is LVTO? When do we have this, what do we need to see and do we need special approval?

Number 98, p. 40

13. Approach ban

Number 31, p. 14

14. Stabilization Criteria @1000ft AAL

SPEED ± 5 kts

HEADING $\pm 10^\circ$

ALTITUDE ± 100 ft

Rate of Descent ± 1000 fpm

Radio NAVAID tracking $\pm 10^\circ$

Glide slope ± 1 DOT

Localizer ± 1 DOT

15. Holding entries and how to execute them:

Number 43, p.21

16. What is MSA?

Number 49, p. 22

17. Noise abatement departure procedures

Numbers 52, 53, 54, p. 23 and 24

18. Runway lengths (TORA, TODA...) (draw it):

Numbers 60, 61, 62 and 70, p. 26, 27 and 28

19. Clearway:

Number 66, p. 28

20. Displaced thresholds:

They refer to the point on a runway that is shifted further down the runway from its physical beginning - > not available for landing, but available for T/O -> purpose is to ensure obstacle clearance and operational flexibility (simultaneous T/O and landing operations)

21. What is the screen height for landing, and T/O and does it stay the same when wet?

An imaginary screen that is just cleared by the lowest part of the aircraft with undercarriage extended and in an unbanked attitude when taking off and landing.
The height at the end of the take-off distance required and at the beginning of the landing distance required.

Jets – 50 ft Land, 35 ft TO (15ft wet rwy)

Props – 50ft TO and Land

22. What is a balanced field length?

Number 72, p.30

23. Explain the fuel policy/fuel requirements for a 1h flight:

Number 73, p. 30 -> TTCAAFED

24. How can the final reserve be increased?

The final reserve fuel may be increased under certain circumstances -> final reserve can be increased up to 2h instead of 30min for an isolated aerodrome

25. RVSM

Number 89, p. 36

26. GPWS (first 5 modes):

Number 90, p.37

Sink Rate, Terrain, Don't Sink, Too low Gear/Flaps/Terrain, Glideslope

27. What is TCAS and how does it work?

Number 91, p. 37

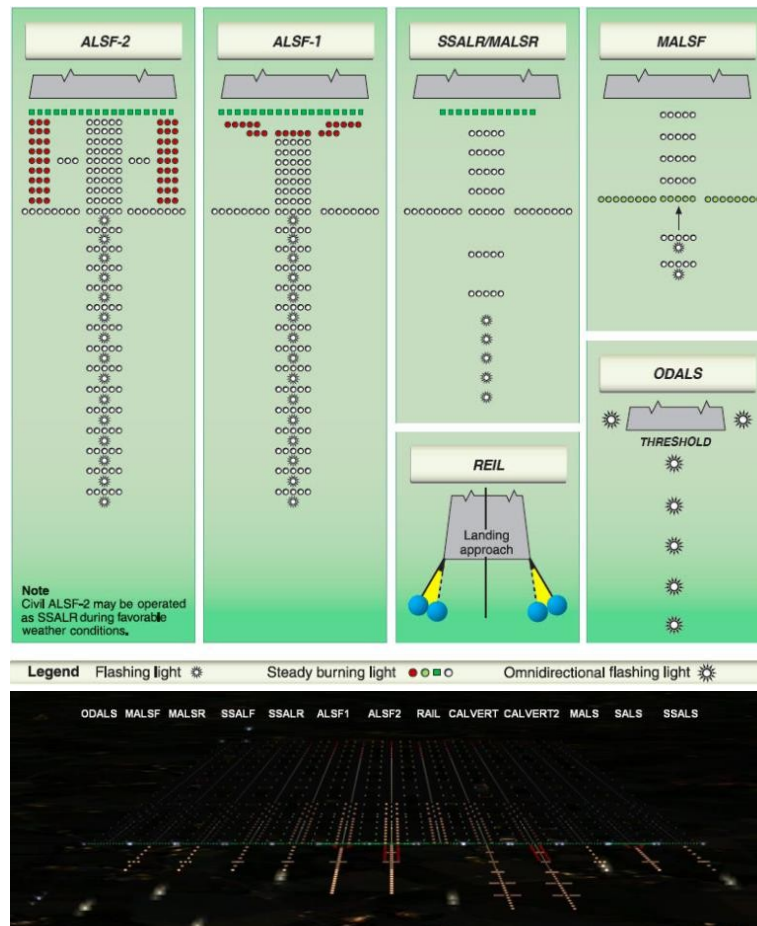
28. What is the MEL and what are the different categories?

Number 99, p.40

29. What is the CDL and where do you find it?

Number 100, p. 40 -> Configuration Deviation List, lists specific external components or parts that may be missing or inoperative. Similar to the Minimum Equipment List (MEL) but focusing specifically on external and non-essential items. Part of the aircraft's technical documentation.

30. Explain the approach lighting system:



Number 101, p. 40

31. Explain the runway lights:

Number 102, p. 41

32. The aiming point:

A critical visual reference on the runway, typically 1000ft, that helps ensure a safe and accurate touchdown during landing (used during both visual and instrument landings) (For RWYs >1200m)

33. Contamination on the runway:

A runway is considered contaminated when more than 25% (based on each 3rd of the runway) or more than a 3rd of the surface is covered with ice, slush, snow or standing water (>3mm) -> reduces the braking ability and causes a slower acceleration

34. What is anti-skid and how does it work, what happens when you apply maximum brakes?

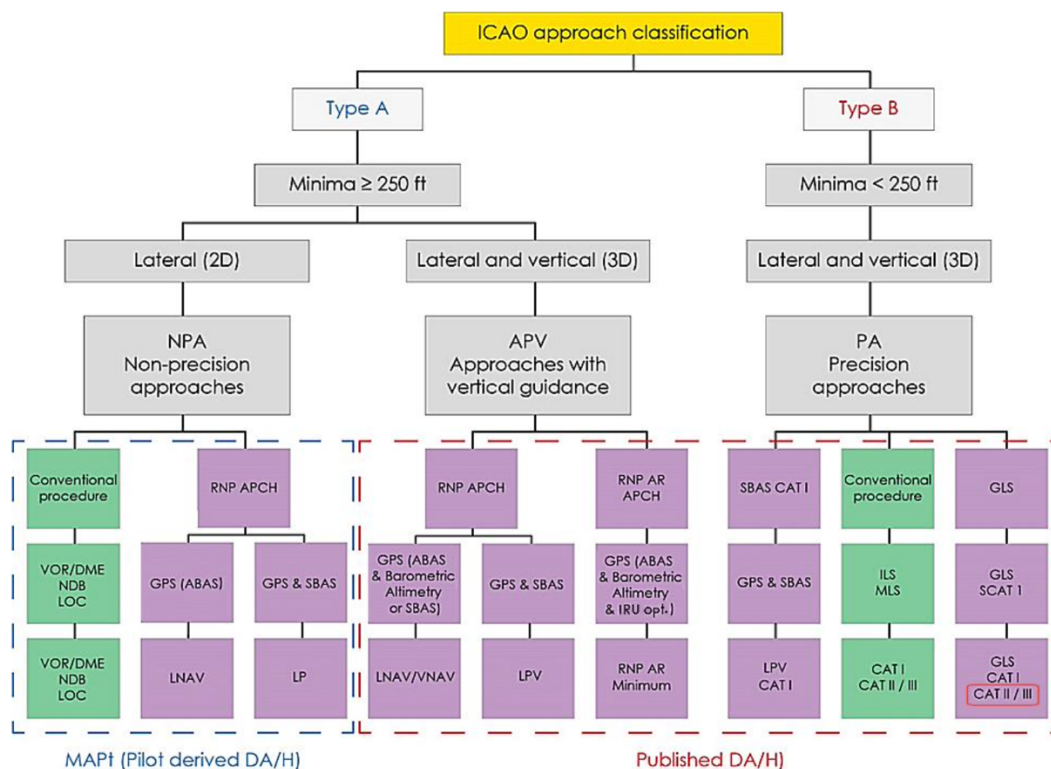
The anti-skid system ensures that brakes do not lock during braking by modulating brake pressure when a skid is detected. During max braking, the anti-skid allows the tires to maintain traction with the runway -> helps to reduce stopping distances and maintain control (especially on slippery surfaces)

