INSTRUCTIONS TO CANDIDATES

You should have the following for this examination:
- Answer booklet;
- Mathematical tables/Non-programmable scientific calculator;
- Drawing instruments;

This paper consists of EIGHT questions in TWO sections; A and B.
Answer FIVE questions by choosing at least TWO questions from each section.
All questions carry equal marks.
Maximum marks for each part of a question are as shown.
Candidates should answer the questions in English.

This paper consists of 3 printed pages.
Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.
SECTION A: AIRFIELD SAFETY AND PROCEDURES II

Answer at least TWO questions from this section.

1. (a) Outline five aircraft unscheduled maintenance triggers. (5 marks)

(b) Explain five inspections carried out after an aircraft is subjected to each of the following flight conditions:

(i) severe turbulence;
(ii) lightning strikes;
(iii) hard or overweight landing. (15 marks)

2. (a) Explain each of the following abbreviations applicable to aircraft weight and balance:

(i) OEW;
(ii) MTOW;
(iii) MLW;
(iv) MZFW. (8 marks)

(b) Explain six major considerations when preparing an aircraft for weighing. (12 marks)

3. With the aid of a labelled sketch, show the layout of a typical airport. (20 marks)

4. With respect to Kenya Civil Aviation Authority Regulations

(a) Define each of the following:

(i) general aviation operations;
(ii) airside. (2 marks)

(b) Outline the six categories under which the regulations are subjected to. (6 marks)

(c) Explain the duties of Kenya Civil Aviation Authority. (12 marks)
SECTION B: RESEARCH METHODS

Answer at least TWO questions from this section.

5. Explain the chronological steps used in formulating a research project. (20 marks)

6. (a) Describe the five types of data analysis used in research. (10 marks)
(b) Explain five factors considered when selecting a research sample size. (10 marks)

7. (a) Describe five factors considered when selecting a research project. (10 marks)
(b) Highlight four ways of developing a hypothesis. (4 marks)
(c) Outline the importance of research project proposal. (6 marks)

8. (a) Describe three advantages of using computers in conducting research. (6 marks)
(b) Explain seven factors considered when choosing a research topic. (14 marks)

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