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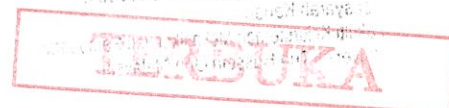
UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER II
SESSION 2021/2022**

- COURSE NAME** : AVIATION MANAGEMENT SYSTEM
- COURSE CODE** : BDX 30803
- PROGRAMME CODE** : BDX
- EXAMINATION DATE** : JULY 2022
- DURATION** : 3 HOURS
- INSTRUCTION** :
- 1. ANSWER FOUR (4) QUESTIONS ONLY**
 - 2. THIS FINAL EXAMINATION IS CONDUCTED VIA CLOSED BOOK.**
 - 3. STUDENTS ARE PROHIBITED TO CONSULT THEIR OWN MATERIAL OR ANY EXTERNAL RESOURCES DURING THE EXAMINATION CONDUCTED VIA CLOSED BOOK.**

THIS QUESTION PAPER CONSISTS OF FIVE(5) PAGES

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Q1 Aviation management is the practice of coordinating and planning the logistics and operations of an airport, airline, or other industry within the field of aviation. The discipline involves many different aspects and roles. The aviation manager requires certain skills and knowledge in terms of strategic planning organization.

(a) Describe **FIVE (5)** jobs related to aviation management.

(10 marks)

(b) Illustrate and explain the relationship of management skill and the level of management according to Robert L. Katz

(15 marks)

Q2 (a) Kuala Lumpur International Airport (KLIA) is able to conduct Hub and Spoke model.

i. Describe the definition of the Hub and Spoke Model and Point to Point Model. Give an example of the Hub and Spoke model in KLIA

(5 marks)

ii. Give your comments on the feasibility of the Point to Point Model in KLIA.

(6 marks)

(b) Open sky is an international policy concept that calls for the liberalization of the rules and regulations of the global aviation industry to create a free-market environment for the airline industry. The ASEAN Open Skies policy was started on 1st January 2015. Justify **THREE (3)** benefits of the ASEAN Open Skies policy to Malaysia.

(6 marks)

(c) Federal Aviation Agency (FAA) is a national aviation authority, while European Aviation Safety Agency (EASA) is the Joint Aviation Authorities. Malaysia Airlines Berhad (MAB) is a Malaysian airline that needs to be aware of both authorities'

requirements. Differentiate the organizational function between the FAA and EASA for MAB to understand the requirements

(8 marks)

Q3 (a) UTHM Holding plan to become an original equipment manufacturer (OEM) for the aerospace industry. The company need to comply with the specific Aerospace Quality Management Systems.

i. Describe **ONE (1)** quality system that needs to be complied with by UTHM Holding.

(3 marks)

ii. Justify **THREE (3)** benefits of applying the quality system as described in Q2(a)(i) for UTHM Holding operation.

(6 marks)

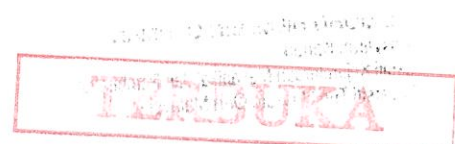
(b) A Design Organization Approval is the recognition that complies with the requirements of Part 21 Subpart J. Recently, UTHM Holding successfully designed and developed a big drone working prototype. Due to the enormous size of the drone, the drone is already considered an aircraft. Therefore, it needs to get a design approval organization from the authority.

i. List down **FOUR (4)** nominated post holders for this company that follow the Design Assurance System requirement.

(4 marks)

ii. Justify the selection of nominated post holders for this company as described in Q3(b)(i)

(8 marks)



- iii. Determine the privileges of UTHM Holding after obtaining the certificate of Design Organization Approval.

(4 marks)

- Q4** (a) Based on your knowledge in severity and likelihood, prepare a table that shows **FIVE (5)** examples of criteria and the levels on your risk for each items related to an operation of an aircraft manufacturing.

(10 marks)

- (b) It has been revealed that many aerospace companies are applying the latest practices in Configuration Management for all their advance capabilities. If the Configuration Management is not applied properly it can unfavorably impact the quality of the product, delay the launch of their product and increases the life cycle cost of all their products. Differentiate three basic tools for implementing Configuration Management.

(15 marks)

- Q5** (a) Discuss **THREE (3)** points about an aerospace supply chain considerations and challenges.

(3 marks)

- (b) By using a diagram, illustrate the transfer process phases in aerospace manufacturing system.

(10 marks)

- (c) Based on Table **Q5(b)**, analyze the result of the qualitative survey of requisite technical areas of expertise versus market specification, and make the assessment of outsourcing decisions in aircraft development.

(12 marks)

-END OF QUESTION -

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Table Q5(b) Qualitative Survey of Requisite Technical Areas of Expertise versus Market Specification for an Aircraft Development.

	No of Competitors	Complexity	Specificity	Essentiality	Live Cycle Duration
Design Tools and Method	Low	Low	Low	Low	Low
Materials (Alloy and Composites)	Medium	Low	Low	Low	Low
Component (Mechanical and Electrical)	High	Medium	Medium	Low	Low
Airframe System (Assembly and Cabin)	Medium	High	High	Medium	Medium
Integrated Utility System	Low	High	High	High	High
Power System (Primary and Auxiliary)	Medium	Medium	Medium		Medium
Production (Tools and Manufacturing)	High	Medium	Low	Low	Low
Testing (Virtual and Physical)	High	Medium	Medium	High	Medium