Q.1.  (a) Mention ten important duties and responsibilities of Chief Engineer of a hotel.
(b) Describe briefly the complaint register-cum-work order system of fault rectification.

Q.2. Calculate the amount of electricity bill for the month of April 2013 for the following electric load, if the cost of electric energy is ₹3/- per kilowatt hour.

100 W electric lamps 80 Nos.
1.5 KW electric heater 2 Nos.
3 KW air conditioner 8 Nos.
5 KW boiler 1 No.

Q.3. State two scientific principles used in refrigeration. With the help of a neat sketch, explain the vapour compression cycle of refrigeration.

Q.4.  (a) Mention ten steps that should be taken to make a hotel more fire-safe.
(b) Classify different fires. Prepare a table showing different extinguishers used for different types of fire.

Q.5. Discuss the types of hardness of water. State the disadvantages of using hard water in hotels.
Q.6. Discuss different types of pollution related to a hotel. (5+5=10)

Q.7. Write short notes (any two):
(a) Precautions for installation of gas bank.
(b) Discuss types of fuels used in catering industry.
(c) Preventive measures for slips & falls.
(d) Necessity for contract maintenance. (10)

Q.8. Explain in brief (any five):
(a) B.T.U. (b) Open circuit
(c) Methods of heat transfer (d) Fluorescent lamp
(e) Solid & liquid waste (f) Automatic fire detector
(g) Group replacement (2x5=10)

Q.9. A Choose the appropriate option:
(i) Measurement of light is given in:
   (a) Joules (b) Volts (iii) Lumens (iv) Ampere
   (ii) In chilled water air conditioning applications, the temperature of chilled water is maintained at:
       (a) 0°C  (b) 7-20°C (iii) 15°C (iv) 5-5°C
   (iii) Paying money one time to repair 10 faulty water taps is a:
       (a) Lumpsum contract  (b) Annual contract
       (c) Monthly contract  (d) Cost plus contract
   (iv) Heat is absorbed by a refrigerator during refrigeration cycle in:
       (a) Condenser  (b) Compressor
       (c) Evaporator  (d) Throttle valve
   (v) In India the single phase voltage for domestic supply is:
       (a) 220-240 Volt  (b) 110-130 Volt
       (c) 380-415 Volt  (d) 415-460 Volt
   (5x2=10)

B Explain:
(a) AC and DC  (b) Calorific value of fuel
(c) One ton of refrigeration  (d) Preventive maintenance
(e) MCB

Q.10. List and explain use of security equipment in hotel industry. (5+5=10)
   OR
   Explain the reason under which equipment are replaced. (10)