

Revised Scheme

GOVERNMENT OF RAJASTHAN
BOARD OF TECHNICAL EDUCATION, RAJASTHAN, JODHPUR
TEACHING AND EXAMINATION SCHEME FOR
Diploma I Year (HOTEL MANAGEMENT AND CATERING TECHNOLOGY) (HMCT)
ANNUAL SCHEME SESSION 2017-2018 & ONWARDS

Code No.	Subjects	Distribution of Time					Distribution of Max. Marks/ Duration							Total Marks
		Hours per week					Board's Exam.							
		L	T	P	Tot	TH	Hrs.	PR	Hrs.	CT	TU	PR(S)		
HM 101	HOUSE KEEPING – I	2	-	3	5	70	3	50	3	30	-	50	200	
HM102	FRONT OFFICE OPERATION – I	2	-	3	5	70	3	50	3	30	-	50	200	
HM103	FOOD PRODUCTION – I	2	-	3	5	70	3	50	3	30	-	50	200	
HM 104	FOOD AND BEVERAGE SERVICE – I	2	-	3	5	70	3	50	3	30	-	50	200	
*HM105	ENGLISH AND BUSINESS COMMUNICATION -I	2	-	2	4	70	3	50	3	30	-	50	200	
*HM106	ENVIRONMENTAL STUDIES	2	-	-	2	70	3	-	-	30	-	-	100	
HM 107	FOOD SCIENCES AND FOOD COMMODITIES	2	-	-	2	70	3	-	-	30	-	-	100	
HM 108	HYGIENE AND NUTRITION	2	-	-	2	70	3	-	-	30	-	-	100	
HM 109	HOTEL ENGG. AND MAINTENANCE	2	-	-	2	70	3	-	-	30	-	-	100	
*HM 110	BASICS OF COMPUTER	-	-	2	2	-	-	50	3	-	-	50	100	
	Student Centred Activities *	-	-	2	2	-	-	-	-	-	-	-	--	
	TOTAL	18	-	18	36	630		300		270	-	300	1500	
Grand Total :														
													1500	

* Student Centred Activities include expert lectures/ practice sessions on technical topics of common interest, personality development, human values, yoga, industrial visits, art of living, environmental issues, quiz programmes, interview techniques, greening and cleaning the campus etc.

Student Centred Activities will be graded on the basis of attendance, interest and learning of the student.

1. L : Lecture
2. T : Tutorial
3. P : Practical
4. TH : Marks for Board Examination for Theory
5. PR : Marks for Board's Examination for Practicals
6. CT : Marks for Class Tests
7. TU : Marks for Tutorials
8. PR(S) : Marks for Practical and Viva

* HM 105, * HM 106 and* HM 110 same as FD 105, FD106 and FD 110

HOUSE KEEPING – I

CODE : HM- 101

L T P
2 - 3

RATIONALE

This course will acquaint the students for planning, implementation and system of housekeeping department, the correct method of cleaning equipment and material and enabling them to take up supervisory level assignment in house keeping operations & management.

COURSE OUTCOME

After completing this course, the student will be able to understand the Importance of House Keeping and his role in Housekeeping Department. Perform Housekeeping duties as per the standard of the Organization.

CONTENTS

- | | |
|---|-----------|
| 1. INTRODUCTION AND SCOPE | 10 |
| <ul style="list-style-type: none"> 1.1 Brief History of lodging Industry. 1.2 Role of house keeping in various Hospitality Operations. 1.3 Hotel Divisions and Departments 1.4 Housekeeping and the Front office 1.5 Hierarchy 1.6 Basic Terminology of House Keeping | |
| 2. PLANNING AND ORGANISING THE HOUSE KEEPING DEPARTMENT | 10 |
| <ul style="list-style-type: none"> 2.1 Identifying Housekeeping Responsibilities 2.2 Planning the work of Housekeeping Department 2.3 Skill Training 2.4 Scheduling 2.5 Chamber Made cart 2.6 Guest supply | |
| 3. CLEANING AND POLISHING | 10 |
| <ul style="list-style-type: none"> 3.1 Vacuum Cleaning 3.2 Daily and weekly cleaning 3.3 Polishing Different equipment and Procedure | |
| 4. PREPARING GUESTROOMS | 10 |
| <ul style="list-style-type: none"> 4.1 Preparing to Clean 4.2 Cleaning Guest Rooms 4.3 Inspection 4.4 Deep Cleaning 4.5 Turn down and special Request 4.6 Toilet cleaning and Procedure | |

- 5. BEDS LINEN AND UNIFORM & ISSUES** **8**
- 5.1 Beds – types of beds, Maintenance
 5.2 Linen – types, size, linen core
 5.3 Uniform – Identifying Uniform needs and selection
- 6. TRANSFERING GUESTS** **4**
- 6.1 Procedure
 6.2 Co-ordination with Front office
- 7. DEALING WITH LOST AND FOUND PROERTY** **8**
- 7.1 Procedure for Lost and Found
 7.2 Thefts – Bomb, Fire etc.
 7.3 Employee theft.

