

SEMESTER - I (17 WEEKS)

National Council Component

MINIMUM CONTACT HOURS FOR EACH SUBJECT

No.	Subject code	Subject	Contact Hours per Semester	
			Th.	Pr.
1	BHM111	Foundation Course in Food Production - I	30	120
2	BHM112	Foundation Course in Food & Beverage Service - I	30	60
3	BHM113	Foundation Course in Front Office - I	30	30
4	BHM114	Foundation Course in Accommodation Operations - I	30	30
5	BHM105	Application of Computers	15	60
6	BHM106	Hotel Engineering	60	-
7	BHM117	Principles of Food Science	30	-
TOTAL:			225	300
GRAND TOTAL			525	

WEEKLY TEACHING SCHEME (17 WEEKS)

No.	Subject code	Subject	Hours per week	
			Th.	Pr.
1	BHM111	Foundation Course in Food Production - I	02	08
2	BHM112	Foundation Course in Food & Beverage Service - I	02	04
3	BHM113	Foundation Course in Front Office - I	02	02
4	BHM114	Foundation Course in Accommodation Operations - I	02	02
5	BHM105	Application of Computers	01	04
6	BHM106	Hotel Engineering	04	-
7	BHM117	Principles of Food Science	02	-
TOTAL:			15	20
GRAND TOTAL			35	

EXAMINATION SCHEME

No.	Subject code	Subject	Term Marks*	
			Th.	Pr.
1	BHM111	Foundation Course in Food Production - I	100	100
2	BHM112	Foundation Course in Food & Beverage Service - I	100	100
3	BHM113	Foundation Course in Front Office - I	100	100
4	BHM114	Foundation Course in Accommodation Operations - I	100	100
5	BHM105	Application of Computers	50	100
6	BHM106	Hotel Engineering	100	-
7	BHM117	Principles of Food Science	100	-
TOTAL:			650	500
GRAND TOTAL			1150	

* Term marks will comprise 30% Incourse & 70% Term end exam marks.



	iii) SAUCES A. Classification of sauces B. Recipes for mother sauces C. Storage & precautions	02	10%
07	METHODS OF COOKING FOOD A. Roasting B. Grilling C. Frying D. Baking E. Broiling F. Poaching G. Boiling <ul style="list-style-type: none"> • Principles of each of the above • Care and precautions to be taken • Selection of food for each type of cooking 	04	15%
08	SOUPS A. Classification with examples B. Basic recipes of Consommé with 10 Garnishes	2	10%
09	EGG COOKERY A. Introduction to egg cookery B. Structure of an egg C. Selection of egg D. Uses of egg in cookery	2	5%
10	COMMODITIES: i) Shortenings (Fats & Oils) A. Role of Shortenings B. Varieties of Shortenings C. Advantages and Disadvantages of using various Shortenings D. Fats & Oil – Types, varieties ii) Raising Agents A. Classification of Raising Agents B. Role of Raising Agents C. Actions and Reactions iii) Thickening Agents A. Classification of thickening agents B. Role of Thickening agents iv) Sugar A. Importance of Sugar B. Types of Sugar C. Cooking of Sugar – various	4	10%
TOTAL		30	100%



FOUNDATION COURSE IN FOOD PRODUCTION - I (PRACTICALS)

