

ROLL No.....

NATIONAL COUNCIL FOR HOTEL MANAGEMENT  
AND CATERING TECHNOLOGY, NOIDA  
**ACADEMIC YEAR – 2016-2017**

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

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(Marks allotted to each question are given in brackets)

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- Q.1. (a) Draw an organisation chart of maintenance department of a 200 room hotel.  
(b) Discuss in brief duties and responsibilities of maintenance department. (5+5=10)

- Q.2. Define the term air-conditioning. State **two** scientific principles used in refrigeration. State the difference between refrigeration and air-conditioning. (2+4+4=10)

**OR**

Explain different types of fuses used in electrical circuit. Describe briefly safety precautions to be observed while working on electrical appliances. (5+5=10)

- Q.3. Write short notes on **any two** of the following:  
(a) Methods of heat transfer  
(b) Types of wiring  
(c) Audio-visual equipment used in the hotel  
(d) Maintenance of swimming pool (2x5=10)

- Q.4. With a neat sketch, explain the functioning of a gas burner. (10)

**OR**

Write short notes on;  
(a) Contract maintenance  
(b) Care and maintenance of Audio-Visual equipment used in a conference room (5+5=10)

- Q.5. Enumerate the differences and similarities between window and central air-conditioning. Describe care and maintenance of deep freezer.

**OR**

Write short notes on;  
(a) Preventive measures for slips and falls (b) Security equipment in hotels (5+5=10)

Q.6. Describe in detail all the different types of fire extinguishers and their uses. (10)

Q.7. Describe briefly various types of pollution caused by the hospitality industry. (10)

Q.8. Explain how hot water is supplied throughout a hotel using central indirect system. (10)

Q.9. Define the following (**any ten**):

- |                            |                          |
|----------------------------|--------------------------|
| (a) Preventive maintenance | (b) Class C fire         |
| (c) KWH                    | (d) Open circuit         |
| (e) MCB                    | (f) Earthing             |
| (g) Energy Audit           | (h) Group replacement    |
| (i) Scale formation        | (j) BTU                  |
| (k) Humidification         | (l) One of refrigeration |

(10x1=10)

Q.10. **A** Fill in the blanks:

- (i) Air is \_\_\_\_\_ than liquefied petroleum gas.
- (ii) Calorific value of LPG is \_\_\_\_\_ than calorific value of coal.
- (iii) One calorie is equal to \_\_\_\_\_ British Thermal Units.
- (iv) One ton of refrigeration means cooling by extracting heat at the rate of \_\_\_\_\_ kilo calories per hour.
- (v) Lignite is an example of \_\_\_\_\_ fuel.

**B** State True or False:

- (i) Temporary hardness of water can be removed by boiling the water.
- (ii) LPG consists of butane and hexane.
- (iii) Lighting fan sub-circuits are meant to carry electric current not exceeding 6 amperes.
- (iv) Soda acid fire extinguishers are used to extinguish oil fires.
- (v) Refrigerators working on vapour absorption cycle require less maintenance.

(5+5=10)

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