

**Code No: 56073**

**Set No. 1**

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**III B.Tech. II Sem., II Mid-Term Examinations, April – 2014**

**AIRCRAFT SYSTEMS**

**Objective Exam**

**Name:** \_\_\_\_\_ **Hall Ticket No.**

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**Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.**

**I Choose the correct alternative:**

1. During a turn the aircraft wing are rotated around the \_\_\_\_\_ axis until a certain bank is attained. [     ]  
a) pitch                      b) roll                      c) yaw                      d) dihedral
2. The flight control surfaces are all powered by [     ]  
a) pneumatically      b) hydraulically      c) mechanically      d) manually
3. Which of the following deals with a set of design processes [     ]  
a) ARP 4761              b) ARP 4754              c) Do-254              d) Do-178B
4. Which of the following deals with system development processes-ARP 4754 [     ]  
a) System development   b) safety assessment process   c) validation of requirements   d) all.
5. In high mach no aircraft the suitable airflow under all conditions is mentioned by providing [     ]  
a) intake rams              b) variable intake area      c) both a & b              d) airflow modulation
6. Most modern civil engines using FADEC for the power management and control requirement [     ]  
a) speed probes              b) pneumatic power      c) LP & HP fuel pump              d) none.
7. Which of the following is directly related to the aerodynamics and precise flight conditions that apply at the time of the control demand [     ]  
a) spring feel              b) actuator              c) Q feel              d) trim
8. Which of the following phase is about understanding the customer's emerging needs [     ]  
a) test phase              b) concept phase              c) built phase              d) retire phase
9. The vent system in commercial aircraft is treated as [     ]  
a) closed vent system   b) open vent system      c) air-breathing system              d) all
10. Which of the following is a component of system of interest [     ]  
a) Operating environment   b) hardwired interfaces   c) Emergement properties   d) all

**Cont.....2**

**II Fill in the blanks**

11. The\_\_\_\_\_ motion relates to the motion of the aircraft around three different axis.
12. \_\_\_\_\_ became necessary when a/c performance increased to the point where it was no longer physically possible for the pilot to apply the high forces needed to move the flight control surface.
13. PSSA stands for\_\_\_\_\_
14. The a/c has 2 independent electrical power generation systems, the main components are the \_\_\_\_\_and the\_\_\_\_\_
15. In military a/c the fuel boosters pumps are used to prevent \_\_\_\_\_ at high altitudes
16. A typical fuel control circuit in which fuel is used as a cooling medium for oil is \_\_\_\_\_
17. The collection of knowledge about the operation of aircraft is \_\_\_\_\_
18. A proto type system is \_\_\_\_\_in the stage of development of technology
19. In a flight control system the needs to influence the center of gravity is to perform\_\_\_\_\_
20. The cross functional characteristics in the management and integration is \_\_\_\_\_

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**Set No. 2**

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**Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.**

**I Choose the correct alternative:**

1. Which of the following deals with system development processes-ARP 4754 [      ]  
a) System development b) safety assessment process c) validation of requirements d) all.
2. In high mach no aircraft the suitable airflow under all conditions is mentioned by providing [      ]  
a) intake rams b) variable intake area c) both a & b d) airflow modulation
3. Most modern civil engines using FADEC for the power management and control requirement [      ]  
a) speed probes b) pneumatic power c) LP & HP fuel pump d) none.
4. Which of the following is directly related to the aerodynamics and precise flight conditions that apply at the time of the control demand [      ]  
a) spring feel b) actuator c) Q feel d) trim
5. Which of the following phase is about understanding the customer's emerging needs [      ]  
a) test phase b) concept phase c) built phase d) retire phase
6. The vent system in commercial aircraft is treated as [      ]  
a) closed vent system b) open vent system c) air-breathing system d) all
7. Which of the following is a component of system of interest [      ]  
a) Operating environment b) hardwired interfaces c) Emergement properties d) all
8. During a turn the aircraft wing are rotated around the \_\_\_\_\_ axis until a certain bank is attained. [      ]  
a) pitch b) roll c) yaw d) dihedral
9. The flight control surfaces are all powered by [      ]  
a) pneumatically b) hydraulically c) mechanically d) manually
10. Which of the following deals with a set of design processes [      ]  
a) ARP 4761 b) ARP 4754 c) Do-254 d) Do-178B

**Cont.....2**

**II Fill in the blanks**

11. The a/c has 2 independent electrical power generation systems, the main components are the \_\_\_\_\_ and the \_\_\_\_\_
12. In military a/c the fuel boosters pumps are used to prevent \_\_\_\_\_ at high altitudes
13. A typical fuel control circuit in which fuel is used as a cooling medium for oil is \_\_\_\_\_
14. The collection of knowledge about the operation of aircraft is \_\_\_\_\_
15. A proto type system is \_\_\_\_\_ in the stage of development of technology
16. In a flight control system the needs to influence the center of gravity is to perform \_\_\_\_\_
17. The cross functional characteristics in the management and integration is \_\_\_\_\_
18. The \_\_\_\_\_ motion relates to the motion of the aircraft around three different axis.
19. \_\_\_\_\_ became necessary when a/c performance increased to the point where it was no longer physically possible for the pilot to apply the high forces needed to move the flight control surface.
20. PSSA stands for \_\_\_\_\_