35. What is hydroplaning, what are the types, on what is this speed based and how do you manage this when it occurs?

It is a loss of tire to runway contact caused by a film of water -> 3 types: dynamic (water can't be displaced due to speed of the A/C), viscous (friction is reduced due to a film of water) and reverted rubber (rubber is heated and creates a layer of steam) -> the likelihood of hydroplaning depends on the speed, water depth, tire pressure and runway surface -> when hydroplaning occurs, braking should be avoided (reduce throttle to regain control) -> typically hydroplaning can start when an A/C exceeds a predefined speed, but once hydroplaning has started, it can also continue well below

Aquaplaning Speed $V_p = 9\sqrt{p}$ (V_p in kt, p in psi)

36. Approach Classification



37. What are type A/B approaches? Give an example

- Type A -> DH or MDH is 250ft or more, 2D or 3D, non-precision approach or APV – VOR/NDB, LNAV, LPV
- Type B -> DH is less than 250ft, 3D, Precision Approach - CAT I, II or III

38. CAT I/II/III minimums:

Category		DH (ft)	RVR (m)	Notes
Type A		≥ 250		
Type B	CAT I	200	550	(or 800m VIS)
	CAT II	100	300	
	CAT III	99-50	175	
		49-0	125	Fail Passive
		49-0	75	Fail Operational

RVR given if VIS/RVR < 1500m

RVR Reporting	Coverage
CAT I	Touchdown Zone
CAT II	Touchdown + Mid zone
CAT III	All zones

Type A instrument approach operation - means an instrument approach operation with an MDH or a DH at or above 250 ft;

Type B instrument approach operation - means an operation with a DH below 250 ft. Type B instrument approach operations are categorised as:

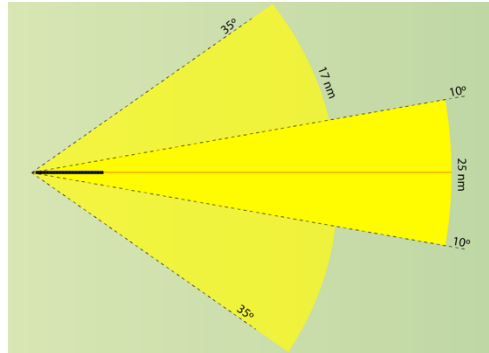
- (a) Category I (CAT I): a DH not lower than 200 ft and with either a visibility not less than 800 m or an RVR not less than 550 m;
- (b) Category II (CAT II): a DH lower than 200 ft but not lower than 100 ft, and an RVR not less than 300 m;
- (c) Category III (CAT III): a DH lower than 100 ft or no DH, and an RVR less than 300 m or no RVR limitation;

The different types of approach and landing operations are classified according to the lowest DH (or MDH) and RVR applicable to the approach type. The classification of approach types does not depend on the technology used for the approach. The lowest minima specified do not take account of 'operational credits' that may allow for lower operating minima.

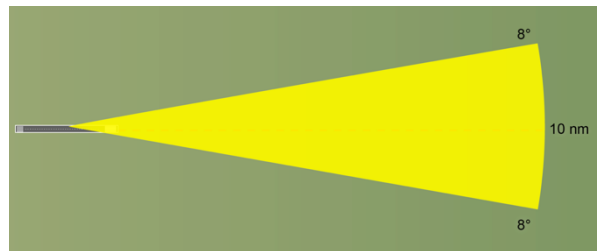
The classification does not subdivide CAT III operations into CAT IIIA, IIIB, and IIIC. The actual minima applicable to any operation depends on the aircraft equipment and the specific LVO approval held by the air operator.

39. Explain the ILS system: (degrees of coverage and modulation)

- Precision approach radio aid with 2 separate ground transmitters:
 - The localizer -> protected 10° either side out to 25NM and 35° either side out to 17NM (up to 6000ft) -> transmit 2 radio signals at 2 different frequencies (90 and 150 kHz) -> used to determine position relative to the runway centreline (VHF 108-112MHz)



- The glideslope -> normally set at 3° -> coverage up to 8° either side out to 10NM -> transmit 2 radio signals at 2 different amplitude modulation frequencies (90 and 150 kHz) -> used to determine position relative to the glideslope (UHF 329,3-335MHz -> automatically paired with ILS frequency)



40. ASI errors when static is blocked:

Number 110, p. 44

41. What is the VSI and how does it work?

Number 112, p.44

42. Gyroscopic instruments and how they are powered:

Number 113, p.45

- Instrument types: attitude indicator, heading indicator, turn coordinator (turn and slip indicator)
- Power sources: vacuum-driven (engine-driven vacuum pumps), electrically driven, mixed

43. The turn coordinator:

The advanced version of the turn and slip indicator -> gives both information about the rate of turn and the coordination of the turn -> works on the principle of gyroscopic precession (90°)

(both roll and yaw movement -> turn and slip indicator is only yaw movement)

44. What is the HSI?

Horizontal situation indicator -> provides information about the aircraft's navigation status -> course deviation, current heading -> it is an integration of multiple navigation functions into a single display (enhances SA)

45. One engine out condition: (asymmetric thrust, slipstream effect...)

- Asymmetric thrust -> causes yaw movement towards inoperative engine -> counteracted by rudder
- Slipstream effect -> spiral flow that wraps around the fuselage and hits the tail surface -> further continues the yawing motion -> propeller only
- P-factor (during high angles of attack) -> effect of the downward-moving propeller blade gives more thrust -> yaw movement -> propeller only
- Spiralling slipstream -> can also create a roll towards dead engine -> propeller only
- Drag increase because of windmilling propeller (propeller only) and performance loss (RoC decreases significantly)

46. What is a funnel cloud, why is it dangerous and what is the METAR code?

It is a rotating cloud which can develop into a tornado (rotation is caused by windshear) -> dangerous since it can cause severe damage and is associated with intense thunderstorms -> FC in a METAR

47. METARs/TAFs:

Numbers 79 and 80, p. 33

- Write a METAR on outside's current weather (LHBP)
- State the correct order
- Read and decode it

Example -> METAR LHBP 171430Z 300/10 5000 -RA BKN020 12/10 1013

- LHBP -> airport
- 171430Z -> 17th at 14.30Z
- Wind 300° at 10kt
- Visibility 5000
- Slight rain
- Clouds broken 2000ft
- Temperature 12, Dew point 10
- QNH 1013

- **Meaning of the following:**

- **TEMPO**

Temporary weather conditions change that last in periods between 30 mins and 1 hour

Sum of duration is half the time of the TEMPO (ex. TEMPO 1500 to 2000 = max 2.5 hours)

- **BECMG**

Definite weather conditions change gradually on schedule time (Window normally 2 hours)

- **FM**

Immediate change from a previous state to a new one from the date, time and minute specified to the described one, nullifying previous changes

- **PROB30/40**

They show the likelihood of certain weather events occurring (30 or 40% chance) -> above 40% it is considered a TREND

- **CAVOK**

Visibility is at least 10 kilometres or more.

No clouds below 5,000 feet AGL or below the minimum sector altitude, whichever is higher.

No significant weather phenomena like rain, thunderstorms, or fog are reported within the vicinity.

No cumulonimbus or towering cumulus clouds are present.

- **NOSIG**

"No Significant Change" in weather conditions over the next 2 hours.

- **NSW**

"No significant weather"

- **SA (as the first two letters)**

It means it's semi-automated -> automated stations report the weather, but might need some human intervention or verification

- **TX**

This gives the maximum temperature

- **=**

Means that the weather observation for this METAR is concluded

48. What is a SIGWX chart and what info does it give?

- It provides critical information about significant weather phenomena affecting flight operations -> usable 3h before and after validity time
- Explain the symbols

49. They give you a chart (approach plate):

- What chart is this
- What is this ... symbol
- What is the distance between these points
- Can you land with the current weather/what are the minima
- How long/wide is the runway and what is the slope
- Do you need an alternate
- What is the missed approach altitude
- What is the missed approach track
- What are the minima for category C aircraft (A320)
- What is ALS
- What is the MSA and what clearance provides it
- What is the big pink number, what does it represent, and in what occasion can we go below?

