

GUJARAT TECHNOLOGICAL UNIVERSITY**BHMCT - SEMESTER- V EXAMINATION – WINTER 2023****Subject Code:153306****Date:15-12-2023****Subject Name: Hotel Engineering & Maintenance****Time:10:30 AM TO 01:00 PM****Total Marks:70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

- Q.1** (a) What is Fire Triangle? 03
 (b) What is Bunsen Burner? 04
 (c) Explain the duties & responsibilities of Chief Engineer in hotel. 07
- Q.2** (a) Explain in brief Water Pollution? 03
 (b) What are ventilation Needs and Types? Describe. 04
 (c) Explain water treatment process used in hotels in detail. 07
- OR**
- (c) Explain different types of maintenance with one example each. 07
- Q.3** (a) What are the Pollution Control Measure? 03
 (b) What are the precautions while using gas a fuel in Hotel Industry? 04
 (c) Explain the precautions to be taken while handling the electric equipment's 07
- OR**
- Q.3** (a) What is maintenance in a hotel? Describe. 03
 (b) Explain AC&DC and state the difference between AC&DC current. 04
 (c) How will you overcome water pollution in hotels? Recommend some positive steps for the same. 07
- Q.4** (a) Write the use of Smoke detector and Water Sprinkler. 03
 (b) Discuss in brief about the maintenance procedure of a swimming pool. 04
 (c) Calculate the electricity bill for the month of April 2011 having the following electric loads: 07
- 60W bulbs 10 Nos. 6 hrs/day
 60W fans 10 Nos. 5 hrs/day
 3 KW heater 03 Nos. 4 /hrs/day
 750W iron 02 Nos. 3 hrs/day
 6KW boiler 01 No. 3 hrs/day
 Cost of electric energy is ₹3/- per unit.
- OR**
- Q.4** (a) What is ohms Law? 03
 (b) Explain functioning of a gas burner. 04
 (c) Define Fire Hazards? 07
- Q.5** (a) Explain Water Closet system. 03
 (b) Explain the central air-conditioning system. 04
 (c) Calculate the electricity bill for December 2023 for the following appliances: Tariff: 07
- Rs.5/- per unit
 (a) 1000W bulb 10 nos. 8 hrs./day
 (b) 1.5 KW heater 2 nos. 4 hrs./day
 (c) 1.5 KW A.C. 1 no. 4 hrs./day
 (d) 40W tube light 10 nos. 8 hrs./day
- OR**
- Q.5** (a) What are types of Pollutants? 03
 (b) With the help of a neat sketch, explain the vapor compression cycle of refrigeration. 04
 (c) Narrate Energy Conservation Tips in Kitchen of a 5star hotel. 07
