

# MD Child and Adolescent Psychiatry-Phase A

## Block wise contents of the Syllabus

Following are the divisions of syllabus for each Block. Residents are expected to complete the contents of each block during their placements and training rotations. The contents are subjects of evaluation during End Block Assessment.

### Block-1: General Psychiatry

#### Basic Sciences Relevant to Psychiatry

- I. **Neuroanatomy:** Structure of the nerve, plasma membrane, nerve cell process. The types of cell found within nervous system. Neuronal synapses. The general anatomy of the brain, cranial nerves and spinal cord. Functions of the lobes and some major gyri including prefrontal cortex, cingulate gyrus and limbic system. The anatomy of the basal ganglia. The internal anatomy of the temporal lobes especially hippocampal formation, amygdala and reticular formation, the major white matter pathways, corpus callosum. Papez's circuit and other circuits relevant to integrated behaviour. The major neurochemical pathways.
- II. **Neurophysiology:** The basic concepts in the physiology of nervous system, synapses and receptors, including synthesis, release and uptake of transmitters. Basic knowledge of action potentials, resting potentials, ion fluxes and channels etc. The physiology of nervous system involved in integrated behavior including perception pain, memory, motor function, arousal, drives and the emotions including aggression fear and stress Knowledge of disturbances of their functions with relevance to organic and nonorganic psychiatry. Tin localization of cerebral functions throughout the life span and their relevance to the effects of injury at different ages to the brain and behavior. An understanding of neurodevelopmental models of psychiatric disorders and of cerebral plasticity. A basic knowledge of the physiology of arousal and sleep with particular reference to noradrenergic activity and the locus ceruleus. Nature of dream and its relationship with sleep. The normal EEG and evoked response techniques. Their application in investigation of cerebral pathology, seizure disorders, sleep and psychiatric disorders. The effects of drug and different disorders on EEG.
- III. **Neuroendocrinology:** The physiology of nervous and endocrine systems involved in integrated behavior including perception, pain, memory, motor function, arousal, drives and the emotions including aggression, fear and stress. Knowledge of disturbances of their functions with relevance to organic and nonorganic psychiatry. An understanding of the neuroendocrine system, specially the control system of the secretion of hypothalamic and pituitary hormones, and posterior pituitary function. A basic-understanding of neuroendocrine rhythms and their disturbances in psychiatric disorders.
- IV. **Neurochemistry:** Neurotransmitters: synthesis, storage and release Ion channels and calcium flux in relation to ion channels. Receptors: structures and function in relation to the transmitters listed below in pre-synaptic and post-synaptic receptors. Basic biochemistry of noradrenalin, serotonin, dopamine, GABA, acetylcholine, excitatory amino acids. Neuropeptides: Elementary knowledge of neuropeptides, particularly corticotrophin releasing hormone and cholecystokinin, enkephalins and endorphins. Chronobiology.

V. **Psychopharmacology:**

*General principles:* a brief historical review of the development of psychotropic drugs and classification of psycho tropics. The principles of rational prescribing of psychotropics. Pharmacokinetics: general principles of absorption, distribution, metabolism and elimination. Comparison of different routes of administration as they affect drug availability, elimination and access to the brain through blood-brain barrier. Relationship between plasma drug level and therapeutic response. Pharmacodynamics: synaptic receptor complexity, subtypes of receptors, phenomenon of receptor up/down regulation. The principal CNS pharmacology of psycho tropics with particular attention to their postulated mechanism of action in achieving therapeutic effect at both synaptic, molecular and system levels.

VI. **Behavioural Science:**

*Basic Psychology:* Introduction to psychology and its major perspectives: behavioural (learning), developmental, cognitive, and psychoanalytic. Sensation and perception: basic principles of visual and auditory perception. The relevance of perceptual theory of illusions, hallucinations and other psychopathology. The process of perception- organization and perception, interpretation and perception. Motivation: theories of motivation. Classification of needs with emphasis on Maslow's hierarchy of needs. Internal and external sources of motivation. Eating disorders. Human obesity. Important social motives. Emotion: development of emotion, components of emotional response, nature and classification. Theories of emotion. Cognitive appraisal, differentiation and the status of primary. Emotion and performance. Learning: learning theories including classical, operant, observational and cognitive models. The concepts of extinction and reinforcement. Nature and schedules of reinforcement. Learning process and etiological formulation of clinical problems. Escape and avoidance learning. The cognitive approach to learning. Clinical application of reinforcement in behaviour therapy. Use of punishment. Memory: memory systems and information processing. Type of memory process of encoding, storage and retrieval. The process of forgetting, emotional factors and retrieval. Distribution, inference, schemata and elaboration in retrieval. The relevance of this to memory disorders and their assessment. Improving memory. Memory and brain.