PART 'A' - COOKERY

HOURS ALLOTTED: 60

MAXIMUM MARKS: 50

S.No	Topic	Method	Hours
1	i) Equipments - Identification, Description, Uses & handling ii) Hygiene - Kitchen etiquettes, Practices & knife handling iii) Safety and security in kitchen	Demonstrations & simple applications	04
2	i) Vegetables - classification ii) Cuts - julienne, jardinière, macedoines, brunoise, paysane, mignonnete, dices, cubes, shred, mirepoix iii) Preparation of salad dressings	Demonstrations & simple applications by students	04
3	Identification and Selection of Ingredients - Qualitative and quantitative measures.	Market survey/tour	04
4	i) Basic Cooking methods and pre-preparations ii) Blanching of Tomatoes and Capsicum iii) Preparation of concasse iv) Boiling (potatoes, Beans, Cauliflower, etc) v) Frying - (deep frying, shallow frying, sautéing) Aubergines, Potatoes, etc. vi) Braising - Onions, Leeks, Cabbage vii) Starch cooking (Rice, Pasta, Potatoes)	Demonstrations & simple applications by students	04
5	i) Stocks - Types of stocks (White and Brown stock) ii) Fish stock iii) Emergency stock iv) Fungi stock	Demonstrations & simple applications by students	04
6	Sauces - Basic mother sauces <ul style="list-style-type: none"> • Béchamel • Espagnole • Veloute • Hollandaise • Mayonnaise • Tomato 	Demonstrations & simple applications	04
7	Egg cookery - Preparation of variety of egg dishes <ul style="list-style-type: none"> • Boiled (Soft & Hard) • Fried (Sunny side up, Single fried, Bull's Eye, Double fried) • Poaches • Scrambled • Omelette (Plain, Stuffed, Spanish) • En cocotte (eggs Benedict) 	Demonstrations & simple applications by students	04
8	Demonstration & Preparation of simple menu	Demonstrations & simple applications by students	04
9	Simple Salads & Soups: <ul style="list-style-type: none"> • Cole slaw, • Potato salad, • Beet root salad, • Green salad, • Fruit salad, 	Demonstration by instructor and applications by students	28



	<ul style="list-style-type: none"> • Consommé <p>Simple Egg preparations:</p> <ul style="list-style-type: none"> • Scotch egg, • Assorted omelettes, • Oeuf Florentine • Oeuf Benedict • Oeuf Farci • Oeuf Portugese • Oeuf Deur Mayonnaise <p>Simple potato preparations</p> <ul style="list-style-type: none"> • Baked potatoes • Mashed potatoes • French fries • Roasted potatoes • Boiled potatoes • Lyonnaise potatoes • Allumettes <p>Vegetable preparations</p> <ul style="list-style-type: none"> • Boiled vegetables • Glazed vegetables • Fried vegetables • Stewed vegetables. 		
TOTAL			60



PART 'B' - BAKERY & PATISSERIE
HOURS ALLOTTED: 60 MAXIMUM MARKS: 50

S.No	Topic	Method	Hours
1	Equipments <ul style="list-style-type: none"> • Identification • Uses and handling Ingredients - Qualitative and quantitative measures	Demonstration by instructor and applications by students	04
2	BREAD MAKING <ul style="list-style-type: none"> • Demonstration & Preparation of Simple and enriched bread recipes • Bread Loaf (White and Brown) • Bread Rolls (Various shapes) • French Bread • Brioche 	Demonstration by instructor and applications by students	10
3	SIMPLE CAKES <ul style="list-style-type: none"> • Demonstration & Preparation of Simple and enriched Cakes, recipes • Sponge, Genoise, Fatless, Swiss roll • Fruit Cake • Rich Cakes • Dundee • Madeira 		10
4	SIMPLE COOKIES <ul style="list-style-type: none"> • Demonstration and Preparation of simple cookies like • Nan Khatai • Golden Goodies • Melting moments • Swiss tart • Tri colour biscuits • Chocolate chip • Cookies • Chocolate Cream Fingers • Bachelor Buttons. 	Demonstration by instructor and applications by students	16
5	HOT / COLD DESSERTS <ul style="list-style-type: none"> • Caramel Custard, • Bread and Butter Pudding • Queen of Pudding • Soufflé – Lemon / Pineapple • Mousse (Chocolate Coffee) • Bavaroise • Diplomat Pudding • Apricot Pudding • Steamed Pudding - Albert Pudding, Cabinet Pudding. 	Demonstration by instructor and applications by students	20
TOTAL			60



	- All other equipment used in F&B Service • French terms related to the above	01	
05	NON-ALCOHOLIC BEVERAGES Classification (Nourishing, Stimulating and Refreshing beverages) A. Tea - Origin & Manufacture - Types & Brands B. Coffee - Origin & Manufacture - Types & Brands C. Juices and Soft Drinks D. Cocoa & Malted Beverages - Origin & Manufacture	01 01 01 01 01	20%
TOTAL		30	100%



FOUNDATION COURSE IN FOOD & BEVERAGE SERVICE - I (PRACTICAL)

