Table 3. Third Year Basic B.Sc. Nursing

Subjects	Theory Hours	Practical Hours (Clinical)	Hours	
1. Medical-Surgical Nursing (Adult including geriatrics)-II	120	270		
2. Child Health Nursing	90	270		
3. Mental Health Nursing	90	270		
4. Midwifery and Obstetrical Nursing	90	180		
5. Library work / Self Study			50	
6. Co-curricular activities			50	
TOTAL	390	990	100	
TOTAL HOURS = 1480 HRS				

Table 4. Fourth Year Basic B.Sc. Nursing

Subjects	Theory Hours	Practical / Clinical Hours		
1. Midwifery and Obstetrical Nursing	Nil	180		
2. Community Health Nursing – II	90	135		
3. Nursing Research & Statistics	45	* Project		
4. Management of Nursing Services and Education	60 + 30			
TOTAL	225	315		
TOTAL HOURS = 540 HRS				

• Project work to be carried out during clinical training.

Table 5. Details of Distribution of Hours for clinical training (Integrated Practice)

Subject	Practical (In hrs)	In Weeks
1. Midwifery and Obstetrical nursing	240	5
2. Community Health Nursing-II	195	4
3. Medical Surgical Nursing (Adult and	430	9
geriatric)		
4. Child Health	145	3
5. Mental Health	95	2
6. Research Project	45	1
Total	1150	24
Hours		

Third Year

Table 8. Distribution of Subjects and Marks for Internal Assessment and University Examination for Third Year Basic B.Sc. Nursing

Subject	Hours	Internal Assessment	University Exam	Total
Theory				
13. Medical Surgical Nursing- II	3	40	100	140
14. Child Health Nursing	3	40	100	140
15. Mental Health Nursing	3	40	100	140
Practical and Viva Voce				
3. Medical - Surgical Nursing- II		50	50	100
4. Child Health Nursing		50	50	100
5. Mental Health Nursing		50	50	100

Note: All practical examinations must be held in the respective clinical areas. One internal and one external examiner should jointly conduct practical /clinical examination for each student.

Fourth Year

Table 9. Distribution of Subjects and Marks for Internal Assessment and University Examination for Fourth Year Basic B.Sc. Nursing

Subject	Internal Assessment	University Exam	Total
Theory			
16. Midwifery and Obstetrical	40	100	140
Nursing			
17. Community Health Nursing – II	40	100	140
18. Nursing Research & Statistics	40	100	140
19. Management of Nursing	40	100	140
Services and Education			
Practical and Viva Voce			
6. Midwifery and Obstetrical	50	50	100
Nursing			
7. Community Health Nursing	50	50	100

Note: All practical examinations must be held in the respective clinical areas. One internal and one external examiner should jointly conduct practical /clinical examination for each student.

Community Health Nursing – II

Placement: Fourth Year **Time**: Theory - 90 Hours

Practical - 135 Hours

Course Description: This course is designed for students to practice Community Health Nursing for the individual, family and groups at both urban and rural settings by using concept and Principles of Health and Community Health Nursing

Unit	Time	Learning	Contents and Teaching Learning Activity
	(Hrs)	Objectives	
I	4	* Define Concepts, scope, principles and historical development of community health and community Health nursing	Introduction * Definition, concept and scope of Community Health and Community Health Nursing * Historical development of
			* Lecture discussion
II	6	* Describe health plans, policies, various health committees and health problems in India	Health planning and policies and problems * National Health planning in India – 5 year plans * Various committees and commissions on health and family welfare Ocentral council for health and family welfare (CCH and FW) National Health Policies (1983, 2002) National Population policy Health problems in India *Teaching Learning Activity* * Lecture discussion * Panel discussion
III	15	* Describe the system of delivery of Community Health Services in Rural and Urban areas * List the functions of various levels	Delivery of Community Health Services * Planning, Budgeting and material management of SCs, PHC and CHC * Rural: Organization, staffing and functions of Rural Health Services provided by Govt. at: O Village O Subcentre O Primary Health Centre