*Developmental Psychology:* Basic framework for conceptualizing the development: nature and nurture, stage theories, maturational tasks, maturity. Examination of gene-environment interactions. Relative influence of early reasons and later adversities. Impact of specific adversities such as trauma/abuse on development. Historical models - Freud and Neo-Freudians, Social learning, Piaget. Attachment: theories of attachment and its relevance to development. Classification and outcome of attachment. Maternal deprivation and its consequences. Brief consideration of neonatal/infantile-maternal bonding. Adult attachment behaviour. Family: family relationship and parenting practice: Influence of parental attitudes compared with parenting practice. Some aspects of distorted family function e.g. discord, overprotection, rejection, enmeshment, and disengagement. The impact of family factors on subsequent development of the child. Family structure and influence on development. Temperament: individual temperamental difference and their impact on parent child relationships. Origins, types and stability of temperament and the evolution of character and personality. Childhood vulnerability and protective factors with respect to mental health.

## **Comprehensive Psychiatry**

### **a)General Adult Psychiatry:**

- I. Introduction to Psychiatry: concepts of mental illness, criteria of abnormality. Disease, illness and sickness. Different models of defining mental disorders. History of Psychiatry.
- II. Phenomenology and Psychopathology: signs and symptoms of psychiatric disorders. Concept of psychopathology and its approaches, defense mechanism.
- III. Psychiatric assessment: psychiatric interview, interviewing techniques. Multidisciplinary approaches of assessment. Record keeping.
- IV. Classification in psychiatry: history of classification and its needs. Types of classifications-categorical and dimensional. Diagnostic grouping, knowledge of ICD and DSM classifications and diagnostic systems. Cross cultural variation.
- V. Psychiatric epidemiology: cross cultural differences and time trends.
- VI. Aetiology of psychiatric disorders: approaches to aetiology and its development, different models and theories. Contribution of biological, psychological and psychodynamic factors to psychiatric aetiology. Importance of multifactorial aetiology.
- VII. Treatment approaches: general approaches of psychiatric treatment including application of multidisciplinary team approaches. Role of psychiatrists in treatment, condition of the various treatment processes involved.
- VIII. *Preventive psychiatry*: types of preventive activity -improvement quality of life, activities to differential levels. Preventive approaches to high-risk group. Mental health education.
- IX. *Psychiatric services*: different models of service. Liaison approach. General hospital services-inpatient, outpatient and day hospital. Primary care psychiatry and referrals. Mental hospital and its present state. Community psychiatric services. Specialized services such as educational, social and economic rehabilitation. Therapeutic communities and support groups.
- X. Psychiatric morbidity and its effects on family, society and economy.

## Block-2: General Psychiatry

### Basic Sciences Relevant to Psychiatry

- I. **Neuropathology:** the neuropathology of organic disorders including the dementia, delirium and amnesic disorder. Lobar damage and its dysfunctional presentation. The neuropathology of schizophrenia, obsessive-compulsive disorder (OCD), neuropathology of other psychiatric disorders particularly brain damage related to stress - the 'glucocorticoid cascade hypothesis'. Conditions associated with mental retardation including inborn errors of metabolism.
- II. **Neuroendocrinology:** General understanding of anatomical considerations, formation, secretion, transport, metabolism, effect and regulation of thyroid hormones, adrenal hormones, gonadal hormones and the hormones of the pancreas. Endocrine functions of the kidneys, heart and pineal gland; hyper and hypo functions of these hormones. Endocrine disorders: pathology of endocrine glands including hyperthyroidism, hypothyroidism, hyper-pituitarism, hypo-pituitarism, hyper-parathyroidism, hypoparathyroidism, hypoadrenalism, hyperadrenalism in relation to psychiatric disorders, diabetes.
- III. **Psychopharmacology:** These groups mainly include antipsychotics, mood stabilizing agents, antidepressants, anxiolytics, hypnotics, psycho stimulants, and antiepileptic agents.