HOURS ALLOTTED: 60

MAXIMUM MARKS: 100

S.No	Topic	Hours
01	Food Service areas – Induction & Profile of the areas	04
02	Ancillary F&B Service areas – Induction & Profile of the areas	04
03	Familiarization of F&B Service equipment	08
04	Care & Maintenance of F&B Service equipment	04
05	Cleaning / polishing of EPNS items by: <ul style="list-style-type: none"> - Plate Powder method - Polivit method - Silver Dip method - Burnishing Machine 	04
06	Basic Technical Skills Task-01: Holding Service Spoon & Fork Task-02: Carrying a Tray / Salver Task-03: Laying a Table Cloth Task-04: Changing a Table Cloth during service Task-05: Placing meal plates & Clearing soiled plates Task-06: Stocking Sideboard Task-07: Service of Water Task-08: Using Service Plate & Crumbing Down Task-09: Napkin Folds Task-10: Changing dirty ashtray Task-11: Cleaning & polishing glassware	16
07	Tea – Preparation & Service	04
08	Coffee - Preparation & Service	04
09	Juices & Soft Drinks - Preparation & Service <ul style="list-style-type: none"> • Mocktails • Juices, Soft drinks, Mineral water, Tonic water 	08
10	Cocoa & Malted Beverages – Preparation & Service	04
TOTAL		60



BHM113 - FOUNDATION COURSE IN FRONT OFFICE OPERATIONS – I (THEORY)**HOURS ALLOTTED: 30****MAXIMUM MARKS: 100**

S.No.	Topic	Hours	Weight age
01	INTRODUCTION TO TOURISM, HOSPITALITY & HOTEL INDUSTRY A. Tourism and its importance B. Hospitality and its origin C. Hotels, their evolution and growth D. Brief introduction to hotel core areas with special reference to Front Office	03	10%
02	CLASSIFICATION OF HOTELS A. Size B. Star C. Location & clientele D. Ownership basis E. Independent hotels F. Management contracted hotel G. Chains H. Franchise/Affiliated I. Supplementary accommodation J. Time shares and condominium	05	15%
03	TYPES OF ROOMS A. Single B. Double C. Twin D. Suits	02	5%
04	TIME SHARE & VACATION OWNERSHIP A. What is time share? Referral chains & condominiums B. How is it different from hotel business? C. Classification of timeshares D. Types of accommodation and their size	03	10%
05	FRONT OFFICE ORGANIZATION A. Function areas B. Front office hierarchy C. Duties and responsibilities D. Personality traits	05	20%
06	HOTEL ENTRANCE, LOBBY AND FRONT OFFICE A. Layout B. Front office equipment (non automated, semi automated and automated)	03	10%
07	BELL DESK A. Functions B. Procedures and records	04	20%



08	FRENCH: To be taught by a professional French language teacher. A. Understanding and uses of accents, orthographic signs & punctuation B. Knowledge of cardinaux & ordinaux (Ordinal & cardinal) C. Days, Dates, Time, Months and Seasons	05	10%
TOTAL		30	100

FOUNDATION COURSE IN FRONT OFFICE OPERATIONS – I (PRACTICALS)

HOURS ALLOTTED: 30

MAXIMUM MARKS: 100

S.No.	Topic	Hours
1	Appraisal of front office equipment and furniture	2
2	Rack, Front desk counter & bell desk	2
3	Filling up of various proforma	4
4	Welcoming of guest	2
5	Telephone handling	4
6	Role play: <ul style="list-style-type: none"> • Reservation • Arrivals • Luggage handling • Message and mail handling • Paging 	4 4 2 4 2
TOTAL		30



BHM114 - FOUNDATION COURSE IN ACCOMMODATION OPERATIONS – I (THEORY)