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**Set No. 3**

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**III B.Tech. II Sem., II Mid-Term Examinations, April – 2014**

**AIRCRAFT SYSTEMS**

**Objective Exam**

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**Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.**

**I Choose the correct alternative:**

1. Most modern civil engines using FADEC for the power management and control requirement [      ]  
a) speed probes      b) pneumatic power      c) LP & HP fuel pump      d) none.
2. Which of the following is directly related to the aerodynamics and precise flight conditions that apply at the time of the control demand [      ]  
a) spring feel      b) actuator      c) Q feel      d) trim
3. Which of the following phase is about understanding the customer's emerging needs [      ]  
a) test phase      b) concept phase      c) built phase      d) retire phase
4. The vent system in commercial aircraft is treated as [      ]  
a) closed vent system      b) open vent system      c) air-breathing system      d) all
5. Which of the following is a component of system of interest [      ]  
a) Operating environment      b) hardwired interfaces      c) Emergence properties      d) all
6. During a turn the aircraft wing are rotated around the \_\_\_\_\_ axis until a certain bank is attained. [      ]  
a) pitch      b) roll      c) yaw      d) dihedral
7. The flight control surfaces are all powered by [      ]  
a) pneumatically      b) hydraulically      c) mechanically      d) manually
8. Which of the following deals with a set of design processes [      ]  
a) ARP 4761      b) ARP 4754      c) Do-254      d) Do-178B
9. Which of the following deals with system development processes-ARP 4754 [      ]  
a) System development      b) safety assessment process      c) validation of requirements      d) all.
10. In high mach no aircraft the suitable airflow under all conditions is mentioned by providing [      ]  
a) intake rams      b) variable intake area      c) both a & b      d) airflow modulation

**Cont.....2**

**II Fill in the blanks**

11. A typical fuel control circuit in which fuel is used as a cooling medium for oil is \_\_\_\_\_
12. The collection of knowledge about the operation of aircraft is \_\_\_\_\_
13. A proto type system is \_\_\_\_\_ in the stage of development of technology
14. In a flight control system the needs to influence the center of gravity is to perform \_\_\_\_\_
15. The cross functional characteristics in the management and integration is \_\_\_\_\_
16. The \_\_\_\_\_ motion relates to the motion of the aircraft around three different axis.
17. \_\_\_\_\_ became necessary when a/c performance increased to the point where it was no longer physically possible for the pilot to apply the high forces needed to move the flight control surface.
18. PSSA stands for \_\_\_\_\_
19. The a/c has 2 independent electrical power generation systems, the main components are the \_\_\_\_\_ and the \_\_\_\_\_
20. In military a/c the fuel boosters pumps are used to prevent \_\_\_\_\_ at high altitudes

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**Set No. 4**

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**Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.**

**I Choose the correct alternative:**

1. Which of the following phase is about understanding the customer's emerging needs [     ]  
a) test phase                      b) concept phase                      c) built phase                      d) retire phase
2. The vent system in commercial aircraft is treated as [     ]  
a) closed vent system   b) open vent system   c) air-breathing system                      d) all
3. Which of the following is a component of system of interest [     ]  
a) Operating environment   b) hardwired interfaces   c) Emergence properties   d) all
4. During a turn the aircraft wing are rotated around the \_\_\_\_\_ axis until a certain bank is attained. [     ]  
a) pitch                      b) roll                      c) yaw                      d) dihedral
5. The flight control surfaces are all powered by [     ]  
a) pneumatically                      b) hydraulically                      c) mechanically                      d) manually
6. Which of the following deals with a set of design processes [     ]  
a) ARP 4761                      b) ARP 4754                      c) Do-254                      d) Do-178B
7. Which of the following deals with system development processes-ARP 4754 [     ]  
a) System development   b) safety assessment process   c) validation of requirements   d) all.
8. In high mach no aircraft the suitable airflow under all conditions is mentioned by providing [     ]  
a) intake rams                      b) variable intake area                      c) both a & b                      d) airflow modulation
9. Most modern civil engines using FADEC for the power management and control requirement [     ]  
a) speed probes                      b) pneumatic power                      c) LP & HP fuel pump                      d) none.
10. Which of the following is directly related to the aerodynamics and precise flight conditions that apply at the time of the control demand [     ]  
a) spring feel                      b) actuator                      c) Q feel                      d) trim

**Cont.....2**

**II Fill in the blanks**

11. A proto type system is \_\_\_\_\_in the stage of development of technology
12. In a flight control system the needs to influence the center of gravity is to perform\_\_\_\_\_
13. The cross functional characteristics in the management and integration is \_\_\_\_\_
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16. PSSA stands for\_\_\_\_\_
17. The a/c has 2 independent electrical power generation systems, the main components are the \_\_\_\_\_ and the\_\_\_\_\_
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19. A typical fuel control circuit in which fuel is used as a cooling medium for oil is \_\_\_\_\_
20. The collection of knowledge about the operation of aircraft is \_\_\_\_\_