

MSE -421 Product Design and Development

Introduction: Definitions; What is industrial design; Assessing the need for ID; Product and process cycles; **Ethics**; Societal and economic considerations in engineering; Technological forecasting; Technological innovation and design process. Importance of product design; Considerations of a good design; Detailed descriptions of design process; Role of marketing; Organization for design and role of computers in design; Product development process.

Concept generation & concept selection: Concept generation process; Basic methods; Information gathering and brain storming; Conventional aids; brain ball; C-Sketch/6-3-5 method; advanced methods: Direct search; Systematic search with physical principles and classifying schemes: Morphological analysis; Factors that determine effective decision making; Estimating technical feasibility; Concept selection process- basic and advanced methods.

Product Planning: The product planning process; Identifying customer needs; product specification; standardization; Concept of generation; Concept of selection; Concept of Testing; Product Architecture; Industrial Design: Assessing the need for Industrial design; Impact of Industrial Design; Industrial design process; Management of the Industrial Design; Assessing the quality of Industrial design.

Product Modeling: Model preparation & selection method; Construction of product models; Physical models/ prototypes; Types of prototypes; Uses of prototypes; Rapid prototyping techniques; Dimensional analysis; Similitude and scale models; Geometrical modeling on the computer; Computer visualization.

Design for Robustness: Quality design theory; General robust design model; Robust design model construction; Taguchi's method; Noise variable matrix; Design variable matrix; Experimental matrix; Signal to noise ratio; Selection of target design; Optimization methods; Evaluation considerations in optimization; Design optimization.

Design for Manufacturing: Estimation of manufacturing costs; Reducing the cost of components and assemblies; Design for assembly; Design for piece part production; Cost driver modeling and manufacturing cost analysis; Human factors in design; anthropometry; ergonomic considerations.

Product Development Economics: Product Development Economics; Elements of Economic analysis; Cost analysis; Cost reduction and value analysis techniques; Patents and Intellectual property.



Note: The examiner is required to set EIGHT questions in all carrying equal marks covering the entire syllabus. The candidate is required to attempt FIVE questions.

Recommended Books:

- Ulrich Karl T and Eppinger Steven D; "*Product design and Development*"; McGraw-Hill Inc; 2000.
- Trott Paul; "*Innovation Management and New Product Development*"; Financial Times Professional Ltd; London; 2000.
- Otto Kelvin and Wood Kristen; "*Product Design*"; Pearson Education; Delhi; 2001.
- Bruce M and Cooper Rachel; "*Creative Product Design*"; John Wiley & Sons Ltd.; New York; 2000
- R. Paneerselvam; "*Engineering Economics*"; Prentice Hall of India (PHI); New Delhi; 2004.
- Hartman; "*Engineering Economy and Decision Making Process*"; Pearson Education Asia; 2007.



M.Com 1.1: Organization Theory and Behavior

Management functions; roles and skills; effective versus successful managerial activities; what is organizational behavior (OB); contributing disciplines to the OB field; changes and opportunities for OB; responding to globalization; managing workforce diversity; improving quality and productivity; improving customer service; improving people skills; developing an OB model; towards a contingency OB model

Foundations of individual behavior; biographical characteristics; ability and learning; values; the importance of values; types of values; values, loyalty, and ethical behavior; values across cultures; attitudes; types of attitudes; attitudes and consistency; cognitive dissonance theory; job satisfaction; measuring job satisfaction; employee performance; dissatisfaction; job satisfaction and customer satisfaction

Case Study

What is personality; personality determinants; traits; personality attributes influencing OB; achieving personality fit?

What are emotions; felt versus displayed emotions; emotion dimensions; gender and emotions; external constraints on emotions; OB applications

What is perception; factors influencing perception; person perception – making judgments about others; link between perception and individual decision-making; decision-making in organizations; ethics in decision-making.

Defining motivation; hierarchy of needs theory; theory X and theory Y; two-factor theory; contemporary theories of motivation.

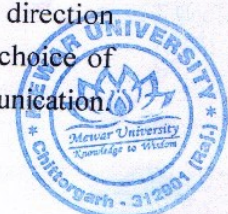
Management by objectives; employee recognition programmes; employee involvement programs; variable pay programs; skill-based pay plans; flexible benefits; special issues in motivation

Case Study

Foundations of group behavior; defining and classifying groups; stages of group development; workgroup behavior; external conditions and groups; group member resources; group structure; group processes; group tasks; group decision-making; group decision-making techniques

Types of teams; creating effective teams; turning individuals into team players; contemporary issues in managing teams

What is communication; functions of communication; the communication process; direction of communication; interpersonal communication; organizational communication; choice of communication channels; barriers to effective communication; current issues in communication



Case Study

What is leadership; trait theories; behavioral theories; contingency theories; trust – the foundation of leadership; leaders as shapers of meaning; the art of framing; emotional intelligence and leadership effectiveness; contemporary leadership roles; moral leadership roles; moral leadership; online leadership; challenges to the leadership construct; finding and creating effective leaders

A definition of conflict; transitions of conflict thought; functional versus dysfunctional conflict; five stages of the conflict process; negotiation; bargaining strategies; the negotiation process; issues in negotiation

Case Study

Organizational change; forces for change; managing planned change; resistance to change; approaches to managing organizational change; contemporary change issues; work stress and its management



Compulsory Text

St Stephen P Robbins, *Organizational Behavior* (New Delhi: Pearson Education, 2003)

Recommended Text

Subba Rao, *Management and Organizational Behavior* (New Delhi: Himalaya Publishing, 2003)

S P Robbins, *Organizational Behavior: Concepts, Controversies, Applications* (New Delhi: PrenticeHall, 1998)

Fred Luthano, *Organizational Behavior* (New York: McGraw-Hill Higher Education, 2002)

I S P Rao and Narayana V S, *Organization Theory and Behavior* (New Delhi: Konark Publishers, 1987)



TE-432-Design of Thermal Systems

Modeling of Thermal Systems: types of models, mathematical modeling, curve fitting, linear algebraic systems, numerical model for a system, system simulation, methods for numerical simulation;

Acceptable Design of a Thermal System: initial design, design strategies, design of systems from different application areas, additional considerations for large practical systems; Economic Considerations: calculation of interest, worth of money as a function of time, series of payments, raising capital, taxes, economic factor in design, application to thermal systems;

Problem Formulation for Optimization: optimization methods, optimization of thermal systems, practical aspects in optimal design, Lagrange multipliers, optimization of constrained and unconstrained problems, applicability to thermal systems; search methods: single-variable problem, multivariable constrained optimization, examples of thermal systems; geometric, linear, and dynamic programming and other methods for optimization, knowledge-based design and additional considerations, professional ethics.

Text Books

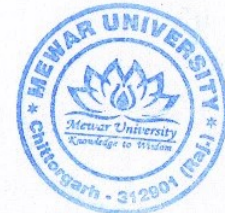
W.F. Stoecker, Design of Thermal Systems - McGraw-Hill, 1971

References

Y. Jaluria, Design and Optimization of Thermal Systems - CRC Press, 2007.

Bejan, G. Tsatsaronis, M.J. Moran, Thermal Design and Optimization - Wiley, 1996.

R. F. Boehm, Developments in the Design of Thermal Systems - Cambridge



PHARMACEUTICAL VALIDATION (MQA
202T)

Scope

The main purpose of the subject is to understand about validation and how it can be applied to industry and thus improve the quality of the products. The subject covers the complete information about validation, types, methodology and application.

Objectives

At completion of this course, it is expected that students will be able to understand

- The concepts of calibration, qualification and validation
- The qualification of various equipments and instruments
- Process validation of different dosage forms
- Validation of analytical method for estimation of drugs
- Cleaning validation of equipments employed in the manufacture of pharmaceuticals

THEORY

60 Hrs

1. Introduction to validation: Definition of Calibration, Qualification and Validation, Scope, frequency and importance. Difference between calibration and validation. Calibration of weights and measures. Advantages of Validation, scope of Validation, Organization for Validation, Validation Master plan, Types of Validation, Streamlining of qualification & Validation process and Validation Master Plan.
Qualification: User requirement specification, Design qualification, Factory Acceptance Test (FAT)/Site Acceptance Test (SAT), Installation qualification, Operational qualification, Performance qualification, Re-Qualification (Maintaining status-Calibration Preventive Maintenance, Change management). 10 Hrs
- 2 Qualification of manufacturing equipment: Dry Powder Mixers, Fluid Bed and Tray dryers, Tablet Compression (Machine), Dry heat sterilization/Tunnels, Autoclaves, Membrane filtration, Capsule filling machine. Qualification of analytical instruments: UV-Visible spectrophotometer, FTIR, DSC, GC, HPLC, HPTLC, LC-MS.



- 3 Qualification of laboratory equipments: Hardness tester, Friability test apparatus, tap density tester, Disintegration tester, Dissolution test apparatus
Validation of Utility systems: Pharmaceutical water system & pure steam, HVAC system, Compressed air and nitrogen. 10 Hrs
- 4 Process Validation: Concept, Process and documentation of Process Validation. Prospective, Concurrent & Retrospective Validation, Re validation criteria, Process Validation of various formulations (Coated tablets, Capsules, Ointment/Creams, Liquid Orals and aerosols.), Aseptic filling: Media fill validation, USFDA guidelines on Process Validation- A life cycle approach. 10 Hrs
Analytical method validation: General principles, Validation of analytical method as per ICH guidelines and USP.
- 5 Cleaning Validation: Cleaning Method development, Validation of analytical method used in cleaning, Cleaning of Equipment, Cleaning of Facilities. Cleaning in place (CIP). 10 Hrs
Validation of facilities in sterile and non-sterile plant.
Computerized system validation: Electronic records and digital signature - 21 CFR Part 11 and GAMP
- 6 General Principles of Intellectual Property: Concepts of Intellectual Property (IP), Intellectual Property Protection (IPP), Intellectual Property Rights (IPR); Economic importance, mechanism for protection of Intellectual Property –patents, Copyright, Trademark; Factors affecting choice of IP protection; Penalties for violation; Role of IP in pharmaceutical industry; Global ramification and financial implications. Filing a patent applications; patent application forms and guidelines. Types patent applications-provisional and non provisional, PCT and convention patent applications; International patenting requirement procedures and costs; Rights and responsibilities of a patentee; Practical aspects regarding maintaining of a Patent file; Patent infringement meaning and scope. Significance of transfer technology (TOT), IP and ethics-positive and negative aspects of IPP; Societal responsibility, avoiding unethical practices.



REFERENCES

1. B. T. Loftus & R. A. Nash, "Pharmaceutical Process Validation", Drugs and Pharm Sci. Series, Vol. 129, 3rd Ed., Marcel Dekker Inc., N.Y.
2. The Theory & Practice of Industrial Pharmacy, 3rd edition, Leon Lachman, Herbert A. Lieberman, Joseph. L. Karig, Varghese Publishing House, Bombay.
3. Validation Master plan by Terveeks or Deeks, Davis Harwood International publishing.
4. Validation of Aseptic Pharmaceutical Processes, 2nd Edition, by Carleton & Agalloco, (Marcel Dekker).
6. Michael Levin, Pharmaceutical Process Scale-Up", Drugs and Pharm. Sci. Series, Vol. 157, 2nd Ed., Marcel Dekker Inc., N.Y.
7. Validation Standard Operating Procedures: A Step by Step Guide for Achieving Compliance in the Pharmaceutical, Medical Device, and Biotech Industries, Syed Imtiaz Haider
8. Pharmaceutical Equipment Validation: The Ultimate Qualification Handbook, Phillip A. Cloud, Interpharm Press
9. Validation of Pharmaceutical Processes: Sterile Products, Frederick J. Carlton (Ed.) and James Agalloco (Ed.), Marcel Dekker
10. Analytical Method validation and Instrument Performance Verification by Churg Chan, Heiman Lam, Y.C. Lee, Yue. Zhang, Wiley Interscience.
11. Huber L. Validation and Qualification in Analytical Laboratories. Informa Healthcare
12. Wingate G. Validating Corporate Computer Systems: Good IT Practice for Pharmaceutical Manufacturers. Interpharm Press
13. LeBlanc DA. Validated Cleaning Technologies for Pharmaceutical Manufacturing. Interpharm Press



Paper V: DSE2 (M3BOT-ET02): ADVANCED PLANT ECOLOGY ECOSYSTEM AND ECOSYSTEM ANALYSIS (THEORY)

UNIT - I

Ecosystem- concept, structure and function; energetics, cybernetics, homeostasis.

UNIT - II

Flow of energy, cycling of materials, organic production in different types of ecosystem. forest, grassland, fresh water and marine ecosystems. Natural and man-made ecosystems.

UNIT - III

Renewable and non renewable energy- renewable and non-renewable energy sources. fossil fuels-classification, composition, physic-chemical characteristics and energy content of coal, crude oil, natural gas, hydroelectric power nuclear energy-fission and fusion .radioactive waste management. energy conservation. biomass and bioenergy, production ,energy plantation, energy and microbes.

UNIT - IV

Ecosystem analysis: models of population growth and interactions mineral resources. Environmental impacts of exploitation of minerals and mining activities with reference to Rajasthan.

UNIT - V

Mineral and population. Aravalli's mining lands types of mine reclamation practice .Environmental monitoring, Environmental auditing .Environmental health, education and ethics.



M.A Education/Year-I

First Semester

Course I (EDU/MA/111) – Philosophical Foundations of Education

Objectives

To enable the prospective teacher educators:

- To understand the nature of education as a discipline
- To examine the philosophical origin of educational theory and practice
- To understand the nature and functions of philosophical approach of education.
- To interpret and synthesis of various concepts, philosophical assumptions and issues about educational phenomenon.
- To know about various Indian schools of philosophy and their educational implications.
- To appraise the contributions made for education by prominent Indian and western educational thinkers.
- To enable the student to develop a philosophical point of view towards educational problems.

Units

Lectures/credit hours

Unit-I:

15

Philosophy

- Philosophy, a directive doctrine and liberal discipline.
- Normative, speculative and analytical functions of philosophy.
- Branches of Philosophy – Metaphysics, Epistemology, Axiology, Aesthetics, Ethics, Logic

UNIT II

Philosophy of Education

16

- Philosophy of Education: its concept and significance for teachers; application of philosophy of education in teaching
- Relationship between Philosophy and Education.

UNIT III

16

Axiology an Education

Critical appreciation of contribution made by:

- Buddhism
- Jainism
- Bhagavadgita
- Ishlam

UNIT IV

18

Social Philosophies

- Critical analysis of the Educational implications of Individualism, Democracy, Socialism and Totalitarianism



- Critical analysis of the ways in which schooling, teaching-learning and curriculum influence social inequalities and ways in which social harmony can be established.
- Educational ideas of Karl Marx, Paulo Freire and Pierre Bourdieu

First Semester

Course II (EDU/MA/112) - Sociological Foundations of Education

Objectives

To enable the prospective teacher educators:

- To develop adequate familiarity with social structure, class, caste and culture.
- To help students to make a critical analysis of the social structure.
- To enable them to realize the role of education as an instrument of social, political, economic and technological change.

Units

Lectures

UNIT I

16

Introduction

- Sociology of education- concept, nature, scope, functions of sociology of education. Difference between educational sociology and sociology of education, need for a sociological approach in education.
- Education as a sub system of society in relation to interaction with other social institutions, as family, community, economy, political system, and religion.
- Social institutions and their role in development of attitude and Inculcation of values (with reference to family, community, school and youth organizations).

UNIT II

18

Sociological Perspectives in Education

- Social organization- concepts, definition characteristics, social groups, disorganization, differentiation and stratification- meaning, definition, characteristics and influencing factors.
- Social systems-functional and structural, education as a sub system of social system.
- Socialization-concept, mechanism and theories of socialization. Education and socialization. Need of socialization. Education as a sub system of socialization.

UNIT III

Agencies of Education In India

18

- Culture and education- meaning, nature and types of culture, role of education in the cultural context, cultural change, cultural crisis, with special reference to Indian society.
- Cultural unity and diversity in India, culture and society, culture and civilization.
- Social change-concepts, patterns characteristics and theories of social change, education as an instrument, factors and reflection of social change and social mobility, concept, types of mobility.



SEMESTER: I

| PSY-MA-111: RESEARCH METHODOLOGY | |
|--|--|
| Unit I | <ul style="list-style-type: none">▪ Research Process: Nature of research, Research Problem and hypothesis. Variables - Operational definition, criterion and predictor variables, selection, manipulation and control of independent and extraneous variables, measurement of dependent variables. |
| Unit II | <ul style="list-style-type: none">▪ Types of Research: Experimental, Quasi Experimental, Correlational Research and Ex-post facto research. Ethical issues in psychological research. |
| Unit III | <ul style="list-style-type: none">▪ Sampling: Meaning, Purpose and Types. Sampling error. Factors influencing sampling decision - size, accessibility and cost. |
| Unit IV | <ul style="list-style-type: none">▪ Research Design: Meaning, characteristics and purpose. Criteria of good research design. Between groups design, Within groups design and factorial design. Randomized and matched group designs. |
| Unit V | <ul style="list-style-type: none">▪ Methods of Data Collection and Report Writing: Observation, interview and questionnaire. Report Writing - Research Report Writing based on APA Style. Ethical issues in psychological research - APA ethics code. |
| Readings: | |
| <ol style="list-style-type: none">1. K.D. Broota (1992). Experimental Designs in Behavioural Research. New Delhi: Willey Eastern.2. F.N. Kerlinger (1973). Foundation of Behavioural Research. Delhi: Surjeet Publications.3. A.K. Gupta and R. Singh (2009). Research Methodology. New Delhi: Vayu Education of India.4. L.H. Kidder (1981). Research Methods in Social Science. Tokyo: Holt Saunders.5. C.J. Goodwin (1998). Research Psychology. New York: John Wiley and Sons. | |



MASTER OF PHYSIOTHERAPY (MPT) FIRST YEAR

RESEARCH METHODOLOGY WITH EVIDENCE BASED PRACTICE & BIostatISTICS

Course Code: MC -104

Section - I

1. Research in Physiotherapy

- a) Introduction
- b) Research for Physiotherapist: Why? How? and, when?
- c) Research – Definition, concept, purpose, approaches
- d) Internet sites for physiotherapists

2. Research Fundamentals

- a) Define measurement
- b) Measurement framework
- c) Scales of measurement
- d) Pilot study
- e) Types of variables
- f) Reliability & Validity
- g) Drawing tables, graphs, master chart etc.

3. Writing a research proposal, critiquing a research article

- a) Defining a problem
- b) Review of literature
- c) Formulating a question, operational definition
- d) Inclusion and Exclusion criteria
- e) Forming groups
- f) Data collection & analysis
- g) Results, Interpretation, Conclusion, Discussion
- h) Informed consent
- i) Limitations

4. Research Design

- a) Principle of designing
- b) Design, instrumentation & analysis for qualitative research
- c) Design, instrumentation & analysis for quantitative research
- d) Design, instrumentation & analysis for quasi-experimental research



e) Design models utilized in Physiotherapy

5. Research Ethics

- a) Importance of **Ethics** in Research
- b) Main ethical issues in human subjects research
- c) Main ethical principles that govern research with human subjects
- d) Components of an ethically valid informed consent for research



PEDAGOGY AND MANAGEMENT

Course Code: MC -105

1. Education

- a. Introduction
- b. Educational Philosophy – Idealism, Naturalism, Pragmatism
- c. Aims of Education
- d. Functions of Education
- e. Formal, informal and non-formal education
- f. Agencies of Education
- g. Current issues and Trends in Higher Education
- h. Issue of quality in Higher Education
- i. Autonomy and Accountability
- j. Privatization of Education

2. Concept of Teaching and Learning

- a. Meaning and scope of Educational Psychology
- b. Meaning and Relationship between teaching and learning
- c. Learning theories
- d. Dynamics of behavior
- e. Individual differences

3. Curriculum

- a. Meaning and concept
- b. Basis of curriculum formulation
- c. Framing objectives for curriculum
- d. Process of curriculum development and factors involved
- e. Evaluation of curriculum

4. Method and techniques of teaching

- a. Lecture
- b. Demonstration
- c. Discussion
- d. Seminar
- e. Assignment
- f. Project
- g. Case study

5. Planning for teaching



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- a. Bloom's taxonomy of instructional objectives
- b. Writing instructional objectives I behavioral terms
- c. Unit planning
- d. Lesson planning

6. Teaching Aids

- a. Types of teaching aids
- b. Principles of selection, preparation and use of audio-visual aids

7. Measurement and Evaluation

- a. Nature of educational measurement: meaning, process, types of tests
- b. Construction of an achievement test and its analysis
- c. Standardized test
- d. Introduction of some standardized tools, important tests of intelligence, aptitude and personality
- e. e. Continuous and comprehensive evaluation

8. Guidance and Counseling

- a. Meaning and concepts of guidance and counseling
- b. Principles of guidance and counseling

9. Awareness Programme

- a. Awareness and guidance to the common people about health and disease

Administration, Management & Ethics

UNIT – 1 – Management

1. Financial and Corporate Management
2. Marketing and Management
3. International Relations and Business
4. Organizational Behavior and Culture
5. Basic Economics

UNIT-II – Administration

1. Functions of management
2. Fundamentals of hospital administration
3. Management Process – Planning, Organization, Direction, Controlling, Decision Making
4. Personnel Management – Staffing, Recruitment, Selection, Performance appraisal, Collective bargaining, Job Satisfaction.



5. Total Quality management – basics, quality control, quality assurance, hospitals and medical audit, International Quality System, Six Sigma approach
6. Just in Time approach.

UNIT- III – Ethics & Legal Issues

1. Rules of Professional conduct
2. Legal responsibility
3. Code of ethics
4. Functions of Physiotherapy associations
5. Role of International health agencies
6. Standards of practice for Physiotherapists
7. Liability and obligations in the case of medical legal action
8. Law of disability and discrimination
9. Confidentiality of the Patient's status
10. Consumer Protection Law, Health law



HUMAN GENETICS AND GENOME

MMLT 205

UNIT-I

Structure of DNA. Histone proteins, Nucleosome, Solenoid structure, Molecular organization of DNA in chromosomes. Heterochromatin and Euchromatin. Human mitochondrial DNA. DNA replication – nuclear and mitochondrial, Transcription, Translation, control of gene expression – Eukaryotic.

UNIT-II

Introduction of recombinant DNA Technology, Human genome mapping, RFLP, Yeast artificial chromosome, bacterial artificial chromosome, PI derived artificial chromosome, MICRO SATELLITES, AND single nucleotide polymorphism

UNIT-III

Inherited human disease-single gene-disease, complete traits. Identification and isolation of disease genes- positional cloning function cloning, DNA and cDNA microarrays. Yeast two-hybrid system. Statistical methods for genetic analysis of complex traits, cancer genetics.

UNIT-IV

Immunogenetics; pre-natal diagnosis- chronic villus sampling, amniocentesis. Pre-implantation diagnosis. Genetic diagnosis. Genetic counseling. Gene therapy- concept, vectors, gene targeting, and tissue-specific expression. **Ethics** and human genetics. Introduction to pharmacogenomics and toxicogenomic.



(MMLT 304) CLINICAL MICROBIOLOGY

Unit I

Epidemiology of infectious diseases. Biomedical waste management, Animal and human ethics involve in microbiological work.

Selection of diagnostic test: Analysis of test verification and validation, Bioassays of vitamins and antibiotics, sterility test, antimicrobial susceptibility testing, End toxin test (procedure and significance. Quality control in a microbiology lab – QA, QC Program.

Unit II

Biochemical test for identification of bacteria, lab diagnosis of bacterial diseases: Diphtheria, tuberculosis, typhoid, cholera, Gonorrhoea, UTI, Food poisoning.

Classification of fungal diseases their identification, transmission drug sensitivity testing, and immunity to fungal infection.

Unit III

Introduction of parasitic infection: General characteristics of blood and intestinal parasite. Processing of body fluid and stool specimens for identification of parasites culture techniques and animal inoculation

Cultivation of animal virus and viral serological and molecular techniques

Unit IV

Statistical analysis of Microbiological Data and research: Introduction to Mean, Mode, Median, Mean Deviation, Standard deviation, coefficient of variation correlation and Regression analysis

Theorems: Probability and sampling- t, Z and F test of significance, a small and large sample of medical significances of Chi-square test.



FIRST SEMESTER

MASW111: History and Philosophy of Social Work

Unit – I

- Meaning, objectives and scope of social work;
- Role and functions of social work – Welfare versus development orientation;
- Values, Principles and philosophy of social work;
- Profession- meaning and elements, professional code of ethics, Professionalization of social work, interface between voluntary and professional social work;

Unit – II

- Emerging ideologies of professional social work in India, historical development of social work education in India;
- Units of social work intervention and dynamics therein- individual, family, groups, organizations, and communities;
- Social work profession as a change agent;
- Integrated social work and place in social work practice;

Unit –III

- Social service and reform tradition in India- ancient period, the medieval period, and modern period;
- Hindu reform movement, Dalit movement, Gandhian ideology and Sarvodaya movement, 20-point programme- Gandhian approach to social work;

Unit – IV

- Ideology of Indian constitution, ideology of voluntary organization and voluntary action and social work practice;

Unit – V

- History of social work in the U.K. and U.S.A. from Charity to Radical social work – organized and scientific charity, Indeo-Christian Ideologies, secular humanism and Protestantism, welfarism, liberalism and democracy, socialism and human right;
- Problems of social work practice & recognition of social work profession in India.

References:

1. Archana, T. – Social Advocacy- Perspective of Social Work, Bombay: College of social work.
2. Bailey, R. & Brake, M. (1975) – Radical Social Work, Edward Arnold.
3. Banks, S. (1995) – Ethics and Values in Social Work: Practical Social Work Series, London: Macmillan Press Ltd.
4. Bartlett, Harriett (1970) – The Common Base of Social Work Practice, National Association of Social Workers, 2 Park Avenue, N.Y.
5. Bisno, Herbert – The Philosophy of Social Work.
6. Clock, G. & Asquith, S. (1985) – Social Work and Social Philosophy, London: Routledge & Kegan Paul.



BRIT - 4TH SEMESTER

HOSPITAL PRACTICE & CARE OF PATIENT

| | |
|---------------|---|
| Chapter 1- | Introduction to hospital staffing- Hospital staffing and administration |
| | Medical records and documentation- Medical records and documentation |
| Chapter 2- | Legal issues Legal issues in radiology department, PCPNDT Act |
| Chapter 3- | Professional ethics Professional ethics and Code of conduct of radiographer |
| Chapter 4- | Handling of patients Seriously ill and traumatized patients, visually impaired, hearing and speech impaired patients, mentally impaired patients, infectious patients |
| Chapter 5- | Departmental Safety Safety from hazards due to radiation, electricity etc |
| Chapter 6- | Vitals signs Vitals signs. How to measure vital signs |
| Chapter 7- | Body mechanics and transferring of patient Draw sheet lift, use of slide boards, wheelchair to couch, couch to wheelchair, couch to table, three men lift and four men lift |
| Chapter 8- | First aid Artificial respiration, haemostasis, first aid techniques, ABCD management |
| Chapter 9- | Adverse reactions Management of adverse reactions to contrast media |



BRIT 4TH SEMESTER

Radiation Hazards & Protection-II

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| Chapter 1 | AERB safety code and ethics Built in safety specifications for diagnostic x-ray, Fluoroscopy and CT units |
| | Specifications for radiation protection devices-room layout. |
| | Operational safety-Radiation protection programme |
| | Personnel requirements and responsibilities-regulatory controls |
| Chapter 2 | Patient protection-Safe work practice in diagnostic radiology |
| | Radiation absorbed dose from general dental fluoroscopy |
| | Radiation absorbed dose in X-Ray and CT examinations |
| | X-ray examinations during pregnancy |
| | X-ray examinations associated with illness, not associated with illness- medico-legal or insurance purpose x-ray examination- medical research x-ray avoidance of unnecessary radiation dose |
| Chapter 3 | Radiation emergencies- situation handling |
| | Safety and prevention- legal requirements recent developments in radiation safety related topics |

PRACTICAL

Radiation Hazards & Protection-II

- Use of TLD film badges, GM counters, Scintillation detectors, Liquid scintillator, Pocket dosimeters and use of protective devices etc. Keeping of dose records of radiation workers, steps after high exposure report and investigations.
- Biological effects of radiation- The cell effect of ionizing radiation on cell. Somatic effects and hereditary effect. Stochastic and deterministic effect.

Quality Assurance & Quality Control

- Quality control tests for X-ray unit.
- Quality control tests for radiation leakage
- Quality control tests for cassettes
- Quality control tests for radiation shielding devices.