	1.41 : 4 00	C '4 H 14 C 4 /0 1 1' ' ' 1	
	and their staffing	Community Health Centre/Sub divisional	
	pattern	o Hospitals	
	* Explain the	o District	
	components of	o State	
	health services	Centre	
	* Describe	* Urban: Organisation, staffing and functions of urban	
	alternative system	health services provided by Govt. at:	
	of health promotion	o Slums	
	and health	 Dispensaries 	
	maintenance	Maternal and child health centres	
	* Describe the	 Special clinics 	
	chain of referral	o Hospitals	
	system	 Corporation/Municipality/Board 	
	System	* Components of Health Services	
		Environmental sanitation	
		TT 1d 7 1	
		 Health Education Vital statistics 	
		o MCH – Antenatal, Natal, Postnatal, MTP act,	
		female foeticide act, child adaptation act.	
		o Family welfare]	
		 National Health programmes 	
		 School Health Services 	
		 Occupational Health 	
		 Defence services 	
		 Institutional services 	
		* Systems of medicine and health care	
		 Allopathy 	
		 Indian system of medicine and Homeopathy 	
		 Alternative health care systems like yoga, 	
		meditation, social and spiritual healing etc	
		* Referral system	
		110101101 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	
		Teaching Learning Activity	
		* Lecture discussion	
		* Visits to various health delivery systems	
		* Supervised field practice	
		* Panel discussion	
IV 25	* Describe	Community Health Nursing approaches, concepts	
1 7 23	Community Health	and roles and responsibilities of Nursing Personnel	
	Nursing approaches	* Approaches	
	and concepts	 Approaches Nursing Theories and Nursing process 	
	* Describe the roles	<u> </u>	
		Epidemiological approach Problem solving approach	
	and responsibility	Problem solving approach Evidence based approach	
	of Community	Evidence based approach	
	Health Nursing	• Empowering people to care for themselves	
	Personnel	* Concepts of Primary Health Care:	

			 Equitable distribution 	
			1	
			 Community participation 	
			 Focus on prevention 	
			 Use of appropriate technology 	
			 Multi-sectoral approach 	
			* Roles and responsibilities of Community Health	
			Nursing personnel in	
			 Family Health services 	
			 Information education communication (IEC) 	
			 Management information system (MIS): 	
			Maintenance of records and reports	
			· ·	
			•	
			personner	
			Tagehing Lagraing Activity	
			<u> </u>	
17	15	* Describe and		
v	13			
		* *		
			-	
		_		
		neatui	_	
			O Iviensuluai cycle	
V	15	* Describe and appreciate the activities of community health nurse in assisting individuals and groups to promote and maintain their health	 Training and supervision of various categories of health workers National Health programmes Environmental sanitation Maternal and child health and family welfare Treatment of minor ailments School Health services Occupational Health Organisation of clinics, camps: types, preparation, planning, conduct and evaluation Waste management in the centre, clinics etc. * Home visit: concept, principles, process techniques: bag technique home visit * Quantities of community health nurse * Job description of community Health Nursing personnel * Teaching Learning Activity * Lecture discussion * Demonstration * Practice session * Supervised field practice * Participation in camps * Group Project Assisting individuals and groups to promote and maintain their health * Empowerment for self care of individuals, families and groups in - A. Assessment of self and family Monitoring growth and development Mile stones Weight measurement Social development Temperature and Blood pressure monitoring Menstrual cycle 	

o Breast self examination and testicles Warning Signs of various diseases o Tests: Urine for sugar and albumin, blood sugar B. Seek health services for o Routine checkup o Immunization o Counseling o Diagnosis o Treatment o Follow up C. Maintenance of health records for self and family D. Continue medical care and follow up in community for various diseases and disabilities E Carryout therapeutic procedures as prescribed / required for self and family F. Waste Management * Collection and disposable of waste at home and community G. Sensitize and handle social issues affecting health and development for self and family * Women Empowerment * Women and child abuse * Abuse of elders * Female Foeticide * Commercial sex workers * Food adulteration * Substance abuse H. Utilize community resources for self and family o Trauma services Old age homes o Orphanage o Homes for physically and mentally challenged individuals Homes for destitute