Number 48, p. 21

The MORA -> minimum off-route altitude -> provides a minimum altitude that guarantees obstacle clearance within a specified area -> we can go below when being on a published approach, being radar vectored, or during a visual descend

Clearance of 1000ft or 2000ft (if the elevation is above 5000ft)

50. Jet engine stages and how they work/provide thrust (be able to draw)

- Fan -> draws in additional air to provide most of the thrust -> significant portion of air that bypasses the engine core (compressor to turbine)
- Inlet -> direct incoming air into the engine -> slows the air and increases its pressure
- Compressor -> air is pressured, and temperature is increased (preparing it for combustion) -> rotor – stator:
 - Rotor -> rotating blades that compresses incoming air by accelerating it
 - Stator -> stationary blades slow the air again, converting it from kinetic energy to pressure and direct the airflow to the next stage for further compression
 - The air continues through multiple stages of rotor/stator pairs in the compressor
- Combustor (combustion chamber) -> compressed air is mixed with fuel and ignited -> produces a large volume of hot gases at high pressure
- Turbine -> converts thermal energy of the hot gases into mechanical energy (pressure drop) -> stator – rotor:
 - Stator -> the stationary blades guide and direct the high energy airflow onto the turbine blades

- Rotor -> the rotating blades then extract energy from the airflow by spinning -> powers the compressor and other engine systems
- Drives the compressor and other engine components
- Nozzle -> accelerate the gases as they exit the engine (they expand/lower in pressure and accelerate) -> produces thrust according to Newton's third law

51. What is bypass ratio?

The mass of air that bypasses the engine core to the mass of air that goes through the core

52. How do magnetos work?

These are self-contained ignition systems that generate electrical sparks to ignite the fuel-air mixture in piston engines -> works through electromagnetic induction (rotating permanent magnets and coils producing high-voltage electricity)

53. What is fly-by-wire?

An advanced aircraft control technology that replaces manual flight controls with electronic systems -> no direct controls between the pilot's and the aircraft's controls -> enhances safety (flight envelope exceeding limits) and performance

54. What is just culture (might be specific for someone else)?

About creating a fair and open environment that fosters learning and safety in organizations -> balancing accountability with support and aims to improve the overall performance and reduce the likelihood of accidents and errors

55. Communication failure on an IFR flight in IMC, the pilot shall:

- **In airspace where a surveillance system is used:**

Maintain the last assigned speed and level for 7 minutes following:

- The time the last assigned level or minimum flight altitude is reached; or
- The time the transponder was set to squawk 7600; or
- The aircraft's failure to report its position over a compulsory reporting point.

whichever is later. Thereafter adjust level and speed in accordance with your filed flight plan.

- **In airspace where procedural separation is being applied (i.e. not radar separation):**

Maintain the last assigned speed and level for 20 minutes following your failure to report position over a compulsory reporting point. Thereafter adjust level and speed in accordance with your filed flight plan.

Begin descent from the fix at, or as close to, the expected approach time (EAT) last received and acknowledged. Without an EAT, descend as close as possible to the ETA resulting from the current flight plan. Complete a normal instrument approach procedure. Land, if possible, within 30 minutes after the ETA or the last.

56. Communication failure in VMC (IFR or VFR)

Continue the flight in VMC. Land at the nearest suitable aerodrome and report your arrival to the appropriate ATSU ASAP after landing.

57. Draw a 6-Pack



58. What is the outbound hold time below 14000ft? Above 14000ft?

1min when below

1min 30sec above

59. Can we go to an airport if we don't know the weather at our ETA? What do we need?

Yes, we can, however we would need 2 alternates. (Weather below minima or no meteorological information available)

60. What are the O2 requirements?

Unpressurized Aircraft:

From 10000 to 13000ft oxygen must be provided to flight crew and 10% of pax. For flight durations over 30mins.

From 13000ft oxygen must be provided to all occupants.

Pressurized Aircraft:

Flight crew - from 10000ft > 30'

13000ft

Quick-donning oxygen masks > FL250

Cabin crew - from 10000ft > 30'

13000ft > 30'

PAX –10% above 10000ft > 30'

30% above 14000ft
All pax from 15000ft

Duration:

Flight crew – at least 2 hours (Certified FL250)

Quick-donning oxygen masks – 10 mins.

Pax – Time to emergency descent + 10 mins.

61. What is TAA?

Terminal Arrival Altitude (TAA) -> Similar concept as MSA but for RNAV approaches

UNANSWERED

62. Why do Airlines have swept wings?
63. How does a Swept Wing work?
64. What are the disadvantages of a swept wing?
65. Mcrit on Swept Wing?
66. What is Dutch Roll?
67. What are aircraft Winglets and how do they work?
68. Why do Airlines change from climbing at constant IAS to constant Mach Number?
69. What is Mcrit?
70. Can you tell me what you understand CRM is?
71. What is windshear?
72. What are the three stages of thunderstorms?
73. What is Vmcg, V1, Vmca?
74. What is the difference between TORA and TODA?
75. How many climb segments are there? What are they?
76. What is RVSM?
77. What is a RVSM airspace? What are the limits? What do you need to fly in it? Do you need an autopilot? Do you need a TCAS? Do you need a significant weather chart?
78. What is RNAV?
79. What are the components of flight plan fuel?
80. What is minimum reserve fuel?
81. What is contingency fuel?
82. Is a destination alternate always required?
83. Is an enroute alternate always required?
84. What is cost index?
85. What is your understanding of an LVO approach?
86. What direction is a standard holding pattern?
87. What engines do our aircraft have?
88. How many cabin crew are onboard? Why this number?
89. What navigation systems do our aircraft have?
90. What is the stall speed of the A320?
91. How many hydraulic systems on the A320?
92. What is Green Dot speed?
93. How does fly-by-wire work? What are the advantages/disadvantages?
94. When does the sideslip indicator turn blue?
95. What is groundspeed mini?
96. What are the Airbus memory items?
97. VFR Limitations?
98. What is your favourite/ least favourite ATPL subject?
99. What's the important things you must watch out during planning?
100. Take-off Minima?

101. How does a carburettor work? Draw it.
102. What are the minima you need at the alternate?
103. Planning minima?
104. How a turbofan engine works?
105. What is freezing fog?
106. Can you land there IFR with your Cessna 172? (w/ METAR)
107. What is Anti Icing and De-icing?
108. What is the RWY midpoint VR requirement for the approach?
109. What is HOT?
110. When and where does the « HOT time window » starts and end?
111. What is the precipitation that will affect HOT the more?
112. What is a contaminated runway?
113. What is standing water?
114. What is the difference between wet and damp?
115. Imagine you're flying from Budapest to Portugal, what would be the minimum flight level for you to be in RVSM airspace? (semicircular Rule)
116. Draw and describe jet engine function and associated systems (icing/injection engine/bleed air).
117. The basic components of a jet engine and what are N1 and N2?
118. Draw a high bypass ratio jet engine and explain how it works, why is it called "high bypass"?
119. What does it mean 12:1 ratio?
120. Write the drag equation and explain it
121. What type of drags forms total drag?
122. Draw parasite drag graph
123. Draw induced drag graph
124. Draw total drag graph
125. Draw a warm front and a cold front
126. Which type of clouds can you find?
127. How does the pressure change when the front is moving?
128. Which are the highlights of a take-off run?
129. What happens in that 2nd stage? (Jet engine)
130. Draw an Airspeed Indicator.
131. How does the capsules move the needle?
132. Draw an Altimeter.
133. How does the capsules move the needle?
134. Type of Airspeed and how you obtain them?
135. Mach number and why we use it at Cruising Altitude?
136. Why should an MDA(H)/DA(H) be raised compared to basic system Minima?
137. Missed Approach Climb Gradient and on which A/C configuration is based?
138. What is Dew Point?
139. Is the RVR minima for whole runway or part of it?
140. What is type b/a approach?
141. Tell me a few precision approaches you know? (ILS GLS MLS)

- 142. What is CRM? When and why was it introduced?
- 143. Fail passive and fail operational systems
- 144. At 5NM from an airport with 500ft elevation, what should your altitude be on a 3° glideslope?
- 145. GPWS
- 146. PA vs NPA
- 147. ADF + VOR: Identify your position on a diagram
- 148. TO segments
- 149. Dutch Roll
- 150. RWY and TWY lightning and RETL (picture-based question)
- 151. LVTO requirements. What is required if RVR is Xm?

SCENARIOS

152. You're approaching the runway on GS 3NM away -> aircraft enters the runway and ATC commands a G/A, but there's a thunderstorm in the G/A path -> what do you do?

