

Unit 12 - Week 10

Course outline

How does an NPTEL online course work?

Week 0

Week 1

Week 2

Week 3

Week 4

Week 5

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Week 7

Week 8

Week 9

Week 10

● Lecture 69 : Cost Estimation in Aircraft Conceptual Design

○ Lecture 70 : Aircraft Life Cycle Cost Estimation

● Lecture 71 : Tutorial on RDT&E and Production Cost Estimation of Transport Aircraft

○ Lecture 72 : Tutorial on DT&E and Production Cost Estimation of HALE UAV

○ Lecture 73 : Estimation of Direct Operating Cost

● Lecture 74 : Fighter Aircraft Life Cycle Cost Estimation Model

○ Quiz : Assignment 10

○ Assignment-10 Solutions

○ Weekly feedback

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Week 11

Week 12

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Assignment 10

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2020-11-25, 23:59 IST.

1) Which of these phases generally affect the Life Cycle Cost to the highest? 1 point

- Design and Development
 Support Equipment
 Operations and Support
 Production

No, the answer is incorrect.
Score: 0

Accepted Answers:
Operations and Support

2) If it is assumed that the engineering staff will work 40 hrs a week for 48 weeks a year, how many engineers are required to accomplish the development over a period of 3 years?

Number of engineering man-hours required: 205670 hrs

Hint

No, the answer is incorrect.
Score: 0

Accepted Answers:
(Type: Numeric) 36

1 point

3) What percentage of Life Cycle Cost is typically committed and actually spent during the Concept Exploration Phase? 1 point

- 40% Committed and 15% Spent
 15% Committed and 40% Spent
 65% Committed and 15% Spent
 15% Committed and 65% Spent

No, the answer is incorrect.
Score: 0

Accepted Answers:
65% Committed and 15% Spent

4) RDT&E Cost of an aircraft does not include the money spend towards 1 point

- Technology Research, Design Engineering and Prototyping
 Ground and Flight Testing
 Evaluation of Operation Suitability and Certification
 Maintenance Cost

No, the answer is incorrect.
Score: 0

Accepted Answers:
Maintenance Cost

5) Which of the following is/are the components of the Life Cycle Cost? 1 point

- Design and Development
 Production
 Support Equipment and Initial Spares
 Operation and Support
 Disposal

No, the answer is incorrect.
Score: 0

Accepted Answers:
Design and Development
Production
Support Equipment and Initial Spares
Operation and Support
Disposal

6) According to the DAPCA IV Cost Model, Manufacturing cost of the airplane depends upon, 1 point

- Maximum Engine Thrust
 Empty Weight
 Maximum Velocity
 Production Quantity
 Gross Takeoff Weight

No, the answer is incorrect.
Score: 0

Accepted Answers:
Empty Weight
Maximum Velocity
Production Quantity

7) Which of the following are the Input parameters for Direct Operating Cost Calculation using AEA Method? 1 point

- Number of Passengers
 Maximum Takeoff Weight
 Maximum Empty Weight
 Production Quantity
 Number of Engines
 Fuel Price

No, the answer is incorrect.
Score: 0

Accepted Answers:
Number of Passengers
Maximum Takeoff Weight
Maximum Empty Weight
Number of Engines
Fuel Price

8) The price of engine spares is _____ % of total engine price as per the AEA Method. 1 point

- 05
 10
 20
 30
 40

No, the answer is incorrect.
Score: 0

Accepted Answers:
30

9) Calculate the engineering cost (in Million USD) of the aircraft with the Empty Weight, $W_E = 4116$ kg, Maximum Velocity, $V = 550$ kmph, Production Quantity, $Q = 10$. (Assume the engineering cost per hour as USD 130).

Hint

No, the answer is incorrect.
Score: 0

Accepted Answers:
(Type: Range) 175,185

1 point

10) What is/are the input parameter(s) for FALCCM? 1 point

- Maintenance Man Hours/Flight Hours
 Technology Level Factor
 Test Flight Hours
 Weapon Factor
 Number of Engineers involved in manufacturing

No, the answer is incorrect.
Score: 0

Accepted Answers:
Maintenance Man Hours/Flight Hours
Technology Level Factor
Weapon Factor