UNIVERSITI TUN HUSSEIN ONN MALAYSIA

FINAL EXAMINATION
SEMESTER I
SESSION 2015/2016

COURSE NAME	:	AVIATION ECONOMY & MANAGEMENT
COURSE CODE	:	BDU 30202
PROGRAMME	:	3 BDC
EXAMINATION DATE	:	DECEMBER 2015/JANUARI 2016
DURATION	:	2 HOURS
INSTRUCTION	:	ANSWER **FOUR (4)** QUESTIONS ONLY

THIS QUESTION PAPER CONSISTS OF **FIVE (5)** PAGES

Q1 (a) Management is introduce to ensure that work activites are completed efficiently and effectively.

   (i) Give 5 POLCA management functions as outlined by Robbins, Bregman and Stagg.

   (ii) Describe 5 out of 14 Principles of Management proposed by Henri Fayol.

   (10 marks)

(b) Differentiate the benefits of hub and spoke as compared to point to point model by providing the mathematical equation for the comparison.

   (5 marks)

(c) Propose 5 challenges faced by the airport management team when using Airport Collaborative Decision Making (A-CDM) approach.

   (10 marks)

Q2 (a) Define the following terms:-
   (i) Aviation law
   (ii) Management
   (iii) Sovereignty.

   (6 marks)

(b) These data are obtained from a series of activities carried out during aircraft system design process:

Table 1: Aircraft Preliminary Design Activities

Activity Number	Activity	Completion time(weeks)
1	Redesign navigation system	6
2	Redesign landing system	2
3	Order and receive components for redesigned navigation system	3
4	Order and receive components for redesign landing system	2
5	Assemble systems	4

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6	Plug in systems	1
7	Testing systems	1
8	Ground run	6
9	Revise navigation system	3
10	Revise landing system	1
11	Deploy system	1

Table 2: Activity occurrence

Activity Number (y) must be finished before	Activity number(x) can start
1	3
2	4
3	5
4	6
5,6	7
7	8
8	9
8	10
9,10	11

(i)   Construct the network analysis of aircraft system design process based on sets of data given in Table 1 and Table 2.

(ii)   Determine the critical path for this process.

(ii)   Based on your answer in Q2 (b) (i), propose 3 comparisons of AON and AOA network conventions.

.   (19 marks)

Q3   (a)   Identify what is the military usage of civil airspace as permitted by FAA.

(3 marks)

(b)   Gives 3 types of major configurations and explain the details of each configuration in designing the airport terminal building.

(7 marks)

(c)   (i)   Define Foreign Object debris (FOD) and gives 2 examples of FOD.

    (ii)   Outline 3 examples of non-aircraft hazards that could lead to accidents to the aircraft.

    (iii)   Propose 3 common factors of airside vehicle movements that causes to the accidents at the airside.

(10 marks)

(d)   Recommend one example of aircraft accident caused by FOD.

(5 marks)

Q4   (a) Compare 3 differences between capitalist economy and socialist economy.

(4 marks)

(b) These are the details to consider in calculating aircraft direct cost:

Table 3: Detail elements in aircraft direct cost

No	Items	Quantity
1	Number of seats	300pax
2	Range at maximum payload	7200nm
3	Cruise speed	M 0.825= 243m/s = 473 kt
4	Aircraft maximum take-off mass	243 200 kg
5	Engine take-off thrust (two engines)	370 kN (each engine)
6	Cruise SFC	0.55
7	Fuel consumption	5500 kg/hr (each engine)
8	Typical jet fuel density	800 kg/m^3
9	Flight crew cost	$360/hr
10	Cabin crew cost	$90/hr
11	Landing fees	$6/ton (of aircraft MTO)
12	Navigational charge	$5640/flight
13	Ground handling	$11/pax

    (i)   Calculate total airport charge based on the values given in table 3, assuming that there are two flight crew and nine cabin crew on this flight.

(7 marks)

(ii)   Based on your answer in Q4(b)(i), determine total fuel cost for this flight by considering it's block time and by assuming that there are 10 minutes lost time during climb; 20 minutes for start-up, taxi-out and take-off;8 minutes for hold prior to landing and 5 minutes for landing and taxi to stop. Note that 1 US gallons = 3.785 liters.

(13 marks)

Q5   (a)   Gives 3 types of money.

(3 marks)

(b)   Explain supply and demand theory using graph.

(5 marks)

(c)   Determine 4 factors of production related to economics systems and provide example for each factor.

(8 marks)

(d)   (i) Analyze the scenario in the aviation industry in Malaysia for the past 5 years.

(ii) Based on your opinions, outline the advantages of the current scenario in the aviation industry.

(9 marks)

- END OF QUESTION -