- I would ask for an alternate missed approach procedure for the G/A (vectors around the thunderstorm, immediate turn away...)
- Personally, I said that I would have done everything in my power to avoid getting into the TS. I said I would have asked for vectors then the assessor said 'no radar available! What do you do?' so I said that I would suggest ATC to adopt a circling procedure if wind allowed it and he said 'it could be an option but the weather doesn't allow you that either' and so then I said that I would declare either a PAN PAN or a MAYDAY in order to get me on the ground asap and no matter how, they were very happy with that answer.
- Told them that I'd go for vectors and once he said that ATC busy or whatever and orders me to go as published, I said I'd turn to heading to avoid thunderstorm notify all stations on freq. and observe TCAS.
- 'Ask for vectors to the side due to CB'. And he was like - 'but ATC is busy and tells you to follow procedure anyways'. I said I'd ask one more time and if he wouldn't change my clearance, I would change path of flying stating that I'm flying a new heading now'. And he was like you'd fly that with another clearance? You may lose your license for that'. I said that I would report ATC acting against safety of the flight and that I'd rather lose license than life flying into +TS. After that he started to ask me about what we pilots can do about that situation in case ATC instructs us to do something that we can't follow. I started thinking out loud that perhaps calling MAYDAY or PAN PAN but for that particular situation I wouldn't do so because it's not matching really MAYDAY call. And he was still using that 'suspicious' tone - 'Why wouldn't you call it MAYDAY?'. I told him that it is not dangerous situation - It only need to deviate from published missed approach procedure. (he might want to hear from me was word 'UNABLE')

153. You are at 1400ft on an ILS and have an RVR of 500m for a CAT I, what do you do?

According to approach ban, we may continue the approach to 1000ft, if at 1000ft the weather is still below the minima, we have to execute a G/A

154. The RVR increased to 550m with 100ft of VV, what do you do?

We can continue the approach to the minima since we only need RVR, if we aren't visual at the minima, we execute a G/A

155. You're below 1000ft stabilized and you have the max XWC, at 800ft the XWC exceeds the max, but the captain still wants to go, what do you do?

I'd communicate my safety concerns in a professional and respectful way and remind him of the potential risks of landing with a crosswind that exceeds the maximum, maybe suggest a G/A

156. You pass 600ft and the captain doesn't care what you say, what do you do?

I'd remain calm and professional, and make one last attempt to communicate my concerns, while already preparing for a G/A

157. He continues insisting, what do you do?

I would prioritize safety above all and be prepared to take action (G/A) if I feel unsafe to land and depending on the airline policy I would document and report the situation afterwards

158. You have an engine fire; how will you contact ATC?

I would make the call "MAYDAY MAYDAY MAYDAY, Wizz 123, engine fire, 3000ft, inbound BUD VOR, request vectors for landing"

159. On the ILS weather minima drop below CAT I, what do you do?

I would continue since we have an emergency and need immediate assistance as soon as possible

160. At the minima you still don't see the runway, what do you do? Again, I'd continue. We are in an emergency, so the standard minima may not strictly apply

161. What are your minima (T/O and landing) right now? -> given a chart? The ceiling drops from OVC002 to OVC001, what would you do?

We can continue the approach (if it's a precision approach) to the minima, since there's no minimum ceiling required. If we are visual at the minima, we can land; if not, we execute a G/A

162. We are going to London, and we are overhead Germany. We don't have enough fuel to go from London to the alternate. Can we still legally proceed to London?

Yes, you can as long as there is enough final reserve fuel. It might be a good decision to look up the weather in London and maybe divert enroute to refuel (think about requirements to do a flight with no alternate -> flight time less than 6h, at least 2 independent runways, weather at ETA +/- 1h...)

163. You are at the last 900m of the RWY, and the plane is still floating, what do you do?

I guess the airbus will need more than 900m for the landing roll, so I would initiate a G/A to prioritize safety and not overrun the runway

164. Approach ban, we are past 1000 ft mark and RVR deteriorate?

Continue to minima I said.

165. You see the runway what do you do?

I continue even if RVR is reported below minima

166. You are coming down on ILS and you get engine fire, you do checklist, but the fire does not go away, you coming down to DH, but you can't see the runway, what do you do?

I said continue approach because it is an emergency. Assessor said that you come to minima and don't see the runway. I was like if I don't see the runway completely, I won't crash the plane and will then go around and potentially land on reciprocal course, or on the ground. that was a wrong answer, because in case of emergency, you don't have any minima, and I should have landed on runway.

167. On my c182 IF 3 passengers (1 has heart attack) to airport where you are from, RVR 550 550 550, what do I do?

Commence approach.

168. Now you are 2000ft AAL RVR 400 600 550, what do you do?

Told them about approach ban.

169. Now I'm below 1000ft and they asked me to which point I'm going to descend?

200ft.

UNANSWERED SCENARIOS

170. When TCAS calls climb in coffin corner, what will you do?
171. You are flying ILS DH 300 ceiling is 200 ft, do you have any thoughts?
172. You get windshear and the captain doesn't go around, what would you do? Then ATC says the cell is moving away and the runway will be clear would you stay or divert (you only have alt and final reserve fuel left?
173. Then he asked me about RVSM and what to do if we noticed that our altimeters don't meet the requirements ($\pm$ 200 ft).
174. Your engine is on fire and weather is below the minimums on the closest aerodrome...do you land below minimums or divert to alternate?
175. BKN001, can we land (disregard the icing conditions)?
176. You are arriving at destination (CAVOK) with having consumed all your trip and contingency fuel, WY is closed for 5mn due to RWY inspection, what do you do? The truck burst a tyre on the runway during the inspection, what do you do? (Alternate is CAVOK)
177. Imagine you are flying in RVSM airspace, your captain goes to the restroom, and suddenly your autopilot fails. What would you do?
178. A flight is around 1:30h. 00:30 to alternate. You have 150l fuel for taxi. The plane burns 2100l/hr. How much fuel would you take for that flight.
179. You have emergency descent and stop at FL150. ATC will clear u for FL100 in 10 min. What is oxygen requirement?
180. You're at the holding point, cleared for takeoff in 1 minute, but your HOT expires in 30 seconds—what do you do? Captain insists on taking off—what do you say/do?
181. RVSM Requirements: What is required? What happens in case of equipment degradation? (They challenged me when I said we would exit RVSM airspace) ATC asks you to stay—do you comply? What if it's night, over the ocean, with no traffic—would you still leave? What is Class A airspace? What does it provide? If ATC clears you to stay in Class A airspace despite RVSM degradation, would you remain?
182. Engine fire on approach, RVR below minima, fire extinguished, alternate is CAVOK. Land or divert?

FORMER AIRPLANE

1. What type of aircraft did I fly before (conventional or counterclockwise)?
2. Does it have a critical engine?
3. What speed should I fly with OEI?
4. What would give me OEI speed?
5. Which system of the planes you've flown before did you like the most?
6. Explain the fuel system (be able to draw)
7. Engine type
8. Engine starting procedure
9. Number of magnetos
10. Braking system (Mechanic / Hydraulic)
11. Draw engine cooling system
12. Anti-icing system
13. Fuel capacity
14. Fuel System/scheme
15. Endurance
16. Consumption
17. Stall Warning systems
18. Procedures – Eng. Failure, Stall, Eng. Fire
19. X-Wind Limits
20. X-Wind correction technique for landing
21. Examiner pulled out a pic of G1000 PFD:
22. What is the altitude reading?
23. What bank angle do we have?
24. If you increase QNH by 20 what is new reading?
25. What is the green arc, yellow arc and white arc?

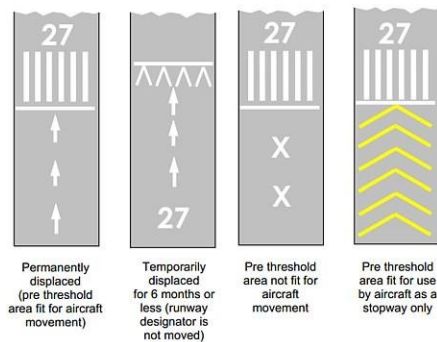
1. During a drift down procedure, what is the vertical separation for obstacles?(325410)

2000ft

2. Why do you keep your map pointing up during VFR flights?

To simplify navigation (observe visual points, roads, etc...), enhance SA and reduce the risk of disorientation

3. Temporarily displaced threshold image



4. What is a balanced field? (329934)

V1 identifies an engine failure speed where the distance to abort and the distance to continue the take-off are the same. OEI ASDR = OEI TODR

5. Balanced V1 is selected if?

The accelerate stop distance is equal to the one engine out take-off distance.