Teaching Learning Activity
* Lecture discussion

			1.5
			* Demonstration
			* Practice session
			* Supervised
			field practice
			* Individual / group/family/
			community health education
VI	20	* Describe national	National health and family welfare programmes and
		health and family	the role of a nurse
		welfare	1) National ARI programme
		programmes and	2) Revised National Tuberculosis Control Programme
		role of a nurse	(RNTCP)
		* Describe the	3) National Anti-Malaria programme
		various health	4) National Filaria control programme
		schemes in India	5) National Guinea worm eradication programme
		Schemes in maia	,
			6) National Leprosy eradication programme
			7) National AIDS control programme
			8) STD control programme
			9) National programme for control of blindness
			10) Iodine deficiency disorder programme
			11) Expanded programme on immunization
			12) National Family Welfare Programme – RCH
			Programme historical development, organization,
			administration, research, constraints
			13) National water supply and sanitation programme
			14) Minimum Need programme
			15) National Diabetics control programme
			16) Polio Eradication: Pulse Polio Programme
			17) National Cancer Control Programme
			18) Yaws Eradication Programme
			19) National Nutritional Anemia Prophylaxis programme
			20) 20 point programme
			21) ICDS programme
			22) Mid-day meal applied nutritional programme
			23) National mental health programme
			* Health Schemes
			EGI
			COMO
			 Health insurance
			Teaching Learning Activity
			* Lecture discussion
			* Participation in National Health
			Programmes * Field visits
			* Field visits

VII	5	Explain the roles and functions of various national and international health agencies	* Health Agencies International – WHO, UNFPA, UNDP, World Bank, FAO, UNICEF, DANIDA, European Commission (EC), Red cross, USAID, UNESCO, Colombo Plan, ILO, CARE etc. National – Indian Red Cross, Indian council for child welfare, Family Planning Association of India (FPAI), Tuberculosis Association of India, Hindu Kusht Nivaran Sangh, Central Social Welfare Board, All India women's conference, Blind Association of India etc.
			Teaching Learning Activity
			* Lecture discussion
			* Field Visits

Community Health Nursing – II – Practical

Placement: Fourth Year **Time**: Practical - 135 hours

195 hours

Clinical Training -

Areas	Durat- ion(in week)	Objectives	Skills	Assignments	Assessment Methods
Community health nursing	week) 1 wk. for Urban 4 wk for Rural	* Identify Community Profile * Identify prevalent communicable and non-communicable diseases * Diagnose health needs of individual, families and community * Plan, provide and evaluate care * Participate in School Health Program * Participate in National Health programs * Organize group for self help and	* Community Health Survey * Community diagnosis * Family care: Home adaptation of common procedures * Home visit: bag technique * Organize and conduct clinicls — antenatal, postnatal, well baby clinic, camps etc. * Screen manage and referrals for:	* Community survey report- 1 * Family care study-1 * Project – 1 * Health talk - 1 * Case book recording	* Assess clinical performance with rating scale * Evaluation of community survey report, family care study, project and health talk * Completion of activity record. * Completion of case book recording
		involve clients in their own health activities * provide family welfare services * Counsel and educate individual, family and community * Collect vital health statistics * Maintain records and reports	emergencies Illness: Physical and mental Disabilities * Conduct delivery at centre/home: Episiotomy and suturing * Resuscitate new born * School Health programme Screen, manage, refer children		

	* Collaborate with
	health and allied
	agencies
	* Train and supervise
	health workers
	* Provide family
	welfare services:
	Insertion of IUD
	* Counsel and teach
	individual, family
	and community
	about: HIV, TB,
	Diabetics,
	hypertension, Mental
	health, adolescents,
	elderly health,
	physically and
	mentally challenged
	individuals etc.
	* Collect and
	Calculate Vital health
	statistics
	* Document and
	maintain
	o Individual,
	family and
	administrative
	records.
	o Write reports-
	center,
	disease,
	national
	health
	programme/pr
	ojects
· · · · · · · · · · · · · · · · · · ·	

Placement: Clinical Training

Time: 4 Weeks

Area	Duration	Objectives	Skills	Assessment
Urban	4 Weeks	* Provide comprehensive care to individual, family and community	* Integrated Practice and group project – 1 in each rural and urban	* Assess clinical performance with rating scale * Evaluation of project

Note: During the Rural Posting they should stay in Health centers under the supervision of teachers.

