

FIRST ROUND QUESTION PAPER 2015

Not to be used before 8 May 2015

INSTRUCTIONS TO THE CANDIDATES

1. All answers must be typed or pasted on the answer sheet provided in the document AnswerSheet.
2. You may do the questions in any order, but you have to make sure the answers are placed correctly on the answer sheet. Save the answer sheet as instructed by your teacher.
3. The files you need to answer the questions have been provided to your school. Ask your teacher/invigilator where to find them.
4. The paper must be completed under “examination conditions”. No communication (oral, electronic or any other form) with other contestants is permitted.
5. You may use the application of your choice and convert the data as it suits you.
6. You have one hour (60 min.) to complete this paper. After one hour you may be given time to print your answer sheet, but no additions or alterations to the answers or files are allowed.
7. All marking is done from hard copy, i.e. from the printed answer sheet.
8. Each correct answer counts the mark indicated in brackets behind the question.
9. You need to store your files where you found them and where your teacher can access them in case the judges want to see how you obtained the answer. **Do not delete any of the files. Do not attempt to modify any files after the end of the contest.**

A: WORD PROCESSING

The Editorial Board of the World Air Safety Organization is quite strict, and has asked you to report on the document called “WASO document”.

1. What is the measurement (in cm) of the top margin of the document? (1)
2. Sometimes the word “plane” is used in the document. To ensure consistency these occurrences must be changed to “airplane”. How many changes have to be made? (1)
3. Whilst preparing the document the author, Richard E Hayden, consulted a number of other publications. He kept record of these other publications in the document so that he could generate a bibliography for the article. Give the surname of the only author that he consulted. (1)

4. How many different heading styles are used in the document? (1)
5. What are the cell margins (in cm) of the only table in the document? (1)
6. All the images in the document have been compressed for sharing purposes (i.e. sending via e-mail). What is the compressed resolution measurement (in ppi – pixels per inch) of any one of the images in the document. (1)

.... B: SPREADSHEETS/

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Before answering these questions acquaint yourself with the contents and structure of the workbook "LHR". London's Heathrow Airport is one of the busiest airports in the world. The LHR workbook you have been given contains some information on the departures for the period 05:00 to 10:40 on a typical day. The answers to all the questions must be obtained from the data provided on the worksheet. It is most likely that extra columns of calculations will need to be created in order to answer some of the questions. Questions 5, 7 and 8 have been allocated columns in which you must do your calculations. These columns must not be deleted but must be kept as part of the spreadsheet so that the judges can look at them later. These files may not be modified after the contest has ended

1. The 3-letter city code for Cape Town is CPT. What is the 3-letter city code for Buenos Aires? (1)
2. How many British Airways flights departed during the given period? (1)
3. How many flights departed for either Dubai or Abu Dhabi? (1)
4. There are 5 aircraft manufacturers that had planes which departed during the period. These were Airbus, Boeing, Embraer, Avro and Fokker. Airbus planes have a code which begins with a 3 in the "Aircraft Type" field. Boeing planes have a code which begins with a 7 in this field. How many more Airbus planes departed than Boeing planes? If necessary, use column J and K for your working. (1)
5. Which airline had the longest delay between the scheduled departure time and the actual departure time? Show your working in column L (and M if needed) and save your work. (1)
6. How many airlines could state that one, or more, of their flights departed 15 minutes or more ahead of schedule? (2)
7. How many flights have exactly 3 digits in the flight number (e.g. BA 155)? Show your working in column N (and O if needed) and save your work. (2)
8. Flights depart from Heathrow Airport approximately every 2 minutes. Determine the average time between the actual departure times. Give your answer in minutes and seconds to the nearest second in the following format 7:25. Show your working in column P (and Q if needed) **and save your work!** (2)

C: DATABASE

The Aviation database contains information on airlines, airports, countries, routes and runway detail. Before answering the questions that follow you might want to take a few minutes to open the various tables to see what data each table contains. Also take note of the fact that many airports have more than one runway.

1. How many routes are listed in the "Routes" table in the database? (1)
2. How many airports are located in Antarctica? (1)
3. What is the name of the airport with the longest, unlit runway that is made of concrete or a combination of concrete and another material (e.g. concrete/asphalt)? (1)
4. The equator has latitude 0 degrees. How many airports in Africa are located at most 1 degree either side of the equator? (1)
5. Scandinavian Airlines in Sweden mainly use the Boeing 737 aircraft on the route between Arlanda Airport (ARN) in Stockholm and Kallax Airport (LLA) in Lulea in the north of Sweden. The Boeing 737 family of aircraft has a number of different models, such as the 737-700 (73G) and the 737-800 (73H). How many different models in the Boeing 737 family does Scandinavian Airlines use on the Stockholm to Lulea route? (1)
6. NASA's shuttles required a runway length of greater than 3 500 m for a safe landing. Various airports around the world had been identified as potential landing sites in the event of an emergency. For security purposes these runways had to be located at a military airport, i.e. an airport with the letters "AFB" in their name. In South Africa the Hoedspruit AFB in Limpopo was one of the two airports where a shuttle could have landed safely in the event of an emergency. What is the name of the other military airport? (2)
7. The World Bank is providing funding for the repair of all the asphalt runways in Botswana. In order to determine the total cost they need to know the total area of all the asphalt runways in the country. What is the total area (in square meters) of all the asphalt runways in Botswana? (Hint: remember that the area of a runway is calculated by multiplying the length of the runway by the width of the runway.) (2)

D: HTML QUESTIONS

Open the file A380.html in a text editor or html editor.

Also view the file in a web browser.

Write down only the letter corresponding to the correct or best answer.

1. The bulleted list under the heading 'Interesting Facts' must be changed so that square rather than round bullets are displayed.
Which of the following HTML statements are correct? (1)
 - (i) `<ul type = "square">`
 - (ii) `<ul type = "block">`
 - (iii) `<ul style="list-style-type: square">`
 - A. Only (i)
 - B. (i), (ii) and (iii)
 - C. (i) and (iii)
 - D. (ii) and (iii)
2. The text after the word 'Source: '(line 19) is supposed to be a hyperlink to a website. Which of the following tags must be added to the given HTML code to display the hyperlink correctly? (1)
 - A. ftp
 - B. href
 - C. linkto
 - D. url
3. All the text from the heading 'Operators' is displayed as a level 2 heading. What change must be made to ensure that only the word 'Operators' is displayed as a level 2 heading? (1)
 - A. An `</h2>` tag must be added immediately after the text 'Operators'.
 - B. An `<h2>` tag must be added immediately after the text 'Operators'.
 - C. The code `<h2>Operators'` should be replaced with `<h1>Operators</h1>'`.
 - D. The `<h2>` tag immediately before 'Operators' should be deleted.
4. What is the name of the image which is displayed stretched or squashed? (1)
 - A. a380Cockpit.jpg
 - B. a380Cabin.jpg
 - C. a380.jpg
 - D. a380Landing.jpg