6. When compared to a balanced condition, taking into account a stopway leads to a? (326184)

Higher T/O mass and increased V₁

7. What is the minimum climb gradient for all engines operative?

Typically, 2.5% according to standard aviation regulation

8. Which type of aeroplane and situation will experience a larger decrease in induced drag at heights between ground level and a wingspan? (813857)

Low wing aircraft during landing

9. What are the clouds encountered in a cold front? (504225)

Broken to overcast (base low, but rising) -> Cu, Cb and sometimes Ns

10. What is GBAS and how does it work? (622255)

Ground based augmentation system provides data which defines the final approach segment -> transmitted on VHF to arriving aircraft, together with differential position corrections and integrity information for each satellite

11. Does GBAS use VHF or UHF?

VHF

12. By volume, what percentage of the air in the lower troposphere consists of water vapour (Humidity)? (501284)

0-5%

13. How is the artificial feel system in a FBW aircraft linked?

The pilot inputs and the control surfaces are linked via a computer (FCC / FCU), so the control surfaces are moved indirectly by the pilot inputs (irreversible) -> linked in parallel

14. If you are flying using a DI (with no wind and precession), what are you flying?

A magnetic track (DI indicates magnetic heading)

15. When is an airplane considered to be in the heavy category? (109379)

When the aircraft is 136.000kg or more

Light-> 7.000kg or more

Medium -> more than 7.000kg but less than 136.000kg

16. What is the time displayed in the Almanac?

UTC

17. The centre of gravity is placed far aft in flight. What is the effect on the elevator trim? (312664)

Nose down trim force is increased

18. What is the main factor which contributes to the formation of very low clouds ahead of a warm front? (504572)

Saturation of the cold air by rain falling into it and evaporating

19. An aeroplane, which is scheduled to fly an oceanic sector, is due to depart from a high-altitude airport in the tropics at 1400 local time. The airport has an exceptionally long runway. Which of the following is most likely to be the limiting factor(s) in determining the take-off mass?

Altitude and temperature of the departure airfield.

Cost index is determined by dividing: (322642)

The aircraft operating cost (time) / fuel cost

20. What is meant by the term 'fading'? (629289)

The interference of the ground and sky wave

21. Which one of the following is a prohibited combination in aircraft registration letters?

TTT, SOS, XXX, PAN

22. Why is icing dangerous on the ground? (709459)

It can occur in places that would normally remain free of icing such as in wheel wells during taxiing (unprotected areas)

23. When is a runway considered contaminated with ice? (326796)

When the ice/snow covers more than 25%

24. When do you use an abbreviated callsign?

Typically, after initial contact. ATC must do it first (D-EHLB = D-LB)

25. Due to what can hyperventilation happen? (405927)

Fear, anxiety and distress

26. What is basic empty mass? (319209)

A component of the DOM that includes unusable fuel and other unusable fluids (oil in engine and auxiliary units, fire extinguishers, pyrotechnics, emergency oxygen equipment, supplementary electronic equipment)

27. What are the O2 requirements?

(Supplemental oxygen is required above 12.500ft for crew members and above 14.000ft for passengers)

Unpressurized Aircraft:
From 10000 to 13000ft oxygen must be provided to flight crew and 10% of pax. For flight durations over 30mins.

From 13000ft oxygen must be provided to all occupants.

28. What are the weather radar colours?

These can vary, but in general:

Green -> light rain

Yellow -> moderate rain

Orange -> heavy rain

Red -> very heavy rain

29. What do you do when you know well in advance that you'll have to hold?

Reduce cruise speed to reduce fuel consumption by flying at an optimal altitude and hold at the minimum clean speed

Point of equal time (PET) is based on...

Ground Speed -> $PET (dist.) = TotalDist. \times GS(H) / (GS(O) + GS(H))$

PSR (time) = $SafeEnd. \times GS(H) / (GS(O) + GS(H))$

30. Of what change does NANU inform users and why are they released 72h in advance? (336612)

The GPS constellation and for planned maintenance

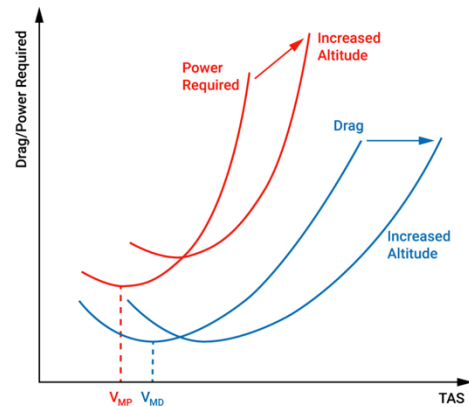
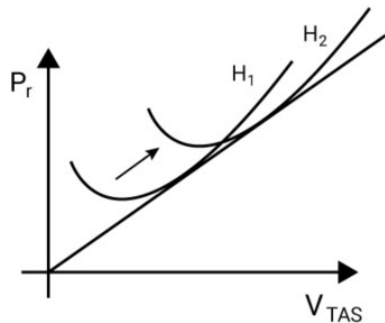
31. What are psychological stressors? (401995)

Loss of a spouse/partner, loss of one's job and credit card debt

32. What happens to the blade pitch of a constant speed propeller on ground roll during take-off? (815345)

It increases

33. Which of the following diagrams correctly shows the change in the position of the power required curve with altitude, given that H2 is at a greater altitude than H1? (323083)



34. When entering ground effect, what happens to the downwash and induced angle of attack? (818582)

The downwash angle reduces, and the induced AoA decreases

35. If u set 7600 in the transponder what does that mean? (914552)

Comms/Radio failure.

36. In case of SSR transponder failure occurring after departure for IFR, the pilot shall? (927742)

Inform the ATC unit immediately

37. An aircraft experiencing radio communication failure on an IFR flight in VMC should: (923228)

Continue to fly in VMC, land at the nearest suitable aerodrome, and report its arrival.

38. An aircraft experiencing radio communication failure on an IFR flight in IMC should: (921658)

Proceed in accordance with the current flight plan to the designated navigation aid serving the destination aerodrome.

39. A good captain should keep:

Cohesion

40. What are the tire brakes limitations?

Turnaround rate and VMBE (Maximum Brake Energy Speed)

41. What does ... mean when talking about braking action? (707721)

Brakes 1 (≤ 0.25) -> poor

Brakes 2 (0.26-0.29) -> medium/poor

Brakes 3 (0.35-0.30) -> medium

Brakes 4 (0.39-0.36) -> medium/good

Brakes 5 (≥ 0.40) -> good

42. What is ASDA?

Length of the TORA plus the stopway (if provided)

43. What is TODA?

Length of the TORA plus the clearway (if provided)

44. What is LDA?

The usable length for landing

45. What is the definition of a wet runway? (326149)

There is sufficient moisture on the runway surface to cause it to appear reflective, but without significant areas of standing water

46. What is the correction factor for landing on a wet runway? (321358)

The landing distance must be increased by 15%

47. How should a station address a general call to all aircraft in its area? (922560)

Starts with 'all stations'

48. In straight flight, as speed is increased, whilst trimming to keep stick forces zero, what happens? (811630)

The elevator is deflected further downwards and the trim tab further upwards

49. Last minute extra cargo is being loaded in the aircraft (FWD of the CG), how should the trim setting adjustment be?

Nose-up (Trim aft) - lowering the leading edge of the stabilizer

50. What is the effect on the stall speed when the weight is increased?

Stall speed increases

51. Regarding CG limits, which one of the following statements is true?

CG limit from an aircraft operator can be more restrictive than the manufacturer's CG limit

52. Why are high latitude flights in Polar regions subject to specific problems with the use of a gyro magnetic compass? (704200) (716289)

Because of the magnetic field being stronger, magnetic variation changes rapidly and the convergence of the meridians

53. What is mountain effect and which instrument does it affect? (628046)

It can be caused by diffraction of an NDB signal bending the path of the radio waves

54. What is the minimum separation time for a departing light/medium behind a heavy aircraft?

2 min (full length T/O); 3 min (intermediate T/O)

55. What is the minimum separation between a light/medium aircraft and a heavy aircraft, or between a light aircraft and a medium aircraft when the heavier one is making a low/missed approach on an opposite runway?