### I. Behavioural science

**Basic Psychology:** Thinking and language: the nature and development of thinking and its relationship with language. Concepts and reasoning. Problem solving strategies. Decision making. Component of spoken language and language development. Theories of language. Intelligence: nature, definition and components of intelligence, concept of IQ and its stability. Intelligence tests, cultural influences, recent advancement in assessing intelligence. Aptitude and achievement tests. Extreme of intelligence. Heredity, environment and intelligence. Personality: different perspectives of personality (psycho-dynamics, trait and type), behavioural and social learning, humanistic and interactions approaches- Personality tests and its constructions. Stress: models of stress, stress reaction-physiological and psychological aspects. Situational factors-life events, conflict and trauma. Vulnerability and invulnerability, type-A behaviour theory. Coping mechanism. Locus of control. Relationship of stress with disorders, concept of behavioral medicine. States of consciousness: arousal. Sleep structure and dreaming. Biorhythms and effects of sleep deprivation. Hypnosis and suggestibility, meditation and trances.

**Social Psychology:** Attitudes: Attitude formation and attitude changes. Components and measurements of attitude. Cognitive consistency and dissonance. Believe-Attitude-Behavior relationships. Self psychology, self-concepts, self-esteem and self-image. Self-recognition and personal identity. Interpersonal issues: person perception, affiliation and friendship. Attribution theory. Social behaviour in social interactions. Theory of mind and pervasive developmental disorders. Leadership, social influence, power and obedience: types, characteristics and behaviour of leaders. Types of social power. Influences operating in small and large groups. Conformity, polarization and group thinking. Gang and deindividuation. Communicative control in relationships. Inter-group behaviour: prejudice, stereotypes and inter-group hostility. Social identity and group membership. Aggression: theories of aggression. Factors influencing aggression. Family and social background of aggressive individuals. Altruism: social exchange theory and helping relationships. Interpersonal cooperation. Masculinity and femininity: psychology of man and psychology of woman. Psychology of institution/organization. Management consultancy, introduction of system theories.

**Developmental Psychology:** Developmental theories. Cognitive development: Piaget's model and its advancement. Hypothesis of intrauterine cognitive development. Language development: basic outline theories with special reference to environmental influences and communicative competence. Social development: social competence, peer relationships. Components of peer popularity and unpopularity, bully victim problems. Moral development: criteria reference to Kohlberg's stag theory. Egocentrism in adolescence. Development and maintenance of fears: in childhood and adolescence with reference to age. Sexual development: factors in the development of sexual identity and preference. Gender role. Adolescence as a developmental phase: Identity formation and role confirmation, and adolescence crisis with special emphasis on works of Bell, Kohut and Erickson. Adulthood: adaptations such as pairing, parenting, illness, bereavement and loss. Job and careers. Conception, pregnancy and childbirth: stresses related with rearing responsibilities, and their implications in the development of infant. Middle age: adoption to physical change, mid-life crisis. Normal aging: changes of normal aging and its impact on physical, social, cognitive and emotional aspects of individual functioning. Social changes accompanying old age. Stage of bereavement. Disability and pain xvii) Death and dying: adjustment with dying and its phases. Methodology of studying development: cross sectional, cohort and individual studies.

## **Comprehensive Psychiatry**

### **General Adult Psychiatry**

- I. Aetiology, presentation, clinical course, outcome and prognosis of psychiatric disorders with the special emphasis of the following: Schizophrenia: development of ideas about schizophrenia, epidemiology, aetiology, classification, diagnostic criteria, course and prognosis, treatments. Other psychotic disorders: overview, schizotypal disorders, delusional disorders, acute and transient psychotic disorders, schizoaffective disorders, Psychotic disorder due to general medical conditions. Atypical psychotic disorders, culture-bound psychotic disorders.
- II. Mood disorders: depressive disorders - epidemiology, aetiology, classification with different perspectives, clinical presentation and diagnostic criterias, course and prognosis, assessment and management.
- III. Bipolar disorders: epidemiology, aetiology, types, clinical presentation and diagnostic criterion of different episodes, course and prognosis, treatments.
- IV. Other mood disorders:
- V. Anxiety disorders: overview, normal and pathological anxiety including their aetiology, classification. Specific anxiety disorders including phobic anxiety disorders, OCD, panic disorder, generalized anxiety disorder, anxiety disorder due to general medical conditions, substance induced anxiety disorder, mixed anxiety and depressive disorder.
- VI. Stress related disorders: overview, reaction to stress. Acute stress disorder, post-traumatic stress disorder, adjustment disorder, their aetiology, clinical features and diagnosis, course and prognosis and management. Other reaction to stress.
- VII. Somatoform disorders: epidemiology, aetiology and types. Detailed knowledge on somatization disorder, undifferentiated somatoform disorder, hypochondriacal disorder, dissociative (conversion) disorders, body dimorphic disorder.
- VIII. Other somatoform disorders.
- IX. Factitious disorders: overview, epidemiology, clinical features and diagnosis, treatment. Other neurotic disorders: neurasthenia, depersonalization-derealization disorder. Other specific neurotic disorders. Chronic fatigue syndrome. Cardinal psychological features of cerebral disorders: Acute and chronic organic reactions, focal cerebral disorders

