

CENG 223—Discrete Computational Structures

MIDTERM

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25 minutes

Q-1) {20 points}

- a) Show that if a is a positive even integer, then $(a + 1)^2 \equiv 1 \pmod{8}$
- b) Prove that the following system of congruences has no simultaneous solution

$$x \equiv 2 \pmod{6}$$

$$x \equiv 3 \pmod{9}$$