Assignment 7

The due date for submitting this assignment has passed.

As per our records you have not submitted this assignment.

Assignment No. 7

1) Thin shells are generally used for structural applications because:
   - It is easy to repair
   - It absorbs very less amount of membrane energy
   - It absorbs a large amount of membrane energy
   - It deforms easily
   No, the answer is incorrect.
   Score: 0
   Accepted Answers:
   - It absorbs a large amount of membrane energy
   - It absorbs very less amount of membrane energy

2) Bending limit load of a perfect shell is ________ than an imperfect shell.
   - Always smaller
   - Always larger
   - Sometimes larger
   - Sometimes smaller
   No, the answer is incorrect.
   Score: 0
   Accepted Answers:
   - Always larger
   - Always smaller

3) Building of a shell greatly influenced due to:
   - Shell geometry
   - Material properties of a shell
   - Type of loading
   - All of these
   No, the answer is incorrect.
   Score: 0
   Accepted Answers:
   - All of these

4) If the given values $Q_1$, $w_0$, $F_1$, $w_2$, and $h_2$, find $A_1$.
   Score: 0
   Accepted Answers:
   - $A_1 = 0.35$, $0.135$, $0.2535$ and $0.5543$ (2 marks)
   - $A_1 = 0.35$, $0.135$, $0.2535$ and $0.5543$ (2 marks)

5) For the given values for a 2D single layer shell geometry $E_1 = 4.98 \times 10^6$ Pa, $E_2 = 1.88 \times 10^6$ Pa, $G_{12} = 0.730 \times 10^6$ Pa, $h_1 = 0.06$, and $h_2 = 0.10$.
   (5 marks)
   - $Q_1 = 0.35$, $0.135$, $0.2535$ and $0.5543$ (2 marks)
   - $Q_1 = 0.35$, $0.135$, $0.2535$ and $0.5543$ (2 marks)

6) If the given data in question no. 5, $F_1$, $F_2 = 0.3$ and thickness $t = 10$ mm then find, $A_{22}$ = ________ for 90 degree single layer shell.
   Score: 0
   Accepted Answers:
   - $A_{22} = 7600$ and $7800$
   - $A_{22} = 7600$ and $7800$

7) Using the given data in question 5 and 6, find $B_{22}$ = ________ for 90 degree single layer shell.
   Score: 0
   Accepted Answers:
   - $0.0211$ and $0.2571$
   - $0.0211$ and $0.2571$

8) Using the above-obtained values and data in question 5 and 6, find $D_{21}$ = ________ for 90 degree single layer shell.
   Score: 0
   Accepted Answers:
   - $0.0211$ and $0.2211$
   - $0.0211$ and $0.2211$

9) Using the obtained values and data in question 5 and 6, find $P_1 = ________ for 90 degree single shell.
   Score: 0
   Accepted Answers:
   - $-4.867$ and $1.114$
   - $-4.867$ and $1.114$

10) A sheet made of isotropic material has a length $l = 4$ m, thickness $h = 2$ mm, and $v = 0.36$, then find the actual critical value of axial load.
   Score: 0
   Accepted Answers:
   - $6.42$
   - $6.42$

**Due on 2021-03-16, 23:09 IST.**