2 min

56. When the AC generators are connected in parallel, the reactive loads are balanced by means of the? (216705)

Excitation current

57. Safety is often improved by applying the principles of CRM, being? (409442)

Expression of doubts or of a different opinion

58. If windshear due to microbursts is expected to occur during T/O, the best solution is to? (503343)

Delay departure

59. What is ICAO Annex 2 about? (101349)

Rules of the air

60. Above 10.000ft AMSL, the VMC minima for flights under VFR in all classes of airspace are? (105759)

Visibility of 8km (5km below 10.000ft) and distance from clouds 1500m horizontally and 1000ft vertically - > for class F and G only (below 3000ft) visibility of 5km and clear of clouds

61. Primary DC system

Critical back-up to the main AC electrical system providing stable power to essential and emergency systems, ensuring safe operation of the aircraft even in abnormal electrical conditions

62. The outbound time for a holding pattern above 14.000ft in still air conditions is?(108458)

1min 30sec (1min when below)

63. How would you describe VHF propagation? (918104)

It can be modelled as line-of-sight propagation

64. Find the next word: happy, frustrated and exhilarated?

Melancholic (options: depressing, polluted, laughable)

65. What is FANS? (221295)

Future Air Navigation System -> means to connect pilots and ATC to communicate via datalink (satellite) -> for smoother traffic flows (Used in limited radar and VHF coverage regions – remote areas)

66. The ICAO procedure to collect and disseminate information on bird strike hazard to aircraft is called? (708634)

IBIS (ICAO Bird Strike Information System)

67. What is correct for path definition error (PDE)? (625350)

Path defined by RNAV system does not correspond to the desired path

68. How does the FMS ETA change with headwind?

Headwind reduces groundspeed, FMS responds to this by increasing the ETA

69. When crossing the international date line (on a westerly heading), what happens? (616666)

The date will increase when crossing on a westerly heading

70. RNP approach GNSS with APV can be?

Baro-VNAV (vertical guidance from barometer) and SBAS (highly accurate GPS)

71. What type of drift would instrument error cause in a conventional gyroscope?(229981)

Real wander (actual movement of the spin axis caused by engineering imperfections such as friction and unbalance)

72. What do you know about the FMS calculated altitude?

It helps optimize the flight -> incorporates a wide range of inputs to provide the most efficient and safe altitude for each phase of flight

73. Symmetrical aerofoil and its coefficient of lift?

When the AoA is 0 -> no lift is produced

74. What is a Pan Pan call? (924356)

The aircraft has an urgent message to transmit concerning the safety of any vehicle, but there is no immediate assistance required (urgency message)

75. Separation between heavy and light upon landing?

3 min

76. An airplane has declared distress on the frequency that takes priority over all messages, it is a?

MAYDAY (or PAN PAN)

77. ATC instructs all stations to standby; it means they must?

All aircraft must stop transmitting (or change frequency) and remain silent

78. What is V_{s1g} ? (328883)

Lowest speed at which the airplane can maintain 1g (force equal to its weight) in level flight

79. What are the possibilities of icing if you fly from warm to cold air?

There is a possibility of icing

80. Hydraulic system's valve function similarity to a diode in an electric circuit?

They both serve as control elements -> directing flow and preventing backflow

81. You are landing in low visibility and after touchdown you only see red and white centreline lights, how many meters are left? (107400)

Not more than 900m (before they're white) -> last 300m are red

82. How long rwy remaining when RWY centreline light turns solid red?

305m(1000ft)

83. How long rwy remaining when RWY centreline light turns alternating red and white?

915m(3000ft)

84. What colour are the runway edge lights (displaced threshold)? (105690)

Before the runway threshold -> red.

After the runway threshold -> white; they may turn yellow on the last 2000ft(600m)

85. What does AIRAC mean? (104964)

AIRAC (Aeronautical Information Regulation and Control) is a system aimed at advanced notification based on common effective dates, of circumstances necessitating significant changes in operating procedures

86. What are VMO and MMO?

VMO is the maximum operating speed; MMO is the maximum operating Mach number

87. What is produced by the coalescence process in the mid-latitudes? (506574)

Drizzle or very light rain

88. Which of the following statements is true concerning the coalescence process?

In the mid-latitudes this process produces only drizzle or very light rain

89. Which of the following combination provides the best visual landmarks for aVFR flight? (618230)

1 - Large water reservoir, 3 - Excessively high mast, 5 - High tension power line.

90. What is the purpose of baffle check valves? (213183)

To prevent movement of fuel towards the wing tips

91. What is the purpose of hydraulic thermal relief valves?

To relieve excess pressure caused by temperature rise

92. Registration marks shall be letters, numbers and shall be assigned by? (102656)

The state of registry or common mark registering authority

93. What type of engine gives less problem in case of critical engine failure?(321947)

Counter-clockwise rotating (Also Contra)

94. How do you increase your optimum altitude? (322771)

Less weight (burning fuel)

95. Which index colour of the AIC contains information about ATS facilities? (108703)

Yellow (white -> administration, pink -> safety, mauve -> restrictions, green -> maps and charts)

96. Regarding an air cycle type ECS pack, where is the water separator fitted?

After the cold air unit turbine

97. Which airplane behaviour will be corrected by the yaw damper? (227848)

Dutch roll -> by moving the vertical stabilizers while the rudder pedals remain fixed

98. How does VMCG change with increasing field elevation and temperature? (815370)

It decreases, because the engine thrust decreases

99. An aircraft manoeuvring in an airport's circuit receives a series of red flashes from the control tower, what does this mean?

Do not land, the airport is not available for landing/unsafe

100. At night an aircraft observes a luminous signal requesting help, how should the pilot indicate that he has received these signals? (105445)

By flashing his landing lights twice or navigation lights if not equipped with landing lights

101. ATIS broadcasts messages containing departure and arrival should include cloud cover, when the clouds are: (901383)

5000ft or below the highest MSA (whichever is greater)

102. If the CG is near the forward limit, the airplane will?

Require elevator trim which will result in an increase in fuel consumption

103. The CDI for a VOR is selected to 90°, indication TO, the CDI is deflected halfway to the right, on what radial is the aircraft?

Halfway to the right -> 5° -> CDI 90° means radial 270 -> 270+5 = 275

104. The semicircular canals form part of the? (403504)

Inner ear

105. The primary duty provided by a radar unit is:

To provide radar separation

106. A waypoint is:

A geographical location relating to RNAV

107. What happens to the climb time when the CG moves forward?

It is increased (higher drag and reduced climb performance)

108. Why do aircraft fly at high altitude?

Fuel efficiency, speed, safety and passenger comfort are all improved, while avoiding congested areas and bad weather

109. What is the Mach formula? (818259)

$M = TAS/LSS$ ($LSS = 39\sqrt{T(k)}$, $LSS (15^{\circ}C) = 340m/s$, $Kelvin = Celsius + 273$)

110. What is RESA? (105002)

RESA = Runway End Safety Area -> starts at the end of the RWY (symmetrical about the centreline) and has a minimum length of 90m (240m for longer RWYs).

111. What happens when your Mach trim is inoperative? (224237)

Pitch down tendency isn't counteracted at high M -> M flown must be decreased

112. For a turbo-propeller aircraft, the landing distance at an alternate aerodrome shall be less than the available landing distance multiplied by a factor of? (717706)

0.7 (0.6 for jets)

113. Rods and cones, what is their purpose?

Rods -> peripheral vision, better at lower light levels and responsible for black and white

Cones -> centre field of vision, responsible for colour

114. Peripheral vision is important for? (401090)

Detecting moving objects

115. Where is the troposphere and stratosphere located?

The troposphere ranges from 0-11km; the stratosphere from 11-50km

116. How does the transponder transmit?

It uses pulse modulation and transmits on a fixed frequency of 1090MHz, when signals are received on 1030MHz

117. What is the priority of messages? (916994)

Distress, urgency, direction finding, flight safety, meteorological, flight regularity

118. Where can you find SAR info? (106690)

In the AIP part GEN

119. What is STD time? (614623)

It is the time set by the legal authorities for a part of a country. (US, Canada, Russia)

120. What is screen height? (323919)

The height at the end of the T/O distance required and at the beginning of the landing distance required

121. Which is more restrictive, operator or manufacturer lists?

The MMEL is provided by the manufacturer, the MEL by the operator. The MEL is usually more restrictive than the MMEL

122. What happens to your glidepath when you experience more headwind than expected?

You need a shallower descent rate to maintain the glide because of a slower groundspeed

123. What happens when you set more flaps than needed for T/O?

You experience an increased drag, slower acceleration, longer T/O distances and reduced climb performance (if outside the T/O range)

124. Isogonic lines?

Connect positions that have the same variation

125. Compass deviation definition?

Angle between Magnetic North and Compass North

126. Seasons are due to:

Inclination of the polar axis with the ecliptic plane

127. Which speed represents maximum landing gear extended speed?

V_{le}

128. On a modern large, pressurized transport aircraft, the maximum cabin differential pressure is approximately?

7-9 PSI (A320~8.6PSI)

129. A " wide cut " fuel is?

More volatile than kerosene type fuel.