Scheme of University Examination for Community Health Nursing

Theory

There shall be one theory paper of three hours duration carrying 100 marks. Distribution of type of questions and marks for Community Health Nursing shall be as given under.

Table 9(A): Distribution of Type of Questions and Marks for Community Health Nursing

Tuble > (11) v 2 lovi lo uvion of 1 jpe of Questions und 1 luris for Community 1100 of tubing						
Type of Questions	No. of Questions	Marks	Sub-total			
Long Essay (LE)	2	10	20			
Short Essay (SE)	10	5	50			
Short Answer (SA)	10	3	30			
Total Marks			100			

Practical and Viva Voce

	Internal	University	Total
	Assessment	Examination	
Community Health Nursing	50	50	100

Nursing Research and Statistics

Placement: Fourth Year **Time:** Theory – 45 Hours

Training– 45 Hours

Clinical Practical

Course Description: The course is designed to enable students to develop and understanding of basic concepts of research, research process and statistics. It is further, structured to conduct/participate in need based research studies in various settings and utilize the research findings to provide quality nursing care. The hours for Practical will be utilized for conducting Individual / group research project.

Unit	Time (Hrs)	Learning Objectives	Contents and Teaching Learning Activity
I	4	* Describe the	Research and Research Process
		concept of research,	* Introduction and need for Nursing research
		terms, need and	* Definition of Research & nursing research
		areas of research in	* Steps of scientific method
		Nursing	* Characteristics of good research
		* Explain the steps of research process	* Steps of Research process-overview
		1	Teaching Learning Activity
			* Lecture discussion
			* Narrate steps of research process followed from
			examples of published studies
II	3	* Identify and state	Research problem / question
		the research	* Identification of problem area
		problem and	* Problem statement
		objectives	* Criteria of a good research problem
			* Writing objectives
			Teaching Learning Activity
			* Lecture discussion
			* Exercise on writing statement of problem and
			objectives
III	3	* Review the	Review of Literature
		related literature	* Location
			* Sources
			* On line search;
			CINHAL, COCHRANE etc
			* Purposes
			* Method of review

IV	4	* Describe the research approaches and designs	* Lecture discussion * Exercise on reviewing one research report/article for a selected research problem * Prepare annotated bibliography Research approaches and designs * Historical, survey and experimental * Qualitive and quantitative designs Teaching Learning Activity * Lecture discussion * Explain types of research approaches used from examples of published and unpublished research studies with rationale
V	8	* Explain the sampling process * Describe the methods of data collection	* Definition of population, sample, sampling criteria, factors influencing sampling process, types of sampling techniques * Data – why, what, from, whom, when, where to collect * Data collection methods and instruments: O Methods of data collection O Questioning, interviewing Observations, record analysis and measurements Types of instruments Validity and reliability of the instrument Pilot study Data collection procedure * Teaching Learning Activity * Lecture discussion * Reading assignment on examples of data collection tools * Preparation of sample data collection tools * Conduct group research project
VI	4	* Analyze, interpret and summarize the research data	Analysis of data: * Compilation, Tabulation, classification, summarization, presentation, interpretation of data Teaching Learning Activity * Lecture discussion * Preparation of sample tables
VII	15	* Explain the use of statistics, scales of measurement and graphical presentation of data * Describe the	Introduction to statistics * Definition, use of statistics, scales of measurement * Frequency distribution and graphical presentation of India * Mean, Median, Mode, Standard deviation * Normal probability and tests of significance.

		measures of central	* Co-efficient of correlation
		tendency and	* Statistical packages and its application
		variability and	
		methods of	
		correlaton.	Teaching Learning Activity
			* Lecture discussion
			* Practice on graphical presentation
			* Practice on computation of measures of central
			tendency, variability and correlation
VIII	4	* Communicate and	Communication and Utilization of Research
		utilize the research	* Communication of Research findings
		findings	 Verbal report
			 Writing research report
			 Writing scientific article/paper
			- Critical review of published research
			 Utilization of research findings
			Teaching Learning Activity
			* Lecture discussion
			* Read / presentations of a sample published /
			unpublished research report
			* Writing group research project

• Nursing Research and Statistics

Nursing Research & Statistics – Nursing Research should be of 65 marks and Statistics of 35 marks.