HOURS ALLOTTED: 30

MAXIMUM MARKS: 100

S.No.	Topic	Hours	Weight age
01	THE ROLE OF HOUSEKEEPING IN HOSPITALITY OPERATION Role of Housekeeping in Guest Satisfaction and Repeat Business	02	5%
02	ORGANISATION CHART OF THE HOUSEKEEPING DEPARTMENT A. Hierarchy in small, medium, large and chain hotels B. Identifying Housekeeping Responsibilities C. Personality Traits of housekeeping Management Personnel. D. Duties and Responsibilities of Housekeeping staff E. Layout of the Housekeeping Department	08	25%
03	CLEANING ORGANISATION A. Principles of cleaning, hygiene and safety factors in cleaning B. Methods of organising cleaning C. Frequency of cleaning daily, periodic, special D. Design features that simplify cleaning E. Use and care of Equipment	04	15%
04	CLEANING AGENTS A. General Criteria for selection B. Classification C. Polishes D. Floor seats E. Use, care and Storage F. Distribution and Controls G. Use of Eco-friendly products in Housekeeping	05	20%
05	COMPOSTION, CARE AND CLEANING OF DIFFERENT SURFACES A. Metals B. Glass C. Leather, Leatherites, Rexines D. Plastic E. Ceramics F. Wood G. Wall finishes H. Floor finishes	05	15%
06	INTER DEPARTMENTAL RELATIONSHIP A. With Front Office B. With Maintenance C. With Security D. With Stores E. With Accounts F. With Personnel G. Use of Computers in House Keeping department	02	10%
07	USE OF COMPUTERS IN HOUSE KEEPING DEPARTMENT	04	10
TOTAL		30	100%



FOUNDATION COURSE IN ACCOMMODATION OPERATIONS – I (PRACTICAL)

HOURS ALLOTTED: 30

MAXIMUM MARKS: 100

S.No.	Topic	Hours
01	Sample Layout of Guest Rooms <ul style="list-style-type: none"> • Single room • Double room • Twin room • Suite 	02
02	Guest Room Supplies and Position <ul style="list-style-type: none"> • Standard room • Suite • VIP room special amenities 	04
03	Cleaning Equipment-(manual and mechanical) <ul style="list-style-type: none"> • Familiarization • Different parts • Function • Care and maintenance 	04
04	Cleaning Agent <ul style="list-style-type: none"> • Familiarization according to classification • Function 	02
05	Public Area Cleaning (Cleaning Different Surface) <p>A. WOOD</p> <ul style="list-style-type: none"> • polished • painted • Laminated <p>B. SILVER/ EPNS</p> <ul style="list-style-type: none"> • Plate powder method • Polivit method • Proprietary solution (Silvo) <p>C. BRASS</p> <ul style="list-style-type: none"> • Traditional/ domestic 1 Method • Proprietary solution 1 (brasso) <p>D. GLASS</p> <ul style="list-style-type: none"> • Glass cleanser • Economical method(newspaper) <p>E. FLOOR - Cleaning and polishing of different types</p> <ul style="list-style-type: none"> • Wooden • Marble • Terrazzo/ mosaic etc. <p>F. WALL - care and maintenance of different types and parts</p> <ul style="list-style-type: none"> • Skirting • Dado • Different types of paints(distemper Emulsion, oil paint etc) 	14



06	Maid's trolley <ul style="list-style-type: none"> • Contents • Trolley setup 	02
07	Familiarizing with different types of Rooms, facilities and surfaces <ul style="list-style-type: none"> • Twin/ double • Suite • Conference etc 	02
TOTAL		30



BHM105 - APPLICATION OF COMPUTERS – THEORY
HOURS ALLOTTED: 15 MAXIMUM MARKS: 50

S.No.	Topic	Hours	Weight age
01	<p>COMPUTER FUNDAMENTALS - THEORY</p> <p>INFORMATION CONCEPTS AND PROCESSING</p> <p>A. Definitions B. Need, Quality and Value of Information C. Data Processing Concepts</p> <p>ELEMENTS OF A COMPUTER SYSTEM</p> <p>A. Definitions B. Characteristics of Computers C. Classification of Computers D. Limitations</p> <p>HARDWARE FEATURES AND USES</p> <p>A. Components of a Computer B. Generations of Computers C. Primary and Secondary Storage Concepts D. Data Entry Devices E. Data Output Devices</p> <p>SOFTWARE CONCEPTS</p> <p>A. System Software B. Application Software C. Language Classification D. D. Compilers and Interpreters</p>	05	05%
02	<p>OPERATING SYSTEMS/ENVIRONMENTS - THEORY</p> <p>BASICS OF MS-DOS</p> <p>A. Internal commands B. External commands</p> <p>INTRODUCTION TO WINDOWS</p> <p>A. GUI/Features B. What are Windows and Windows 95 and above? C. Parts of a Typical Window and their Functions</p>	05	20%
03	<p>NETWORKS – THEORY</p> <p>A. Network Topology</p> <ul style="list-style-type: none"> • Bus • Star • Ring <p>B. Network Applications</p>	05	35%



	<p>C. Types of Network</p> <ul style="list-style-type: none"> • LAN • MAN • WAN <p>D. Network Configuration Hardware</p> <ul style="list-style-type: none"> • Server • Nodes <p>E. Channel</p> <ul style="list-style-type: none"> • Fibre optic • Twisted • Co-axial <p>F. Hubs</p> <p>G. Network Interface Card</p> <ul style="list-style-type: none"> • Arcnet • Ethernet <p>H. Network Software</p> <ul style="list-style-type: none"> • Novel • Windows NT 		
TOTAL		15	100%



APPLICATION OF COMPUTERS – PRACTICAL
HOURS ALLOTTED: 60 MAXIMUM MARKS: 100

S.No.	Topic	Hours	Weight age
01	WINDOWS OPERATIONS A. Creating Folders B. Creating Shortcuts C. Copying Files/Folders D. Renaming Files/Folders E. Deleting Files F. Exploring Windows G. Quick Menus	05	15%
02	MS-OFFICE 2007 MS WORD CREATING A DOCUMENT A. Entering Text B. Saving the Document C. Editing a Document already saved to Disk D. Getting around the Document E. Find and Replace Operations F. Printing the Document FORMATTING A DOCUMENT A. Justifying Paragraphs B. Changing Paragraph Indents C. Setting Tabs and Margins D. Formatting Pages and Documents E. Using Bullets and Numbering F. Headers/Footers G. .Pagination SPECIAL EFFECTS A. Print Special Effects e.g. Bold, Underline, Superscripts, Subscript B. Changing Fonts C. .Changing Case CUT, COPY AND PASTE OPERATION A. Marking Blocks B. Copying and Pasting a Block C. Cutting and Pasting a Block D. Deleting a Block E. Formatting a Block F. Using Find and Replace in a Block USING MS-WORD TOOLS A. Spelling and Grammar B. Mail Merge C. .Printing Envelops and Labels	15	25%



	<p>TABLES</p> <ul style="list-style-type: none"> A. Create B. Delete C. Format <p>GRAPHICS</p> <ul style="list-style-type: none"> A. Inserting Clip arts B. Symbols (Border/Shading) C. Word Art <p>PRINT OPTIONS</p> <ul style="list-style-type: none"> A. Previewing the Document B. Printing a whole Document C. Printing a Specific Page D. Printing a selected set E. Printing Several Documents F. Printing More than one Copies 		
03	<p>MS OFFICE 2007</p> <p>MS-EXCEL</p> <ul style="list-style-type: none"> A. How to use Excel B. Starting Excel C. Parts of the Excel Screen D. Parts of the Worksheet E. Navigating in a Worksheet F. Getting to know mouse pointer shapes <p>CREATING A SPREADSHEET</p> <ul style="list-style-type: none"> A. Starting a new worksheet B. Entering the three different types of data in a worksheet C. Creating simple formulas D. Formatting data for decimal points E. Editing data in a worksheet F. Using AutoFill G. Blocking data H. Saving a worksheet I. Exiting excel <p>MAKING THE WORKSHEET LOOK PRETTY</p> <ul style="list-style-type: none"> A. Selecting cells to format B. Trimming tables with Auto Format C. Formatting cells for: <ul style="list-style-type: none"> - Currency - Comma - Percent - Decimal - Date D. Changing columns width and row height E. Aligning text <ul style="list-style-type: none"> - Top to bottom - Text wrap 	15	25%



	<ul style="list-style-type: none"> - Re ordering Orientation F Using Borders <p>GOING THROUGH CHANGES</p> <ul style="list-style-type: none"> A. Opening workbook files for editing B. Undoing the mistakes C. Moving and copying with drag and drop D. Copying formulas E. Moving and Copying with Cut, Copy and Paste F. Deleting cell entries G. Deleting columns and rows from worksheet H. Inserting columns and rows in a worksheet I. Spell checking the worksheet <p>PRINTING THE WORKSHEET</p> <ul style="list-style-type: none"> A. Previewing pages before printing B. Printing from the Standard toolbar C. Printing a part of a worksheet D. Changing the orientation of the printing E. Printing the whole worksheet in a single pages F. Adding a header and footer to a report G. Inserting page breaks in a report H. Printing the formulas in the worksheet <p>ADDITIONAL FEATURES OF A WORKSHEET</p> <ul style="list-style-type: none"> A. Splitting worksheet window into two four panes B. Freezing columns and rows on-screen for worksheet title C. Attaching comments to cells D. Finding and replacing data in the worksheet E. Protecting a worksheet F. Function commands <p>MAINTAINING MULTIPLE WORKSHEET</p> <ul style="list-style-type: none"> A. Moving from sheet in a worksheet B. Adding more sheets to a workbook C. Deleting sheets from a workbook D. Naming sheet tabs other than sheet 1, sheet 2 and so on E. Copying or moving sheets from one worksheet to another <p>CREATING GRAPHICS/CHARTS</p> <ul style="list-style-type: none"> A. Using Chart wizard B. Changing the Chart with the Chart Toolbar C. Formatting the chart's axes D. Adding a text box to a chart E. Changing the orientation of a 3-D chart F. Using drawing tools to add graphics to chart and worksheet G. Printing a chart with printing the rest of the worksheet data <p>EXCEL's DATABASE FACILITIES</p> <ul style="list-style-type: none"> A. Setting up a database 		
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	B. Sorting records in the database		
04	MS OFFICE 2007 MS-POWER POINT A. Making a simple presentation B. Using Auto content Wizards and Templates C. Power Points five views D. Slides - Creating Slides, re-arranging, modifying - Inserting pictures, objects - Setting up a Slide Show E. Creating an Organizational Chart	20	25%
05	Internet & E-mail – PRACTICAL	05	10%
TOTAL		60	100%



BHM106 - HOTEL ENGINEERING
HOURS ALLOTTED: 60 MAXIMUM MARKS: 100

S.No.	Topic	Hours	Weight age
01	MAINTENANCE: A. Preventive and breakdown maintenance, comparisons B. Roll & Importance of maintenance department in the hotel industry with emphasis on its relation with other departments of the hotel. C. Organization chart of maintenance department, duties and responsibilities of maintenance department	03	5%
02.	Fuels used in catering industry: A. Types of fuel used in catering industry; calorific value; comparative study of different fuels B. Calculation of amount of fuel required and cost.	04	5%
03	Gas: A. Heat terms and units; method of transfer B. LPG and its properties; principles of Bunsen and burner, precautions to be taken while handling gas; low and high-pressure burners, corresponding heat output. C. Gas bank, location, different types of manifolds	04	5%
04	Electricity: A. Fundamentals of electricity, insulators, conductors, current, potential difference resistance, power, energy concepts; definitions, their units and relationships, AC and DC; single phase and three phase and its importance on equipment specifications B. Electric circuits, open circuits and close circuits, symbols of circuit elements, series and parallel connections, short circuit, fuses; MCB, earthing, reason for placing switches on live wire side. C. Electric wires and types of wiring D. Calculation of electric energy consumption of equipment, safety precaution to be observed while using electric appliances. E. Types of lighting, different lighting devices, incandescent lamps, fluorescent lamps, other gas discharged lamps, illumination, and units of illumination. F. External lighting G. Safety in handling electrical equipment.	06	10%
05.	Water systems: A. Water distribution system in a hotel B. Cold water systems in India C. Hardness of water, water softening, base exchange method (Demonstration) D. Cold water cistern swimming pools E. Hot water supply system in hotels F. Flushing system, water taps, traps and closets.	04	5%



06	Refrigeration & Air-conditioning: <ul style="list-style-type: none"> A. Basic principles, latent heat, boiling point and its dependence on pressure, vapour compressor system of refrigeration and refrigerants B. Vapour absorption system, care and maintenance of refrigerators, defrosting, types of refrigerant units, their care and maintenance. (Demonstration) C. Conditions for comfort, relative humidity, humidification, de-humidifying, dew point control, unit of air conditioning D. Window type air conditioner, central air conditioning, preventive maintenance E. Vertical transportation, elevators, escalators. 	10	15%
07	Fire prevention and fire fighting system: <ul style="list-style-type: none"> A. Classes of fire, methods of extinguishing fires (Demonstration) B. Fire extinguishes, portable and stationery C. Fire detectors and alarm D. Automatic fire detectors cum extinguishing devices E. Structural protection F. Legal requirements 	04	10%
08	Waste disposal and pollution control: <ul style="list-style-type: none"> A. Solid and liquid waste, sullage and sewage, disposal of solid waste B. Sewage treatment C. Pollution related to hotel industry D. Water pollution, sewage pollution E. Air pollution, noise pollution, thermal pollution F. Legal Requirements 	05	10%
09	Safety: <ul style="list-style-type: none"> A. Accident prevention B. Slips and falls C. Other safety topics 	01	5%
10.	Security	01	10%
11.	Equipment replacement policy: <ul style="list-style-type: none"> A. Circumstances under which equipment are replaced. B. Replacement policy of items which gradually deteriorates C. Replacement when the average annual cost is minimum D. Replacement when the present cost is minimum E. Economic replacement cycle for suddenly failing equipment 	05	5%
12.	Audio visual equipments: <ul style="list-style-type: none"> A. Various audio visual equipment used in hotel B. Care and cleaning of overhead projector, slide projector, LCD and power point presentation units C. Maintenance of computers: D. Care and cleaning of PC, CPU, Modem, UPS, Printer, Laptops E. Sensors – Various sensors used in different locations of a hotel – type, uses and cost effectiveness 	08	10%



13.	Contract maintenance: A. Necessity of contract maintenance, advantages and disadvantages of contract maintenance B. Essential requirements of a contract, types of contract, their comparative advantages and disadvantages. C. Procedure for inviting and processing tenders, negotiating and finalizing	03	5%
TOTAL		60	100%



BHM117 - PRINCIPLES OF FOOD SCIENCE
HOURS ALLOTTED: 30 MAXIMUM MARKS: 100

S.No.	Topic	Hours	Weight age
01	<ul style="list-style-type: none"> • Definition and scope of food science and • It's inter-relationship with food chemistry, food microbiology and food processing. 	02	5%
02	<p>CARBOHYDRATES</p> <ul style="list-style-type: none"> A. Introduction B. Effect of cooking (gelatinisation and retrogradation) C. Factors affecting texture of carbohydrates (Stiffness of CHO gel & dextrinization) D. Uses of carbohydrates in food preparations 	04	15%
03	<p>FAT & OILS</p> <ul style="list-style-type: none"> A. Classification (based on the origin and degree of saturation) B. Autoxidation (factors and prevention measures) C. Flavour reversion D. Refining, Hydrogenation & winterisation E. Effect of heating on fats & oils with respect to smoke point F. Commercial uses of fats (with emphasis on shortening value of different fats) 	05	20%
04	<p>PROTEINS</p> <ul style="list-style-type: none"> A. Basic structure and properties B. Type of proteins based on their origin (plant/animal) C. Effect of heat on proteins (Denaturation, coagulation) D. Functional properties of proteins (Gelation, Emulsification, Foamability, Viscosity) E. Commercial uses of proteins in different food preparations (like Egg gels, Gelatin gels, Cakes, Confectionary items, Meringues, Souffles, Custards, Soups, Curries etc.) 	04	15%
05	<p>FOOD PROCESSING</p> <ul style="list-style-type: none"> A. Definition B. Objectives C. Types of treatment D. Effect of factors like heat, acid, alkali on food constituents 	03	10%
06	<p>EVALUATION OF FOOD</p> <ul style="list-style-type: none"> A. Objectives B. Sensory assessment of food quality C. Methods D. Introduction to proximate analysis of Food constituents E. Rheological aspects of food 	03	10%
07	<p>EMULSIONS</p> <ul style="list-style-type: none"> A. Theory of emulsification B. Types of emulsions 	03	10%



	C. Emulsifying agents D. Role of emulsifying agents in food emulsions		
08	COLLOIDS <ul style="list-style-type: none"> • Definition • Application of colloid systems in food preparation 	02	5%
09	FLAVOUR <ul style="list-style-type: none"> • Definition • Description of food flavours (tea, coffee, wine, meat, fish spices) 	02	5%
10	BROWNING <ul style="list-style-type: none"> • Types (enzymatic and non-enzymatic) • Role in food preparation • Prevention of undesirable browning 	02	5%
TOTAL		30	100%