130. Station numbers and water lines are:

Means of locating airframe structure and components (3D grid system)

131. An aircraft making a radar approach should be directed to execute a missed approach if no clearance to land has been received from the non-radar controller; by the time the aircraft reaches a distance of:

2nm

132. The primary purpose of bonding the metallic parts of an aeroplane is to:

Provide safe distribution of electrical charges and currents.

133. Air Data Computer (ADC)?

Transforms air data measurements into electric impulses driving servo motors in instruments

134. When isobars stand close together on a surface chart?

Strong winds are present

135. Which airspeed provides the greatest gain in altitude in the shortest distance during climb after take-off?

V_x

136. Which airspeed provides the greatest gain in altitude in each period?

V_y

137. With a decreased flap setting from 20° to 10° on take-off the effect will be:

V_{LOF} and V₂ would both increase

138. The speed V_{LO} is defined as:

The maximum speed for extending or retracting the landing gear.

139. After a cabin pressure loss in approximately 35 000 FT the TUC (Time of Useful Consciousness) will be approximately:

30 -90 seconds

140. Susceptibility to carbon monoxide poisoning, as from smoking tobacco

Increases as altitude increases

141. The fundamental components of an autopilot control loop are:

Rate gyro, servomotor, error signal generator.

142. 'Fail safe construction' is:

A type of construction in which the load is carried by other components if a part of the structure fails.

143. How do air masses move at a warm front?

Warm air overrides a cold air mass

144. The "PAPI" shall consist of:

A wing bar of 4 sharp transition multi-lamp or paired units equally spaced

145. Gyro drift?

Manual realignment every 10 to 15 minutes

146. In the transonic range, CLmax will and the 1g stalling speed will?

Decrease, increase.

147. What are ribs for in a wing? (212652)

It gives the wing its cambered shape and they transmit loads from the skin and stringers to the spars.

Most ribs extend chordwise from the leading edge of the wing to the rear spar, or to the trailing edge of the wing.

148. What is the purpose of an ATC clearance? (102549)

To prevent collisions, to expedite and maintain an orderly flow of traffic

A clearance issued by ATC is predicated on known traffic and known physical airport conditions. An ATC clearance means an authorization by ATC, for the purpose of preventing collision between known aircraft, for an aircraft to proceed under specified conditions within controlled airspace.

149. What is whiteout effect? (614394)

You cannot see the visible horizon because of terrain covered with snow in the white sky -> visual determination of height becomes difficult. (Whiteout is a weather condition that causes disorientation and low visibility by snow, overcast cloud and fog.)

150. Percentage of tailwind and headwind to consider during take-off/landing runway calculation?

50% of the reported headwind and 150% of the tailwind

151. Mountain effect affects VORs or NDBs? and the phenomena is refraction/diffraction?

NDBs and Diffraction. (VORs prone to shadowing/reflection)

152. What does "km/l" mean?

Kilometre/litre

153. Value of gravitational acceleration?

9.81 m/s²

154. What level of noise can cause Noise Induced Hearing Loss (NIHL)? (401050)

85 dB

155. What does the Turn Coordinator measure? (222013)

Change of heading

156. SNOWTAM validity:

8 hours

157. If part of rwy is not cleared after being contaminated in which section of SNOWTAM, will it be?

Section F – extent and type of contamination for each runway third

Section G - depth of contamination for each runway third

158. Where to find wind limitations on contaminated runway?

OM Part B - includes operational procedures and limitations specific to the aircraft type

159. What is TAT? (224705)

TAT (Total Air Temperature) represents the temperature of the air outside of the airplane. As airplanes fly, they will heat up. TAT considers this temperature increase. More specifically, it's calculated by taking the SAT (Static Air Temperature) and adding the temperature increase associated with the movement of the aircraft.

160. What is EPR?

Engine Pressure Ratio (EPR) or Exhaust Pressure Ratio is the total turbine outlet pressure to the total compressor inlet pressure. Is a means of measuring the amount of thrust being produced by a jet engine. measurements are taken by probes installed in the engine inlet and at the turbine exhaust.

161. What is EGT?

Exhaust Gas Temperature (EGT), sometimes referred to as Turbine Outlet Temperature (TOT), is the temperature of the turbine exhaust gases as they leave the turbine unit. Measured on the turbine stage of the engine.

162. What does Vortex Generators do? (811624)

Transfer energy from the free airflow into the boundary layer.

UNANSWERED

163. Number of pairs of touchdown markings vs runway length
164. When to wear safety belt?
165. Something about not having EFIS onboard. where would u check the type/nature of problem if u have an alarm? answers: Something type related, use QRH? / Emergencies? / AFM? / FCOM?
166. IFR flight, u have a transponder failure, what should u do? (Don't recall all the options) Set 7600/land at the nearest suitable airport and fix it/keep going to your destination? /don't remember
167. A flight crew is operating a commercial flight, 30 min after taking off with 1h30 fuel remaining and going to a destination without alternate. (+-) they are contacted by ATC that informs them that at destination there's 17 min delay due to traffic. What should they do? A - declare fuel emergency to the ATC and guarantee priority on landing. B - they proceed to the destination take the delay using contingency (?) fuel and land provided the fuel reserves still intact. C - inflight replanning and proceed to an alternate. D - ...don't recall...
168. Flap in position 3 instead of 2. What is the difference in the landing distance and go around?
169. Turn from 300° to 040°. What is the behaviour of the compass, and the error is increased or decreased by the liquid?
170. Profile drag is lower when?
171. When does the anvil form during CB?
172. What does TAF say when amended?
173. Landing distance if landing available is 2400m?
174. Temperature at tropical tropopause?
175. What is NANU?
176. What is the VHF frequency range?
177. Impact of bleeding air at the HPC on the engine (more EGT and more fuel consumption)
178. Formula of SFC and what is? (WFF/THRUST)
179. - What propeller is the best when you have a left engine failure (critical engine) departing on R36 with wind coming from 270? (Counter rotating, clockwise rotating, fuselage mounted engines, don't remember)
180. Calculate the true track (coming from the compass heading)
181. Effects of flaps on TORA
182. When do you suffer max turbulence? (heavy plane t/o ahead)
183. You are on the glide in descent there is a microburst in front of you and on the right. Which effect on TAS and ROD?
184. What is ATC? (Several answers with information, control and alert)
185. When do you risk encountering wake turbulences of the aircraft taking off on the right runway? (light crosswind)
186. Symbol of operation complete?
187. If you change your climb speeds from 0.74/250KT to 0.78/250KT, what are the changes to your operational limits? (327186)
188. What's is SBAS and how does it work (geostationary satellites).
189. Drizzle droplet size

190. Aspect Ratio Effects?
191. What is Impingement Drag? Impingement drag refers to the aerodynamic drag caused by airflow impinging or striking an object directly, leading to energy losses. I.e. Precipitation or water accumulation on RWY.
192. How is speed written on the flight plan? NXXXX for TAS and MXXX for Mach number
193. What is Impingement Drag?
194. Why turn coordinator is affected by aircraft movement causing an error. There were different answers concerning rotating planes of gyroscope.
195. Complacency leads to...
196. Time spacing of arriving medium after heavy aircraft?
197. What happens when you pull back the rpm-lever in a single piston engine in the descent? The descent rate increases/decreases and the propeller blade angle increases/decreases
198. What final reserve is required when flying to an isolated aerodrome?
199. What is Frontal Fog?
200. What is Final Reserve?
201. What is Contingency fuel?
202. Frequency ranges for NDB, VOR
203. Mach number and why we use it at Cruising Altitude?
204. PBN – Definitions
205. MLS working principle
206. Cabin altitude that is usually not exceeded
207. Define true north
208. Few q about V1
209. Changes of period longer than 3 months published where? *Know exactly where in AIP
210. If pilot's ears get suddenly clogged in FL310 what the reason can be?
211. Speed breaks- ROD and descend angle does it increase or decrease
212. Holding positions on twy when cat 1.2.3 approaches are in progress
213. Indicated vs true altitude in warm cold air
214. Fwd/aft CG stability etc
215. Forced landing definition
216. Define geometric angle of propeller blade
217. QDM/QDR question
218. FWD/AFT CG movement relating to stability
219. Runway edge light distances
220. How does CL vary with flaps extended!
221. Question about a colour you can find in the AIP
222. Advection Fog
223. Compass errors
224. What is the dihedral angle
225. What is the hold entry for given radials (almost tricked me since they gave us the heading to VOR as a radial we were inbound on, luckily, I read it again and got it)
226. What is QDR?
227. What is MOCA?