## Block-3: General Psychiatry

### Basic Sciences Relevant to Psychiatry

**I)Neuropathology:**Pathology of degenerative disorders including Alzheimer's disease, Pick's disease, Huntington's disease. Parkinson's disease and neurochemical pathology of tardive dyskinesia. Association between the localization of gross cerebral lesions and clinical signs (including tumors, trauma, cerebro-vascular disease, infections including slow virus and unconventional agent affections). Psycho-neuroimmunology.

**II)Psychopharmacology:**Knowledge about advancement of psychotropics. Adverse effects: understanding dose related adverse reactions associated with main groups of drugs used in psychiatry with appropriate corrective action. Evaluation of risks and benefits of psychotropic drugs in acute, short and long term use including effects of withdrawal.

### III.Behavioural Science

**Educational Psychology including School Psychology: Elements** of good teaching; characteristics of expert teacher, role of Educational Psychology. Cognition and Language, social and emotional development: Types and principles of development, Theories of development: Piaget and Vygotsky's theories of cognitive development, development of language. Erickson theory of psychosocial development, fostering self-esteem, Kohlberg theory of moral development. Learning abilities and learning diversity: Individual differences and teaching, cognitive and learning styles, students and learning challenges. Mainstreaming and integration. Motivation and classroom learning: Goal and task of learning, autonomy and accomplishment in classroom, cooperation and competition, encouraging motivation and thoughtful learning. Instruction and classroom management and classroom assessment.

*Identification and evaluation of influences on development.*

**Sociology and Anthropology:** Description and terms: Social class, socio-economic status and their relevance to psychiatric disorder and health care delivery. Social role of doctors: Doctor-patient – relationship. Sick role and illness behaviour. Formation of group, clan and family. Family cycle: family factors and psychiatric disorders. Social factors and specific mental health issues: Life events, and their subjective and contextual issues. Sociology of residential institutions. Basic principles of criminology and penology. Culture and its influence on psychiatric disorders. Stigma and prejudice. Ethnicity: types, ethnic minorities. Adoption and mental health. Anthropological studies, methodology, surveys, social anthropological approaches, and ethnography. Interrelationship between professional groups: team formation, patient care. Characteristics of professions. Development of self-sociological and anthropological perspectives

### Comprehensive Psychiatry

#### a) General Adult Psychiatry

- I. Specific disorders: head injury, cerebral tumors, epilepsy, intracranial infections, cerebrovascular disorders, dementias and pseudodementias, delirium and cognitive disorders, vitamin deficiencies, toxic disorders, movement disorders and other disorders affecting the nervous systems. Culture bound syndromes.
- II. Sexuality and gender identity disorders: normal sexuality, psychosexuality, sexual and gender identity and sexual behaviour, Sexual dysfunctions including sexual desire disorder, sexual arousal disorder, orgasmic disorder with special emphasis on premature ejaculation, Sexual pain disorder -

- vaginismus, dysperunia.
- III. Substance induced sexual dysfunction; culture bound sexual disorder - Dhat syndrome. Paraphilias. Gender identity disorders - epidemiology, aetiology, description, course and prognosis of transsexualism.
  - IV. Sleep disorders: normal sleep patterns, regulation, and function and sleep-wake rhythm. Classification of sleep disorders, dyssomnias, insomnias and hypersomnias. Parasomnias -nightmare disorders, sleep terror disorder, sleep waking disorder. Sleep disorder related to another mental disorder. Other sleep disorders including sleep disorders due to general medical conditions, and substance induced sleep disorders.
  - V. Impulse control disorders: overview. Impulse control disorders not elsewhere classified, intermittent explosive disorders, pathological gambling, kleptomania, pyromania, Trichotillomania and others.
  - VI. Eating disorders: epidemiology, aetiology, presentation, diagnosis, course, prognosis and treatment of anorexia nervosa, bulimia nervosa and obesity.
  - VII. Personality disorders: development of abnormal personality, Epidemiology, aetiology, presentation, diagnostic criteria, course, prognosis and treatment of different types of personality disorders with special emphasis on antisocial personality disorder.
  - VIII. Other conditions related to psychiatry and psychiatric disorders: relationship problems, abuse of adult, bereavement, malingering, phase of life problem, age-related cognitive decline, academic and occupational problem, nonadherence to treatment for mental disorder.
  - IX. Psychiatric emergencies epidemiology of suicide, deliberate self-harm and its treatment. Organic and functional psychiatric emergencies and their management. Violence and auscultative behavior, their causes and treatment. Emergency psychiatric interview.

## **b) Basic Child and Adolescent Psychiatry**

- I. Introduction to Child and Adolescent Psychiatry: Historical/cultural relations, Epidemiology & prevalence, Classification, Epidemiology - cross cultural,, Ethnic and cultural issues in mental health
- II. Interviewing: with children and adolescents, with parents and family. Approaches of assessment of cases in Child and Adolescent Psychiatry, importance of multiinformant and multisource, assessment of both difficulties and strengths. Physical examination, medical investigations, psychological tests, multiaxial diagnosis.
- III. Aetiology of child psychiatric disorders: genetic influences, chromosomal abnormalities, brain disorders, individual and family factors, social and environmental influences.
- IV. Prevalence, aetiology, presentation, treatments and outcome of clinical syndromes and conditions in child and adolescent psychiatry including pervasive developmental disorders, specific developmental disorders, hyperkinetic disorder, oppositional defiant and conduct disorders, emotional disorders specific to childhood, anxiety disorder, depression, somatoform disorder and its variants, stress related disorder, obsessive compulsive disorder, tics disorder, feeding and sleeping disorders, attachment disorders in infancy and childhood. Enuresis and encopresis, school refusal, selective mutism, preschool problems.
- V. Psychiatric aspect of somatic disease & disorders, psychosomatic disorders, epilepsy and psychiatry
- VI. Family conflict and problems, school and peer factors. Disorders of adolescence, suicide and deliberate self- harm, anorexia and bulimia nervosa, substance use disorders, schizophrenia and allied disorders,
- VII. Continuities of childhood psychiatric disorders into adult life.
- VIII. Approaches to treatment: basic range of treatment methods -description, indications and contraindications for different treatment interventions, outcomes. Indications for in patient and

- day patient care.
- IX. Child psychiatric services: general description. Basic information on different agencies involved in the care of children and their functions.

**c) Community Psychiatry:**

- I. Concept of community psychiatry: evolution, historical trend, custodial care, mental hygiene movement, deinstitutionalization, and disease prevention in psychiatry,
- II. Prevention in psychiatry: public health model - primary secondary and tertiary prevention,
- III. Community mental health care services: (please refer to General Adult Psychiatry section. Psychiatric services) Community mental health centers: philosophy, objectives, care facilities, consultation, care of chronically ill and participatory community care.
- IV. Manpower development: development of clinical and para-clinical staff, training, utilization of existing manpower, and peer review of efficiency.
- V. Economics of psychiatry, cost shifting, cost analysis, sources of financing, prospective, payment, insurance, unfavorable provisions for psychiatric patients.

**d) Rehabilitation Psychiatry:**

- I. Provision for rehabilitation for psychiatric disorders with special emphasis on schizophrenia, intellectual disability, and substance use related disorders.



## **Block-4 Liaison Psychiatry: Internal Medicine**

### **Psychiatry in Medicine**

- I. Basic understanding of ward dynamics including doctor-patient-nurse-care givers relationship.
- II. Referrals: dynamics, relationship with referrers.
- III. Communications skills.
- IV. Psychiatric assessment of patients with physical illnesses.
- V. Clinical and theoretical aspects of acute and chronic pain and its management.
- VI. Assessment and management of patients who have harmed or threatened to harm themselves.
- VII. Medical treatment, its complications and their management with special emphasis on drug interaction.
- VIII. Theoretical and clinical aspects of psychiatric presentations in physical diseases.
  - I. General medicine relevant to psychiatry. Psychiatric aspect of somatic disease & disorders, psychosomatic disorders,
- IX. Course and management of liver, renal and cardiac disease, diabetes, respiratory disorders, cancer relevant to psychiatry.
- X. Course and management cardiovascular disorders relevant to psychiatry
- XI. Course and management of endocrine and metabolic disorders relevant to psychiatry.
- XII. Course and management gastrointestinal and hepatopancreatic disorders relevant to psychiatry. Recognition and management of medical conditions associated with HIV infection and other STDs including their psychiatric manifestations.
- XIII. Recognition and management of disorder of hemopetic system including their psychiatric manifestations.
- XIV. Recognition and management of infectious, renal, genitourinary diseases, including their psychiatric manifestations
- XV. Chronic physical diseases, psychiatric sequelae and their management.
- XVI. Terminal illness: management of dying patients and their families.

