Assignment 4

Due on 2019-06-28, 23:59 IST.

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

1. In the SHIP, the radiating signal is:
   - Radar
   - Sonar
   - CCTV
   - Sonar
   The answer is incorrect. Accepted Answers: Sonar

2. The only parameters used in the control of the dc power flow are:
   - Power flow control
   - Voltage and current
   - Feedforward control
   - None of the above
   The answer is incorrect. Accepted Answers: Power flow control, Voltage and current

3. A single-phase full-bridge inverter has 6G-L load. The dc input voltage is 120 V and the output frequency is 30 Hz. Find the expression for the load voltage up to the fifth harmonic:
   - 200 sin (3πt / 24) + 180 sin (3πt / 24) + 60 sin (3πt / 24) + 0 sin (3πt / 24) + 0 sin (3πt / 24)
   - 200 sin (3πt / 24) + 180 sin (3πt / 24) + 60 sin (3πt / 24) + 0 sin (3πt / 24) + 0 sin (3πt / 24)
   - 200 sin (3πt / 24) + 180 sin (3πt / 24) + 60 sin (3πt / 24) + 0 sin (3πt / 24) + 0 sin (3πt / 24)
   - 200 sin (3πt / 24) + 180 sin (3πt / 24) + 60 sin (3πt / 24) + 0 sin (3πt / 24) + 0 sin (3πt / 24)
   The answer is incorrect. Accepted Answers: 200 sin (3πt / 24) + 180 sin (3πt / 24) + 60 sin (3πt / 24) + 0 sin (3πt / 24) + 0 sin (3πt / 24)

4. Which of the following decentralized control is limited to small renewable energy systems?
   - Power line signaling method
   - Decentralized control
   - Voltage-leveling DC link signaling method
   - None of the above
   The answer is incorrect. Accepted Answers: Decentralized control

5. In a 3-phase VS operating in square-wave mode, the output line voltage is free from:
   - 3rd harmonic
   - 3rd harmonic
   - 9th harmonic
   - 15th harmonic
   The answer is incorrect. Accepted Answers: 3rd harmonic

6. A single-phase full-bridge inverter circuit, has load F1 = 2.0 and dc source Vdc = 230 V. Find the value of power delivered to the load in watts only due to the fundamental component of the load current.
   - 1240.75 W
   - 1214.5 W
   - 2142 W
   - 2142 W
   The answer is incorrect. Accepted Answers: 1240.75 W

7. In voltage source inverters (VSIs), the amplitude of the output voltage is:
   - Independent of the load
   - Dependent on the load
   - Independent of the load
   - None of the mentioned
   The answer is incorrect. Accepted Answers: Independent of the load

8. What standard is recommended practice for the design of dc auxiliary power systems for generating stations?
   - IEC 1000-4-3
   - IEC 61000-4-3
   - IEC 61000-4-1
   - None of the above
   The answer is incorrect. Accepted Answers: IEC 61000-4-1

9. Which of the following type of load can cause instability issues under varying load conditions in a HVAC (Microgrid):
   - Constant impedance loads
   - Constant current loads
   - Constant power loads
   - None of the above
   The answer is incorrect. Accepted Answers: Constant power loads

10. Determine a minimum short circuit breaker rating and interrupting capacity for a 14 kV, single phase transformer with 8% impedance, to be operated from a 480 V, 3 phase source.
    - 420 Amp
    - 1250 Amp
    - 4200 Amp
    - None of the above
    The answer is incorrect. Accepted Answers: 420 Amp