PRACTICALS

- | | |
|--|-------------|
| 1. CLEANNING | ---- 15hrs. |
| a. Glass b. Floors c. Public areas d. Walls e. Fixtures f. Wooden g. Laminated surfaces. | |
| 2. POLISHING | ---- 9 hrs. |
| a. Metals b. Silver c. Brass d. Copper e. Raxin f. Leather g. Suede. | |
| 3. IDENTIFICATION OF EQUIPMENTS | ---- 6 hrs. |
| 4. CHAMBER MAIDS CART | ---- 6 hrs. |
| 5. VACCUM CLEANING OF CARPETS | ---- 3 hrs. |
| 6. CLEANING OF BATH ROOMS | ---- 3hrs. |
| 7. BED MAKING | ---- 6 hrs. |
| 8. GUEST SUPPLY | ---- 3 hrs. |
| 9. MAKING GUEST ROOMS / MAKING V.I.P. ROOM | ---- 3 hrs. |
| 10. DAILY CLEANING / WEEKLY CLEANING | ---- 6 hrs. |
| 11. SPRING CLEANING | ---- 6hrs. |
| 12. CLEANING BAQUETS HALLS | ---- 6 hrs. |
| 13. CLEANING PUBLIC AREAS | ---- 6 hrs. |
| 14. CLEANING OF OFFIES | ---- 6 hrs. |
| 15. ISSUING LINES/UNIFORMS | ---- 6 hrs. |

REFERENCES

- | | |
|--|-------------------------------------|
| 1. Hotel, Hostel & Hospital House Keeping | By Joan C Branson & Margaret Lennox |
| 2. Housekeeping Management | By M O A Casado |
| 3. Professional Management of Housekeeping Operation | By Robert J Martin |
| 4. Training Manual (Housekeeping) | By Sudhir Andrew |

FRONT OFFICE OPERATION – I

CODE:HM- 102

L T P
2 - 3

RATIONALE

This course will provide the students with an understanding of the role of front office and reception in a Hotel. They will understand customer care policies, communication with other department and role front office plays in selling the hotel and all its facilities.

COURSE OUTCOME

After completing this course, the student will be able to

1. Understand the Hotel Front office operation
2. Perform Front office related operation as per the required standard.

CONTENTS

1. INTRODUCTION	6
1.1 Introduction to Lodging Industry	
1.2 Types of Hotels	
1.3 Classification	
1.4 Types of Rooms: Single, Double Suite	
2. CONCEPT OF FRONT OFFICE	10
2.1 Concept of Front Office	
2.2 Front Office Set-Up	
2.3 Qualities of F.O. Staff	
2.4 Roles & Responsibilities of F.O. Staff	
2.5 General Knowledge – Local Information	
2.6 Check In- Rooming List, Informing All Dept, Reconfirming Times of Wake – Up	
2.7 Calls, Breakfast, Lunch & Dinner.	
2.8 Bell Desk – Greeting Guests, Escorting & Handling Luggage, Mail & Message	
2.9 Delivery, Lift Luggage, Errands for Guests.	
2.10 Paging	
2.11 Guest Index	
3. TELEPHONE HANDLING	10
3.1 Importance	
3.2 Type Of Calls	
3.3 Telephone Manners Do's & Don't	
3.4 Phonetic Alphabets	
3.5 Telephonic Message Distribution	
3.6 Effective Telephone Usages And Etiquettes	
3.7 Phonetics and Pronunciation	

4. RESERVATIONS

15

- 4.1 Reservations & Reservation & Sales
- 4.2 Tentative Reservation Forms
- 4.3 Cut-Off Date
- 4.4 Room Rates
- 4.5 Confirmed Reservations
- 4.6 Mode of Payment and Billing
- 4.7 Arrival & Departure Time
- 4.8 Number of Rooms
- 4.9 Updating Availability Status
- 4.10 Intimation to All Dept.
- 4.11 Types of Reservations
- 4.12 Reservation Enquiry
- 4.13 Reservation Availability
- 4.14 Reservation Record
- 4.15 Reservation Confirmation
- 4.16 Reservation Maintenance
- 4.17 Reservation Reports
- 4.18 Reservation Considerations
- 4.19 VIP Intimation * Special Requests
- 4.20 Tariff Plan

5. REGISTRATION

10

- 5.1 Registration Activity
- 5.2 Method of Registration
- 5.3 Guest Registration card
- 5.4 Pre Registration Activity
- 5.5 Room & Rate Assignment
- 5.6 Issuing Room Key
- 5.7 Post Registration Activity

6. IMPORTANCE OF ATTITUDE

4

- 6.1 How to Build Positive Attitude?
- 6.2 Different Methods
- 6.3 Balanced Attitude
- 6.4 Stiff
- 6.5 Jiggles / Standing with less support, Crossed legs
- 6.6 Success
- 6.7 What Is Body Language
- 6.8 Eye contact
- 6.9 Gestures
- 6.10 Attitude – Body convey
- 6.11 Tone
- 6.12 Mood (face)
- 6.13 Smile
- 6.14 Body Signals
- 6.15 What is in a loop
- 6.16 The Key To Everyday Body Language
- 6.17 Taking With Your Hands
- 6.18 Likes And Dislikes
- 6.19 What Arms And Hand Tell You
- 6.20 What Is Holding Us Back

7. MOTIVATION	2
7.1 Self Esteem	
7.2 Steps To Building A Positive Personality	
7.3 Subconscious Mind And Habits	
8. GOAL SETTING	2
8.1 Values and Vision	
9. GLOSSARY	1

PRACTICAL

1. Types of Room	---- 9 Hrs.
2. Key Terms	---- 6 Hrs.
3. Phonetic Alphabetic Reservation Course	---- 6 Hrs.
4. Country/Capital/Currency And Language	---- 6 Hrs.
5. Uniform Service	---- 6 Hrs.
6. Message Slips	---- 3 Hrs.
7. Reservation Form / Procedure	---- 9 Hrs.
8. Walk In / Check In Check Out Procedure	---- 6 Hrs.
9. Registration	---- 6 Hrs.
10. Showing Guest Their Room.	---- 3 Hrs.
11. Using Telephone	---- 6 Hrs.
12. Handling Messages	---- 6 Hrs.
13. Guest History Card	---- 6 Hrs.
14. Flow Chart Front Office	---- 6 Hrs.
15. Telephone Operating Console	---- 6 Hrs.

Note :- Students have to approach different Hotels and get the samples and procedure of above Practical.

REFERENCES

1. Front Office Manual	---- Sudhir Andrew
2. Principals of Hotel Front office Operations	---- Baker,Bradely & Huyton
3. Front Office Procedure & yield Management	---- Peter Abboff & Sue Lenry

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FOOD PRODUCTION – I

CODE:HM- 103

L T P
2 - 3

RATIONALE

This course will acquaint the students to prepare varieties of food stuff which are commonly found within the hotel industry to acceptable standards.

COURSE OUTCOME

After completing this course, the student will be able to

- Understand the Basic of Cooking and Baking.
- Prepare Indian and Continental Dishes independently as per standard of industry.

CONTENTS

1. HISTORY & AIM OF COOKING	2
1.1 Attitude and behaviour in the Kitchen	
1.2 Origin of cuisine and concept of Cooking	
1.3 History and Evolution	
1.4 Introduction to major cuisine	
1.5 Personal Hygiene	
2. KITCHEN HIERARCHY CHART	2
2.1 Various Levels of Managements in Kitchen	
2.2 Duties and responsibilities of different chefs	
3. METHODS OF COOKING FOODS	4
3.1 Boiling	
3.2 Steaming	
3.3 Roasting	
3.4 Frying etc.	
3.5 Poaching	
3.6 Stewing	
3.7 Shallow frying	
3.8 Baking	
3.9 Grilling	
3.10 Broiling	
3.11 Braising	
3.12 Deep Frying	
4. INTRODUCTION TO VESSEL	4
4.1 Different types of vessels used in Commercial Kitchen	
4.2 Safety procedures and handling equipments	

5.	PLAN OF WORK, INDENTING, MENU PLANNING	4
5.1	Importance of Plan of work	
5.2	Indenting	
5.3	Points to be taken care while planning a Menu	
5.4	General layout of Kitchen in various organisations	
6.	CLASSIFICATION OF RAW MATERIALS	4
6.1	Introduction Processing and use of above raw materials	
6.1.1	Spices	
6.1.2	Vegetables	
6.1.3	Cereals & Pulses	
6.1.4	Milk and Dairy Products	
6.1.5	Milk	
6.1.6	Cheese	
6.1.7	Butter	
7.	KITCHEN TERMINOLOGY	2
7.1	Culinary terms	
7.1.1	Vegetarian / Fruit	
7.1.2	Non Veg	
7.1.3	Herbs & Spices (Commonly used Kitchen Terminology in India)	
7.2	French Terms (Basic)	
8.	FATS & OIL	4
8.1	Source	
8.2	Type	
8.3	Smoking point of different oils	
8.4	Use	
8.5	Storage	
8.6	Rancidity and flavour reversion	
9.	STOCKS	4
9.1	Definition	
9.2	Types	
9.3	Preparation	
9.4	Uses	
9.5	Storage of stocks	
9.5.1	Care	
9.5.2	Precautions	
10.	SAUCES AND DERIVATIVES	4
10.1	Six Mother Sauces	
10.2	Procedure of preparation and storage	
10.3	Derivatives of basic sauces	
10.4	Procedure of preparation	
11.	SOUPS & CLASSIFICATION	4
11.1	Aim	
11.2	Preparation (Basic recipe)	

- 11.3 Classification with example
- 11.4 Garnishes and accompaniments

12. EGG COOKERY

4

- 12.1 Types of egg
- 12.2 Various Egg Preparations
- 12.3 Quality of Eggs
- 12.4 Structure of egg
- 12.5 Methods of cooking eggs and vegetables

13. INTRODUCTION TO- MEAT, FISH, POULTRY

6

- 13.1 Purchasing
- 13.2 Cuts
- 13.3 Uses of different cuts

14. CARE OF KITCHEN EQUIPMENT

3

- 14.1 Handling
- 14.2 Using
- 14.3 Storing
- 14.4 Cleaning

15. INTRODUCTION TO BAKERY

9

- 15.1 Bakery Equipments and ingredients
- 15.2 Bakery terms and temperature
- 15.3 Bakery ingredients and functions (flour, milk, sugar, salt and yeast)
- 15.4 Raising agents, flavoring agents and leavening agents
- 15.5 Precautions

16. MENU

PRACTICALS

1. Use of Food Cooking Method
Boiling, Steaming, Roasting
Familiarization to Various Kitchen Vessels and Equipments
Familiarization to Various Spices
2. Peeling & Cutting of Vegetables and basic cuts
3. Cuts of meat, chicken and fish
4. Use of food cooking methods
5. Different types of stocks, soups, sauces & gravies
6. Indent and plan of work
7. Egg cookery
8. Bakery Products
 - 8.1 Dough and methods of making dough
 - 8.2 Preparation of different types of dough
 - 8.3 Bread and types of bread
 - 8.4 Pastry and types of pastries
 - 8.5 Short crust pastry

- 8.6 Puff, flaky and choux
- 8.7 Fatless and egg less sponge
- 8.8 Cakes – fruit cake, plum cake, pineapple upside down, Genoese, sponge cake, fatless sponge cake and egg less sponge cake, chocolate walnut brownie, Swiss roll, orange brownie, coconut brownie, nan khatai, khasta biscuit
- 8.9 Icing – royal icing, marzipan
- 8.10 Glazed Vegetables
- 8.11 Steamed Vegetables

9. SUGGESTED DISHES

- 9.1 Continental Menu
 - 9.1.1 Glazed Vegetables
 - 9.1.2 Mashed Vegetables
 - 9.1.3 Pommes Lyonnaise
 - 9.1.4 Steamed Vegetables
 - 9.1.5 Blanching Vegetables
 - 9.1.6 Baked Vegetables
 - 9.1.7 French Fries
 - 9.1.8 Cutlet of Vegetables
 - 9.1.9 Cheese Balls
 - 9.1.10 Sauces
 - 9.1.10.1 Mother
 - 9.1.10.2 Tomato (Red Kitchen)
 - 9.1.10.3 Bechamel (White Cream)
 - 9.1.10.4 Mayonnaise (Cold Yellow sauce)
 - 9.1.10.5 Hollandaise (Warm Yellow Sauce)
 - 9.1.10.6 Veloute (Blend Sauce)
 - 9.1.10.7 Espagnole (Brown Sauce)
- 9.2 Egg Dishes
 - 9.2.1 Boiled
 - 9.2.2 Sunny side up
 - 9.2.3 Side down
 - 9.2.4 Plain Omelette
- 9.3 Pasta Dishes
 - 9.3.1 With Tomato Sauce
 - 9.3.2 With Bolognese sauce

REFERENCES BOOKS :

- | | | |
|----|----------------------------|-----------------------------------|
| 1. | Modern cookery Vol. I & II | -- Thangam Phillip |
| 2. | Theory of cookery | -- Krishna Arora (S Chand & Sons) |
| 3. | Professional Chef | -- Arvind Saraswat |

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FOOD AND BEVERAGE SERVICE-I

CODE:HM- 104

L T P
2 - 3

RATIONALE

This course will acquaint the students with the importance of food and beverage service, covering basic technical skills, technical knowledge and social skills, that the Food and Beverage personal needs to achieve. This course will provide the student a proficient standard to work within the profession.

COURSE OUTCOME

After completing this course, the student will be able to

- Understand and work in hotel and restaurant as per the required standard in Food & Beverages Services Department.

CONTENTS

1. INTRODUCTION TO F & B SERVICES	2
1.1 Evaluation of hotel with brief history	
1.2 Different type of Food and Beverage Outlets	
2. ORGANIZATION CHART OF F & B, RESTAURANT STAFF	4
2.1 Duties and responsibilities	
2.2 Co-operation & co-ordination with other departments	
3. TYPES OF EQUIPMENTS	10
3.1 Classification and size	
3.2 Different crockery, glassware, hollowware.	
3.3 Restaurant equipment & cleaning process	
3.4 Service area, pantry, still room, plate room, linen room	
4. ATTRIBUTES OF A GOOD WAITER, INCLUDING FOOD HANDLING, HYGIENE	4
4.1 Do's and Don'ts for waiting personnel	
5. MENU	10
5.1 Types of menu	
5.2 French Classical menu	
5.3 Garnishes	
5.4 Accompaniments	
6. TYPES OF MEAL & TIMING	6
6.1 Breakfast, Lunch, Dinner, Buffet, Hi-Tea Afternoon Tea, Supper, Brunch	

7. TABLE LAYING

12

- 7.1 Height and size of chair and table
- 7.2 Laying of table cloth and its sizes
- 7.3 Setting of sideboard
- 7.4 Table reservation, Registration, Table placing, Allocation
- 7.5 Rules to be observed while waiting a table
- 7.6 Taking order – meal, beverage, Non-alcoholic beverages
- 7.7 Simple control and check system
 - 7.7.1 K.O.T, B.O.T.

8. TYPES OF SERVICES

4

- 8.1 Pre Plated Service, Room Service, Buffet Service, Banquet Service

9. MISE-EN-PLACE

4

- 9.1 Restaurant, coffee shop, banquet, buffet
- 9.2 Mise - en - Seeme

10. GLOSSARY

4

PRACTICALS

- 1. Identification of Outlet, Crockery, Linen and Restaurant Equipment · 16 Hrs.
- 2. Table Laying · 16 Hrs.
- 3. Napkin Folding · 16 Hrs.
- 4. Visa MIS-EN-PLACE of Restaurant · 16 Hrs.
- 5. Holding & Carrying of · 40 Hrs.
- 6. Receiving the Guest, Seating the Guest, Presents the Menu, Taking the Order. · 8 Hrs.
- 7. Placing the Order, Servicing the Food, Presenting the Bill · 8 Hrs.

REFERENCES

- | | |
|--------------------------------------|------------------------------|
| 1. F & B Manual | By Sudhir Andrews |
| 2. F & B Service | By Dennis Lillicrap |
| 3. The Bar & Beverage Book | By Costas Katsigris & Thomas |
| 4. Food & Beverage Service operation | By Vijay Dhavan |

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ENGLISH AND BUSINESS COMMUNICATION -I

CODE:HM/FD - 105

L T P
2 - 2

RATIONALE

This course will provide students some uniform essential skills such as general management skills, communication skills, presentation skills, group discussion skills and interpersonal skills. This course will also make them confident and capable of using the knowledge gained while at work.

COURSE OUTCOME

After completing this course, the student will be able to Understand the importance of English & Business Communication in Hotel Industries

CONTENTS

- | | | |
|-----------|---|-----------|
| 1. | INTRODUCTION TO ENGLISH GRAMMER AND COMPOSITION | 15 |
| | <ul style="list-style-type: none"> 1.1. Tenses 1.2. Subject, Predicate 1.3. Active And Passive Voice 1.4. Homophones / Common Errors 1.5. Comprehension 1.6. Précis 1.7. Memos And Circulars 1.8. Common Mis-Spelt Words 1.9. Punctuation 1.10. Paraphrasing 1.11. Letter Writing – Formal, Informal | |
| 2 | CONCEPT OF COMMUNICATION | 8 |
| | <ul style="list-style-type: none"> 2.1. Definition And Meaning 2.2. Purpose Of Communication 2.3. Elements Of Communication 2.4. Source, Message, Channel, Receiver, Effects and Feed Back. 2.5. Barriers Of Communication | |
| 3 | BUSINESS COMMUNICATION | 8 |
| | <ul style="list-style-type: none"> 3.1. Memos And Circulars <ul style="list-style-type: none"> 3.1.2 Polite conversation and sentences 3.2. Letter Writing – Formal, Informal | |
| 4 | APPROACH TO COMMUNICATION | 10 |
| | <ul style="list-style-type: none"> 4.1. Direct Indirect 4.2. Verbal Non Verbal 4.3. Clarity 4.4. Techniques | |

- 4.5. Sensitivity And Observation
- 4.6. Empathy / Courtesy
- 4.7. Pronunciation
- 4.8. Voice Accent
- 4.9. Telephonic etiquettes

5 LISTENING

10

- 5.1. Types Of Listening
- 5.2. How To Listen
- 5.3. Poor Listening Habits
- 5.4. Skill Building To Improve Listening Habits
- 5.5. Tips For Effective Listening

6 PERSONAL GROOMING

9

- 6.1. Posture
- 6.2. Etiquettes And Mannerism
- 6.3. Body Language
- 6.4. Gestures
- 6.5. Personal Hygiene

PRACTICALS

- | | |
|--|-------------|
| 1. Punctuation, common errors, comprehensions | ---- 4 Hrs |
| 2. Assignments – role play | ---- 6 Hrs |
| 3. Write internal memos / circulars | ---- 4 Hrs |
| 4. Format, letters | ---- 6 Hrs |
| 5. Techniques, clarity, sensitivity, observation | ---- 10 Hrs |
| 6. G.D | ---- 15 Hrs |
| 7. Mannerism & etiquettes, Body Language Gesture | --- -15 Hrs |

REFERENCES

English Grammar --- Wren & Martin

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ENVIRONMENTAL STUDIES

CODE : HM/FD - 106

L	T	P
2	-	-

RATIONALE

Environmental study is a subject as per directions of Supreme Court / Govt. of India. Under Act. 51 A (g) of our constitution it is our fundamental duty to protect our environment. A diploma holder must have knowledge of different types of pollution so that he/she may help in balancing the eco system and controlling pollution by suitable pollution control measures. He/She should also be aware of environmental laws related to the control of pollution.

COURSE OUTCOME

Students are expected to enhance knowledge, skills and attitude to environment and gaining effective learning for environmental concerns by field experience.

CONTENTS

- | | | |
|----|---|----|
| 1. | GENERAL : | 5 |
| | 1.1 Biotic and Abiotic environment. | |
| | 1.2 Adverse effects of Environmental Pollution | |
| | 1.3 Control strategies | |
| | 1.4 Various Acts and RegulationS related to hotel industry | |
| 2. | WATER POLLUTION : | 10 |
| | 2.1 Water Quality Standards | |
| | 2.2 Surface and underground water sources | |
| | 2.3 Impurities in water | |
| | 2.4 Introduction of treatment plant | |
| | 2.5 De-fluoridation | |
| 3. | AIR POLLUTION : | 10 |
| | 3.1 Sources of air contaminants | |
| | 3.2 Adverse effects on human health | |
| | 3.3 Air quality standards and their permissible limits | |
| | 3.4 Measures to check air pollution | |
| | 3.5 Greenhouse effect | |
| | 3.6 Global warming | |
| | 3.7 Acid rain | |
| | 3.8 Ozone depletion | |
| 4. | SOLID WASTE MANAGEMENT | 5 |
| | 4.1 Introduction to solid waste | |
| | 4.2 Collection,segrgation and disposal of solid waste of hotels | |
| | 4.3 Recovery of resources | |
| | 4.4 Sanitary land-filling | |
| | 4.5 Vermi-composting | |
| | 4.6 Hazardous waste management | |

5. LAND POLLUTION :	5
5.1 Soil conservation	
5.2 Land erosion	
5.3 Afforestation	
6. ECOLOGY :	5
6.1 Basics of species	
6.2 Biodiversity	
6.3 Population dynamics	
6.4 Energy flow	
6.5 Ecosystems	
7. SOCIAL ISSUES AND ENVIRONMENT :	5
7.1 Sustainable development and Life style	
7.2 Urban problems related to energy	
7.3 Resettlement and rehabilitation of people	
7.4 Environmental ethics	
7.5 Consumerism and waste products	
8. WATER HARVESTING:	10
8.1 Water harvesting techniques	
8.2 Septic Tank	
8.3 Collection and disposal of wastes	
8.4 Bio-gas	
9. MISCELLANEOUS :	5
9.1 Non-Conventional (Renewable) sources of energy	
9.2 Solar energy, Wind energy, Bio-mass energy, Hydrogen energy	
10. VISITS TO FIELDS/HOTELS	

REFERENCE BOOKS :

- | | |
|--|--|
| 1. Patyavaran Shiksha | Dr. A.N. Mathur, Dr. N.S. Rathore & Dr. V.K. Vijay |
| 2. Patyavaran Adhyayan | Dr. Ram Kumar Gujar Dr. B.C. Jat |
| 3. Patyavaran Avabodh | Dr. D.D. Ojha |
| 4. Environmental chemistry and pollution control | S.S. Dora |
| 5. Ecology concepts and Manuel | C. Muller application : |
| 6. Environmental protection | Emil T. Chanlett |
| 7. Environmental science | Cumingham. Saigo |
| 8. Solid waste management : | C.I.. Mantell |
| 9. Introduction to Environmental | Gilbert M Masters Engineering & Science Prentice Hall of India, 1995 |
| 10. Concept of Ecology, | 1991 Edward J Kormondy |
| 11. Ecology 1975 | Odum |
| 12. Environmental Engineering | Peavy, Rowe, Tehobaniglum |

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FOOD SCIENCES AND FOOD COMMODITIES

HM-107

L	T	P
2	--	--

RATIONALE

This course is designed for providing students basic knowledge of Food Science and commodities.

COURSE OUTCOME

After completing this course, the student will be able to understand the basics of food Science and commodities..

CONTENTS

- | | | |
|-----------|---|----------|
| 1. | BASIC ASPECT: | 8 |
| | 1.1 Importance with relation to food handling, preparation and service. | |
| | 1.2 Micro Organisms | |
| | 1.2.1 Classification. | |
| | 1.3 Bacteria | |
| | 1.3.1 Size | |
| | 1.3.2 Shape | |
| | 1.3.3 Reproduction | |
| | 1.3.4 Beneficial and harmful effects | |
| | 1.4 Yeasts | |
| | 1.4.1 Size | |
| | 1.4.2 Shape | |
| | 1.4.3 Reproduction | |
| | 1.4.4 Beneficial effects. | |
| 2. | FOOD PRESERVATION | 8 |
| | 2.1 Methods and principles of food preservation. | |
| | 2.2 Food Poisoning – | |
| | 2.2.1 Staphylococci, | |
| | 2.2.2 Botulism | |
| | 2.2.3 Clostridium perfringens, | |
| | 2.3 Symptoms , illness & prevention | |
| 3. | COLLOIDS | 5 |
| | 3.1 Types and factors affecting colloidal solutions | |
| | 3.2 Emulsions | |
| | 3.2.1 Types of emulsion | |
| | 3.2.2 Theory of emulsion | |
| | 3.2.3 Food emulsions | |
| 4. | BROWNING | 2 |
| | 4.1 Types of Browning | |
| | 4.2 Prevention of browning | |

5. CEREALS: TYPES, STORAGE & USES OF	5
5.1 Wheat	
5.2 Rice	
5.3 Oats & rye	
5.4 Barley	
5.5 Maize	
5.6 Arrowroot	
5.7 Sago	
5.8 Tapioca	
5.9 Sorghum	
5.10 Ready to eat cereals	
5.11 Uncooked Breakfast cereal	
6. PULSES	3
6.1 Types	
6.2 Products & storage	
6.3 Uses of pulses	
7. VEGETABLE FRUITS & NUTS	3
7.1 Classification	
7.2 Selection	
7.3 storage & uses	
8. HERBS, SPICES AND CONDIMENTS	2
8.1 Description and uses in catering	
9. COLOURS, FLAVORS AND ESSENCE.	2
10. FATS AND OILS	4
10.1 Types	
10.2 Sources	
10.3 Storage	
10.4 uses	
11. MILK & MILK PRODUCTS	5
11.1 Classification,, Composition, Processing, storage & Uses	
11.1.1 Milk	
11.1.2 Cream	
11.1.3 Curd & yoghurt	
11.1.4 Khoa	
11.1.5 Cheese	
11.1.6 Manufacturing, classification and uses	
12. MEAT & MEAT PRODUCTS	5
12.1 Sources, storage & uses	
12.1.1 Beef & Veal	
12.1.2 Lamb & Mutton	
12.1.3 Pork & pork products	

- 12.2 Sources, storage & uses
 - 12.2.1. Fish & Shell fish
 - 12.2.2 Poultry & Game

13. EGGS

3

- 13.1 Structure
- 13.2 Composition
- 13.3 Types, Storage and uses.

14. NON ALCOHOLIC BEVERAGES

5

- 14.1 Tea
- 14.2 Coffee
- 14.3 Cocoa (processing & uses)
- 14.2 Fruit beverages
 - 14.2.1 Fruit juice
 - 14.2.2 Fruit drink
 - 14.2.3 Fruit squash
 - 14.2.4 Fruit cordial
 - 14.2.5 Fruit punches
 - 14.2.6 Sherbets

REFERENCE

- | | |
|---|-----------------------------|
| 1. Food Science & Nutrition | Roday Sunetra |
| 2. Manay Shakuntala, Shadakshara Swami, | m: Food, facts & principles |
| 3. Food Science | Potter and Hotchkin |

HYGIENE AND NUTRITION

CODE:HM- 108

L	T	P
2	-	-

RATIONALE

This course is designed for providing students basic knowledge of Food Science Hygiene and nutrition.

COURSE OUTCOME

After completing this course, the student will be able to.

- Understand the basics of food Science, Hygiene and Nutrition Utilize scientific principles in Food Preparation

CONTENTS

1	BASIC BACTERIOLOGY	10
	1.1 Factors effecting Microbiological Growth	
	1.2 Economic Importance of microbes	
	1.3 Bacterial food poisoning	
	1.4 Food Preservation	
2	FOOD ADULTERATION	10
	2.1 Most harmful adulterants	
	2.2 other common adulterants	
	2.3 Test to detect adulterants	
	2.4 Food Standards	
3	HYGIENE AND SANITATION	20
	3.1 Personal Hygiene	
	3.2 Food Hygiene	
	3.3 Kitchen Hygiene Disinfection	
	3.4 Pest control	
	3.5 Disinfection	
4	BASIC FOOD CHEMISTRY	10
	4.1 Colloidal systems	
	4.2 Effect of cooking on carbohydrates	
	4.3 Effect of cooking on proteins	
	4.4 Foaming function of egg proteins	
	4.5 Gelatine & gelatine gels	
	4.6 Rancidity and flavour Reversion in fats & oils	
5	NUTRITION	10
	5.1 Basic Knowledge about nutrition	
	5.2 Planning Balanced diets	
	5.3 New concepts about Nutrition	

REFERENCES BOOKS:

1. Handbook of Food & Nutrition
2. Food Science, Nutrition & Health
3. Nutrition & Dietetics

M. Swaminathan Bappco publications,
Bangalore
Fax & Cameron, Edward Arnold: A
member of holder headline group, London,
Sydney, Auckland.
Joshi Tata Mcgraw hill, N.D.

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HOTEL ENGG. AND MAINTENANCE

CODE:HM- 109

L	T	P
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RATIONALE

This course is designed To understand the function of the Engineering department and its integration in the overall operation and management of the hotel

.COURSE OUTCOME

After completing this course, the student will be able to understand the basics of hotel Engineering and maintenance .He will be able to understand the function of the Engineering department and its integration in the overall operation and management of the hotel

CONTENTS

1. MAINTENANCE

5

- 1.1 Definition of maintenance
- 1.2 Scope of maintenance
- 1.3 Objectives of maintenance
- 1.4 Types of maintenance- preventive and breakdown maintenance
- 1.5 Role and importance of maintenance department
- 1.6 Organizational chart
- 1.7 Duties and responsibilities of maintenance department

2. FUELS AND HEAT TRANSFER

10

- 2.1 Definition of fuel
- 2.2 Types- solid, liquid and gaseous fuel
- 2.3 Calorific value
- 2.4 Characteristics of good fuel
- 2.5 Comparison of solid, liquid and gaseous fuels.
- 2.6 L.P.G. (Liquefied Petroleum Gas) and its properties
- 2.7 Calculation of amount of fuel required and cost
- 2.8 Definitions of heat and temperature
- 2.9 Modes / Methods of heat transfer
- 2.10 Principle and construction of bunsen and gas burner
- 2.11 Precaution to be taken while handling and using gaseous fuel

3. ELECTRICITY AND LIGHTING SYSTEMS

15

- 3.1 Fundamentals of electricity
- 3.2 Insulators
- 3.3 Conductors
- 3.4 Current and Potential difference
- 3.5 Resistance
- 3.6 Power and Energy -concepts, definitions, units and their relationships
- 3.7 AC and DC supply- basic concepts
- 3.8 Single phase and three phase and its importance on equipment specifications
- 3.9 Electric circuits- Open circuits and short circuits

3.10	Symbols of circuit elements	
3.11	Series and parallel connections	
3.12	Basic idea -Fuse, MCB, ELCB and isolator	
3.13	Earthing	
3.14	Reason for placing switches on live wire side	
3.15	Electric wires and types of wiring	
3.16	Calculation of electric energy consumption of equipment	
3.17	Safety precaution to be observed while using electric appliances	
3.18	Basic definitions- natural light, Artificial light	
3.19	Types of lighting	
3.19.1	indoor lighting	
3.19.2	external lighting	
3.20	Different lighting devices-(specifications)	
3.20.1	Incandescent lamps	
3.20.2	Fluorescent lamps	
3.20.3	Other gas discharged lamps	
3.20.4	CFL lamps	
3.20.5	LED lamps	
3.21	Illumination , and units of illumination.	
4.	WATER AND WASTE WATER SYSTEMS	8
4.1	Water distribution system in a hotel	
4.2	Cold and hot water systems in India	
4.3	Hard and soft water	
4.4	Types of hardness	
4.5	Methods of water softening (Lime soda process, Ion exchange process, zeolite method)	
4.6	Cold and hot water distribution system	
4.7	Various plumbing fixtures	
4.8	Water taps	
4.9	traps and closets	
4.10	Flushing system	
5.	REFRIGERATION AND AIR CONDITIONING	12
5.1	Definition	
5.1.1	Pressure	
5.1.2	Energy	
5.1.3	Latent heat	
5.1.4	Specific heat	
5.1.5	Boiling point	
5.2	Defrosting	
5.3	Refrigerants – basic ideas and types	
5.4	Unit of refrigeration	
5.5	Working of refrigeration system- basic idea and its preventive maintenance	
5.6	Conditions for comfort	
5.7	Relative humidity	
5.8	Air conditioning- meaning and unit	
5.9	Types of AC systems	
5.9.1	Central AC	
5.9.2	Window AC	
5.9.3	Split AC	
5.10	Working of AC and its components, preventive maintenance	
5.11	Ventilation: need and types	

6. COMMUNICATION SYSTEMS AND TRANSPORTATION**5**

- 6.1 Various audio-visual equipment used in hotel
- 6.2 Care and cleaning of overhead projector
- 6.3 Slide projector
- 6.4 LCD and power point presentation units
- 6.5 Maintenance of computers
- 6.6 Care and cleaning of PC, CPU, Modem, UPS, Printer, Laptops
- 6.7 Sensors
 - 6.7.1 Various sensors used in different locations of a hotel
 - 6.7.2 Type, uses and cost effectiveness
- 6.8 Maintenance and care of
 - 6.8.1 EPBAX
 - 6.8.2 Mobile
- 6.9 Vertical transportation
 - 6.9.1 Elevators
 - 6.9.2 Escalators

7. FIRE PREVENTION AND FIRE FIGHTING SYSTEM (SAFETY IN HOTEL INDUSTRY)**5**

- 7.1 Classification of fire
- 7.2 Causes of fire
- 7.3 Methods and types of fire extinguishers (portable and stationary)
- 7.4 Fire detector (Smoke and Temperature) and alarm
- 7.5 Fire prevention
- 7.6 Fire notification
- 7.7 Automatic fire detectors cum extinguishing devices

REFERENCES

- | | |
|--|---|
| 1. The Management of Maintenance and Engineering Systems in the Hospitality Industry | - Frank D. Borsenik , Alan T. Stutts, John Wiley & Sons Inc., New York. |
| 2. Air Conditioning Engineering; | W. P. Jones, English Language Book Society |
| 3. Refrigeration and Air Conditioning | Domkundwar |
| 4. A Text Book of Hotel Maintenance | Goyal and Arora |
| 5. Electrical Workshop | |

BASICS OF COMPUTER

CODE:HM/FD- 110

L	T	P
-	-	2

Computers are now-a-days necessary in human routine life. At each and every stage, we find its importance.

An attempt is made to generate different skills like report writing through M.S. word and to generate worksheets, data manipulation, graphs, for decision support system through EXCEL, to prepare presentation through Power Point and to gather information through Internet practice.

COURSE OUTCOME

After completing this course, the student will be able to.

- Understand computer applications and its software requirements.
- Know operating system and its use.
- Use operating system commands.
- Identify the main Menu and other Menu options of Window, Word, Excel, Power point
- Print report, letter.
- Operate computer system.
- Relate different data
- Select the software according to use requirement.
- Print the table/report/drawing
- Transfer the document to other computers using media
- Identify the menu/toolbar/dialog box/settings
- Identify different hardware of the computers
- Modify reports as per requirements

PRACTICALS

1. Introduction to the computer System, parts, Devices Input/Output and computer software
2. Introduction to the operating system, file identification, extension, directory.
3. Introduction to GUI concepts, control panel Demonstration and use file manager, programme manager, clipboard, icons, dialog boxes
4. Use of all menu options
5. Introduction to word processor, data entry, Demonstration and use save, quit, retrieve
6. Basic settings such as left & Right margin
7. Footnotes, headers, justification, tabulation
8. Editing text using detailing character, word, line, search and replace, dictionary
9. Cut, paste, move, copy, sort, file read, file write
10. Mail merge, print, index, book mark, tables of content using paragraph
11. Introduction to worksheet, workbook, cell, row
12. Editing data, clean, insert, delete cell, row, column
13. Formula and function for data entry
14. Worksheet settings, width of column, , colour , heading, hide & display, align data, bold, align data, bold, italics, orientation
15. Freeze rows, columns, spilt, sort, filter, sub total
16. Chart sheet, save, Colour types, legend
17. Multiple worksheets, Copy, move, linking data between worksheets

18. Prepare a worksheet to print, page break
19. Print a worksheet, work book
20. Power point sample template selection
21. Power point sample presentation Demonstration
22. Power point slide layout selection Demonstration and Use
23. Prepare a slide, insert new slide
24. Use of animation styles, sound effect for presentation
25. Internet awareness
26. Different types of internet browsers, Searching of Internet
27. Connecting different WWW sites
28. Creating and sending emails
29. e-Payment method, Card and e- wallets
30. E-commerce sites and payment Catalogue

REFERENCES BOOKS:

1. MS Office Instant Reference
2. Windows Inside Peter Norton
3. Teach Yourself WINDOWS Al Stevens