## **Block-5: Liaison Psychiatry: Neurology**

### **Neuropsychiatry**

- I. Clinical knowledge of neurology: physical examination of nervous system, diagnosis, investigation and treatment of common conditions.
- II. Disorders affecting cranial nerves, spinal cord, peripheral nerves and demyelinating diseases.
- III. Infection of the nervous system: bacterial, viral including slow viral diseases.
- IV. Psychiatric consequences and associations of brain diseases, damage and dysfunctions.
- V. Brain degeneration process including degenerative disorders and its psychiatric consequences including organic psychiatric conditions.
- VI. Psychiatric aspects of head injury and stroke and psychiatric conditions associated with them and the rehabilitation strategies.
- VII. Seizure disorders, epilepsy, their management and psychiatric conditions associated with them and the rehabilitative strategies.
- VIII. Neurological disorders presenting as psychiatric problems.
- IX. Specific conditions like headache, migraine, facial pain, neuralgias.
- X. Neuro-imaging techniques: structural and functional imaging including X-ray, CT, MRI, EEC, SPECT, PET, MRS, Fusion imaging.

## **Block- 6: Liaison Psychiatry: General Paediatrics**

### **Psychiatry in Paediatrics**

- i. Introduction to Paediatrics; Ethics in paediatric care
- ii. Clinical knowledge and skills of Paediatrics: physical examination, diagnosis, investigation and treatment of common conditions.
- iii. Understand the different specific and changing health needs of children and adolescents, know about normal and abnormal pubertal development
- iv. Understand the effects of family composition, socio-economic factors and poverty on child health
- v. Growth and Nutrition- child and adolescent health. Protein energy malnutrition, causes, presentation, clinical course, outcome and prognosis. Psychiatric aspect of nutritional disorder.
- vi. Aetiology, presentation, clinical course, outcome and prognosis of disorders like Common infectious disorder, Genetic disorders, Neuro-endocrine disorders, Type-1 Diabetes mellitus and psychiatric consequences.
- vii. Acute glomerular nephritis, Nephrotic syndrome and their relation with psychiatry.
- viii. Psychiatric aspect of chronic paediatric disorder like Epilepsy, Juvenile Rheumatoid arthritis, Rheumatic fever, Childhood asthma, Paediatric malignancies and their impact on child and family and effect of multiple hospitalizations.
- ix. Premature birth, low birth weight baby, birth defects, cerebral palsy,
- x. Features of common chromosomal disorders, congenital malformations, Genetic Syndromes.
- XI. Understand the risks and cultural issues posed by consanguinity
- XII. Care of children and adolescents with burn injuries
- XIII. Care of children with haematological diseases like Thalassemia, Anaemia, Leukaemia, Bleeding disorders
- XIV. Psychiatric disorders presenting as paediatric problems and vice versa.
- XV. Other related psychiatric problems may arise in general paediatrics

## Block-7: General Psychiatry

### Basic Sciences Relevant to Psychiatry

- I. **Psychopharmacology:** Evaluation of drugs: research methodology for drug trials including principles of design, randomization, blindness (double-blind technique), statistical power, duration, rating scales, exclusion criteria.
- II. **Behavioural Genetics:** Basic concepts - chromosomes, cell division, gene structure, transcription and translation, normal karyotype, pattern of inheritance. Traditional techniques: Family, twin and adoption studies. Techniques of molecular genetics: restriction enzymes, molecular cloning and gen probes and others. Condition associated with chromosomal abnormalities-cytogenic and Mendelian disorders, disorders with multifactorial inheritance, Fragile X syndrome. Principal inherited conditions encountered in psychiatric-practice and the genetic contribution to specific psychiatric-disorders. Prenatal identification, