

ROLL No.....

NATIONAL COUNCIL FOR HOTEL MANAGEMENT  
AND CATERING TECHNOLOGY, NOIDA  
**ACADEMIC YEAR – 2014-2015**

COURSE : 1<sup>st</sup> Semester of 3-year B.Sc. in H&HA  
SUBJECT : Hotel Engineering  
TIME ALLOWED : 03 Hours MAX. MARKS: 100

(Marks allotted to each question are given in brackets)

- 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.
- (5+5=10)

- 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.	6 hrs./day
1.5 KW electric heater	2 Nos.	8 hrs./day
3 KW air conditioner	8 Nos.	8 hrs./day
5 KW boiler	1 No.	6 hrs./day

(10)

**OR**

- (a) Discuss the role of fuse in a circuit.  
(b) Discuss why earthing is important for an electrical appliance?
- (5+5=10)

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

**OR**

Describe the installation, commissioning, proper use and care of an air-conditioner.

(10)

- 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.
- (5+5=10)

- Q.5. Discuss the types of hardness of water. State the disadvantages of using hard water in hotels.

- (5+5=10)
- Q.6. Discuss different types of pollution related to a hotel. (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.
- (2x5=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        |                             |
- (5x2=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
- B** Explain:
- |                              |                             |
|------------------------------|-----------------------------|
| (a) AC and DC                | (b) Calorific value of fuel |
| (c) One ton of refrigeration | (d) Preventive maintenance  |
| (e) MCB                      |                             |
- (5+5=10)
- Q.10. List and explain use of security equipment in hotel industry.
- OR**
- Explain the reason under which equipment are replaced.
- (10)

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