Assignment Week 11

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

1) Identify under what classification the following compliant mechanism falls.

- Displacement-amplifying mechanism
- Suspension mechanism
- X and Y de-coupler mechanism
- Both B and C

No, the answer is incorrect.
Score: 0
Accepted Answers:
Both B and C

2) Identify the incorrect statement among the following

- Tuning of stiffness of compliant mechanism is possible with the help of contact aided compliant mechanism.
- Anisotropy can be used to make new compliant mechanisms.
- It is not possible to obtain non-smooth response from smooth actuation.
- Compliant mechanism can be used for signal processing and logic gates.

No, the answer is incorrect.
Score: 0
Accepted Answers:
It is not possible to obtain non-smooth response from smooth actuation.

3) Which of the following, if used in micromachined accelerometer design, enhances sensitivity and resolution?
- Compliant suspension
- Displacement amplifying compliant mechanism
- Contact aided compliant mechanism
- None of these

No, the answer is incorrect.
Score: 0
Accepted Answers:
Displacement amplifying compliant mechanism

4) Which of the following is a distributed compliant mechanism?
- I
- II
- III
- IV

No, the answer is incorrect.
Score: 0
Accepted Answers:
III

Assertion: Displacement amplifying compliant mechanisms improves the resolution of MEMS accelerometers.
Reasoning: Thermo-mechanical noise is significantly less compared to electronic noise.

Assertion is incorrect but the reasoning is correct.
6) Which among these does not fall under the category of a composite compliant mechanism?

- I.
- II.
- III.
- IV.

No, the answer is incorrect.
Score: 0
Accepted Answers:
Assertion and reasoning are both correct.

7) Which of the following statements is true for this compliant mechanism design technique: Pseudo Rigid Body Model?

- Minimal user involvement in required.
- Can be used in synthesis problem involving function generation.
- Feasibility study for given user specifications.
- Mostly depends on user’s creativity and intuition.

No, the answer is incorrect.
Score: 0
Accepted Answers:
Can be used in synthesis problem involving function generation.
8) Which of the following statements is true for this compliant mechanism design technique: Spring Lever/ Spring Mass Lever Model?

- Minimal user involvement in required.
- Can be used in synthesis problem involving function generation.
- Feasibility study for given user specifications.
- Mostly depends on user’s creativity and intuition.

**No, the answer is incorrect.**
**Score: 0**
**Accepted Answers:**
*Feasibility study for given user specifications.*

9) Which of the following statements is true for this compliant mechanism design technique: Topology Optimization?

- Minimal user involvement in required.
- Can be used in synthesis problem involving function generation.
- Feasibility study for given user specifications.
- Mostly depends on user’s creativity and intuition.

**No, the answer is incorrect.**
**Score: 0**
**Accepted Answers:**
*Minimal user involvement in required.*

10) Which of the following statements is true for this compliant mechanism design technique: Building-block method?

- Minimal user involvement in required.
- Can be used in synthesis problem involving function generation.
- Feasibility study for given user specifications.
- Mostly depends on user’s creativity and intuition.

**No, the answer is incorrect.**
**Score: 0**
**Accepted Answers:**
*Mostly depends on user’s creativity and intuition.*