Table 9 – B: Distribution of Type of Questions and Marks for Nursing Research (65 marks)

Type of Questions	No. of Questions	Marks	Sub-total
Long Essay (LE)	1	10	10
Short Essay (SE)	8	5	40
Short Answer (SA)	6	3	15
Total Marks			65

Table 9(C): Distribution of Type of Questions and Marks for Statistics (35 marks)

Type of Questions	No. of Questions	Marks	Sub-total
Long Essay (LE)	-	-	
Short Essay (SE)	4	5	20
Short Answer (SA)	5	3	15
Total Marks			35

No Practical examination.

Management of Nursing Services and Education

Placement: Fourth Year **Time**: Theory - 90 Hours

Course Description: This course is designed to enable students to acquire understanding of management of clinical and community health nursing services, nursing educational programmes. This is also designed to enable students to acquire understanding of the professional responsibilities, prospects and contribution to the growth of the profession.

Unit		me rs)	Learning Objectives	Content and Teaching Learning Activities
	Th	rs) Pr	Objectives	
I	4		* Explain the principles and functions of management	Introduction to management in nursing * Definition, concepts and theories * Functions of management * Principles of Management * Role of Nurse as a manager Teaching Learning Activities * Lecture Discussion * Explain using organization chart
II	5		* Describe the elements and process of management	* Planning; mission, philosophy, objectives, operational plan * Staffing: Philosophy, staffing study, norms, activities, patient, classification systems, scheduling * Human resource management; recruiting, selecting, deployment, retaining, promoting, super annuation etc * Budgeting: concept, principles, types, cost benefit analysis, audit * Material management: equipment and supplies * Directing process (Leading) * Controlling: Quality management * program Evaluation Review Technique (PERT), Bench marking, Activity Plan (Gantt Chart), Teaching Learning Activities * Lecture Discussion * Simulated Exercises * Case studies
III	8	20	* Describe the Management of	Management of nursing services in the hospital and Community

nursing services in	* Planning:
the hospital and	 Hospital and patient care units including ward
community	management
	 Emergency and disaster management
	* Human resource management:
	o Recruiting, selecting, deployment, retaining,
	promoting, superannuation etc.
	o Categories of nursing personnel including job
	description of all levels
	o Patient /population classification systems
	o Patients/population assignment and Nursing
	care responsibilities
	 Staff development and welfare * Budgeting: proposal, projecting requirements for
	staff, equipments and supplies for
	 Hospital and patient care units
	 Emergency and disaster management
	* Material Management; procurement, inventory
	control, auditing and maintenance in
	 Hospital and patient care units
	 Emergency and disaster management
	* Directing and leading: delegation, participatory
	management
	 Assignments, rotations, delegations
	 Supervision & guidance
	 Implement standards, policies, procedures and
	practices
	Staff development and welfare
	o Maintenance of discipline
	* Controlling / Evaluation:
	 Nursing Rounds/visits, Nursing protocols, Manuals
	Quality Assurance Model, documentation-
	 Quanty Assurance Model, documentation- Records and report
	Performance appraisal
	Terrormance appraisar
	Teaching Learning Activity
	* Lecture Discussion
	* Demonstra-tion
	* Simulated Exercises
	* Case studies
	* Supervised practice in ward-writing indents,
	preparing duty roaster, ward supervision
	* Assignment on duties and responsibilities of ward
	sister
	* Writing report