- 228. Questions about L, M, H and timed separation for departure from a parallel runway. Also, a similar question when arriving on an opposite runway.
- 229. MZFM
- 230. Landing with white and red centreline lights, distance to RWY end?
- 231. LDR factor with wet RWY?
- 232. Balanced field length
- 233. Relationship between MMO and V_c
- 234. Glonass satellites altitude
- 235. IRS alignment time at mid-latitudes
- 236. Can GPS and NAVSTAR work together?
- 237. Braking coefficient of 0,25

MATH

1. What is $1,1 \times 1,1$?

1,21

2. 321×56 ?

17976

3. What is $2522306/5233$?

482

4. What is $2455989/4523$?

543

5. What is $2507040/5233$?

479.08

6. What is the sum of the prime numbers between 4 and 16?

$5+7+11+13 = 36$ (4)

7. What is the sum of the prime numbers between 10 and 20?

$11+13+17+19 = 60$ (4)

8. There are 20 A320 IAE, 10 A321 IAE and 5 A321neo, what percentage is the A321neo of the whole group?

$20+10+5 = 35 \rightarrow (5/35) \times 100 = 14,29\%$

9. If the plane (twin) burns 2200kg of fuel per hours, but when sharklets are added this is reduced by 5%, what will be the engine fuel burn with sharklets?

$2200 - 2200 \times 5\% = 2200 - 110 = 2090/2 = 1045\text{kg/h}$

10. What is X when 75% of $X = 6054$?

$(6054/3) \times 4 = 8072$

11. What is x in $(x-8)(x+4) = 0$?

Both $x-8$ and $x+4$ may be seen as $= 0$

$x-8 = 0 \rightarrow x = 8$

$x+4 = 0 \rightarrow x = -4$

12. What is y in $2x - (1+y) = 2y$?

$$2x - 1 - y = 2y \rightarrow 2x - 1 = 3y \rightarrow (2x - 1)/3 = y$$

13. What is Z (could also be Y) in the equation $Y(Z+1) = X$?

$$yz + y = x \rightarrow yz = x - y \rightarrow z = (x-y)/y \rightarrow z = x/y - 1$$

14. What is 50cm x 50cm x 50cm in m³?

$$0,5\text{m} \times 0,5\text{m} \times 0,5\text{m} \rightarrow 0,125\text{m}^3$$

15. What is 50cm x 50cm x 100cm in m³?

$$1\text{m} \times 0,5\text{m} \times 0,5\text{m} \rightarrow 0,250\text{m}^3$$

16. You have a wheel with a diameter of 3m, what distance does it cover with 18 revolutions?

$$D \times \pi = 3 \times 3,14 = 9,42 \text{ circumference} \rightarrow 9,42 \times 18 = 169,56\text{m}$$

17. It's 17:00h, you add 17 hours, what time is it?

10:00h the next day

18. An aircraft flies 23h on Mo, We, and Fri, 19h on Tue and Thu, and 22h on Sat and Sun (maintenance takes 1h per day). How many hours are spent on the ground by this aircraft?

$$\text{Total flying hours this week} = 69 + 38 + 44 = 151\text{h} \rightarrow \text{total hours in a week} = 24 \times 7 = 168 \rightarrow 168 - 151 = 17\text{h}$$

19. Convert km/h to m/min and NM/min

$$6\text{km/h} \rightarrow 100\text{m/min}; 1\text{NM/min} = 111\text{km/h}$$

20. After flying for 16min at 100kt TAS with a tailwind of 20kt, you must return to the airfield, when will you arrive?

$$16' @ 120\text{kts} = 32 \text{ NM} \rightarrow 32\text{NM} @ 80\text{kts} = 24 \text{ mins}$$

21. An aircraft is flying at 200kt and should arrive at A at 08:24h but passes it at 08:30h instead. At what time will it arrive over waypoint B if the total trip is 80NM?

$$80/200 = 0,4 \rightarrow 0,4 = 24\text{min} \rightarrow 08:30 + 00:24 \rightarrow 08:54\text{h}$$

22. A ground feature was observed on a relative bearing of 325° and 5min later on a relative bearing of 280°. The aircraft was on a heading of 165°M with variation 25°W, drift 10° right and GS 360kt. At what distance and true bearing of the aircraft FROM the feature was the RB 280°? (616966)

$$\text{Distance flown in 5min} \rightarrow (360 \times 5)/60 = 30\text{NM} \rightarrow \text{change in bearing} = 325 - 280 = 45^\circ \rightarrow \text{distance to feature} = 30/\tan(45) = 30\text{NM}$$

$$165^\circ\text{M} - 25^\circ\text{W} = 140^\circ\text{T} \rightarrow \text{TB} = \text{T HDG} + \text{RB} \rightarrow 140^\circ\text{T} + 280^\circ\text{RB} = 420^\circ - 360^\circ = 60^\circ \text{ true bearing from the aircraft to the feature} \rightarrow 60 + 180 = 240^\circ \text{ from the feature to the aircraft}$$

23. If 40% of 240 is X. What is 25% of 3x?

$$X = 40\% \text{ of } 240 = 0.4 \times 240 = 96$$

$$3X = 3 \times 96 = 288$$

$$25\% \text{ of } 288 = 0.25 \times 288 = 72$$

24. Five people are working 10h to paint a wall, how many h will it take is 7 people paint the wall?

$$5p \times 10h = 50h \rightarrow 50h / 7p = 7,14h = 7h8min24s$$

25. 5 cabin crew cleans the cabin for 4 min, how many min will 4 cabin crew need?

$$5p \times 4min = 20min \rightarrow 20min / 4p = 5min$$

26. 75% of a number is 6457, what is your number?

$$6457 \times 4/3 = 8609$$

27. Airline X has 35 A/C in total. 20 A320, 10 A330 and 5 A350. All heavy A/C are equipped with RR engines. What % of the aircraft are equipped with RR engines?

$$100\% = 35, 15 = X \rightarrow 15 \times 100/35 = 42,86\%$$

28. You have a wheel with a diameter of 60cm, what distance does it cover with 2 revolutions?

$$2 \times 2 \times \pi \times 60/2 = 377cm$$

29. There is a group of 13. Seven are girls. What is the ratio of boys to girls?

$$13 - 7 = 6 \text{ boys} \rightarrow 6/7 = 86\%$$

30. Average of 15, 25, 30, 45, 55

$$15 + 25 + 30 + 45 + 55 = 170 \rightarrow 170/5 = 34$$

31. Out of 30 questions 6 are about chapter 5, what % of questions where about chapter 5?

$$6 \times 100/30 = 20\%$$

32. Rectangle sees his length decreased by 20% and its width by 10%. What is the % change in area?

$$\text{Assuming } W1=2 \text{ and } L1=4 \rightarrow A1=2 \times 4=8m^2, W2 = 2 \times 90\%=1,8m \rightarrow L2 = 4 \times 80\%=3,2m \rightarrow A2 = 1,8 \times 3,2=5,76m^2, A2/A1 = 72\% \rightarrow \text{Area difference} = 100-72 = 28\% \text{ decrease}$$

33. $xy=x+1$

$$x=1/(Y+1) \text{ or } y=1+(1/x)$$

34. You have a rectangle with a width of 2m and a length of 4m, if the size is reduced with 20%, what will the new area be?

$$\text{Old area} = 8m^2 \rightarrow 8 \times 20\% = 1,6 \rightarrow 8 - 1,6 = 6,4m^2$$

$$\text{Old sizes} = 4 \times 2 \rightarrow 4 \times 2 \times 20\% = 3.2 \times 1.6 = 5.12m^2$$

UNANSWERED

- 35. Fractions with options where you have to say which one is bigger/smaller than the other
- 36. Conversions km/h to nm/min, km/h to ft/min
- 37. Conversions. From US Gal to litre, from km/h to NM/min from km/h to ft/min
- 38. Which fraction is higher than $\frac{3}{5}$ and smaller than $\frac{6}{7}$ (choose between 4)
- 39. 2 Airplanes leave at diff speeds, how far and when will they meet?
- 40. Initial price of an object knowing discount
- 41. Similar discount question however finds new price
- 42. $4x-3=33$
- 43. 25% of 120 is X. How much is 75% of X?