			* Assessment of the assignments * Performance evaluation by ward sister with rating scale
IV	5	* Describe the concepts, theories and techniques of Organizational behaviour and human relations	Organizational behaviour and human relations * Concepts and theories of organizational behaviours * Review of Channels of communication * Leadership styles * Review of Motivation; concepts and theories * Group dynamics * Techniques of; Ocommunication; and Interpersonal relationships Human relations; * Public relations in context of nursing * Relations with professional associations and employee unions and Collective bargaining * Teaching Learning Activity * Lecture Discussion * Role plays * Group games * Self assessment * Case discussion * Practice Session * Assessment of problem solving
V	5	* Participate in planning and organizing in service education program	In Service education * Nature & scope of in -service education program, * Organization of in-service education * Principles of adult learning, * Planning for in-service education program, techniques, methods and evaluation of staff education program. * Preparation of report Teaching Learning Activity * Lecture Discussion * Plan and conduct an educational session for in service nursing personnel * Assess the planning & conduct of the educational session
VI	10	* Describe management of Nursing education	Management of nursing educational institutions * Establishment of Nursing educational institution-INC norms and guidelines

		institutions	* Co-ordination with-
		mstitutions	Regulatory bodies
			Accreditation
			A 0011
			- Philosophy/objectives
			- Organization
			o Structure
			O Committees
			- Physical facilities
			o College/School
			o Hostel
			- Students
			Selection
			 Admission
			 Guidance and Counseling
			 Maintaining discipline
			- Faculty and staff
			o Selection
			o Recruitment
			 Job description
			o Placement
			 Performance appraisal
			 Development and welfare
			Budgeting
			 Equipments and supplies: audio visual
			equipments, laboratory equipment, books,
			journals etc.
			 Curriculum; Planning, implementation and
			evaluation,
			Clinical facilities
			• Transport facilities
			Institutional Records and reports –
			Administrative, faculty, staff and students.
			Teaching Learning Activity
			* Lecture Discussion
			* Role plays
			* Counseling session
			* Group Exercises
VII	10	* Describe the	Nursing as a Profession
		ethical and legal	* Nursing as a profession
		responsibilities of a	 Philosophy; nursing practice
		professional nurse.	 Aims and objectives
		* Explain the	 Characteristics of a professional nurse
		nursing practice	o Regulatory bodies; INC, SNC Acts; -
		standards	Constitution, functions

			 ○ Current trends and issues in Nursing * Professional ethics ○ Code of ethics; INC, ICN ○ Code of professional conduct; INC, ICN * Practice standards for Nursing; INC * Consumer protection Act * Legal aspects in Nursing ○ Legal terms related to practice; registration and licensing ○ Laws related to Nursing practice, Breach and Penalties ○ Malpractice and negligence * Teaching Learning Activity * Lecture Discussion * Case discussion * Panel discussion * Role plays * Critical incidents * Visit to INC/SNRCs * Assessment of critical incidents
VIII	3	* Explain the various	Professional Advancement: * Continuing education
		opportunities for	* Career opportunities
		professional advancement	* Collective bargaining
		advancement	* Membership with professional organization; National and International
			* Participation in research activities
			* Publications; Journals, newspapers etc.
			Teaching Learning Activity
			* Lecture Discussion
1			4.50
			* Review / Presentation of published articles * Group work on maintenance of bulletin board.

Scheme of University Examination for Management of Nursing Services and Education

Theory

There shall be one theory paper of three hours duration carrying 100 marks. Distribution of type of questions and marks for Management of Nursing Services and Education shall be as given under.

Distribution of Type of Quest0ions and Marks for Management of Nursing Services and Education

Type of Questions	No. of Questions	Marks	Sub-total
Long Essay (LE)	2	10	20
Short Essay (SE)	10	5	50
Short Answer (SA)	10	3	30
Total Marks			100

Note: No practical examination

ANNEXURE - I
BIO-MEDICAL WASTE MANAGEMENT

WASTE CATEGORY NO.	WASTE CATEGORY TYPE	TREATMENT & DISPOSAL OPTIONS	SUBJECT/YEAR OF STUDY
Category No. 1	Animal Waste: (Animal tissues, organs, body parts, carcasses, bleeding parts, fluid, blood and experimental animals used in research, waste generated by veterinary hospitals; colleges, discharge from hospitals; animal houses.	Incineration [@] /deep burial*	II year Unit III Community Health nursing - 1 hr.
Category No. 2	Microbiology & Biotechnology waste: (Waste from laboratory cultures, stocks of specimens of microorganisms live or attenuated vaccines, human and animal cell cultures used in research and infectious agents from research and industrial laboratories, wastes from production of biological, toxins, dishes and devices used for transfer of cultures.)	Local autoclaving / micro waving / incineration [@]	<u>I year</u> Unit IV Microbiology – 1 hr.

Category No. 3	Waste Sharps: (Needles, syringes, scaples, blades, glass etc. that may cause puncture and cuts. This includes both used and unused sharps.)	Disinfection (Chemical treatment / # autoclaving/ micro waving and mutilation/ shredding **	<u>I Year</u> Nursing Foundation – 1 hr. Unit – III
Category No. 4	Discarded Medicines and Cytotoxic Drugs: (Wastes comprising of outdated, contaminated and discarded medicines)	Incineration@/ destruction and drugs disposal in secured landfills	<u>I year</u> Nursing Foundation – 1 hr. Unit- III
Category No. 5	Soiled Waste: (items contaminated with blood and body fluids including cotton, dressings, soiled plaster casts, liners, bleedings and other material contaminated with blood)	Incineration @ autoclaving/ micro waving	<u>I Year</u> Nursing Foundation – 1 hr. Unit- III
Category No. 6	Liquid Waste: (Waste generated from laboratory and washing, cleaning, housekeeping and disinfecting activities)	Disinfection by chemical treatment and discharge into drains	I Year) Biochemistry and Biophysics – 1 hr. Unit III
Category No. 7	Chemical Waste: (Chemicals used in production of biological, chemicals used in disinfection, as insecticides etc.)	Chemical treatment and discharge into drains for liquids and secured landfill for solids.	I Year Biochemistry and Biophysics – 1 hr. Unit III

- # Chemical treatment using at least 1% hypo chloride solution or any other equivalent chemical reagent. It must be ensured that chemical treatment ensures disinfection.
- ** Mutilation / shredding must be such so as to prevent unauthorized reuse.
- @ There will be no chemical pretreatment before incineration. Chlorinated plastics shall not be incinerated.

* Deep burial shall be an option available only in towns with population less than five lakhs and in rural areas.

1 b) COLOUR CODING AND TYPE OF CONTAINER FOR DISPOSAL OF BIOMEDICAL WASTES

Colour Coding	Type of Container	Waste Category	Treatment Options
Yellow	Plastic bag	Cat. 1, Cat. 2 and	Incineration/ deep
		Cat. 5	burial
Red	Disinfected	Cat. 2 and Cat. 5	Autoclaving/ Micro
	container/ Plastic		waving and
	bag		chemical treatment
Blue/ White	Plastic bag/	Cat. 3	Autoclaving/ Micro
translucent	Puncture proof		waving /chemical
	container		treatment and
			destruction/
			shredding
Black	Plastic bag	Cat. 4 and Cat. 7	Disposal in secured
		(solid)	landfill

- Waste collection bags for waste types needing incineration shall not be made of chlorinated plastics.
- Categories 6 and 7 (liquid) do not require containers/ bags.
- Category 2 if disinfected locally need not be put in containers/bags.

Examination

Note: One short answer or short essay questions pertaining to the above chapters in their respective subjects may be asked

Books

- I) Text book for Environmental Studies 2004 Erach Bharucha University Grants Commision, New Delhi.
- II) Journal of the Indian Society of Hospital Waste Management Dr. D.G. Gopinath, Volume - 2, Issue - I, 2004.
- III) Biomedical wastage (Management and handling) Rules 1998, Ministry of Forests and Environment, Government of India.
- IV) J. E. Park Preventive & social medicine Ed. 18 M/S Banarsidas Bhanot Jabalpur 2005
- V) Potter and Perry Fundamentals of Nursing ed. Sixth Mosby St. Louis Missouri 2005
- VI) Barbara Kozier Fundamentals of Nursing ed. Fourth Addison Wesley Canada 1991
- VII) Text Book of Microbiology Ananth Narayan ed. 7th Orient Longman Chennai 2005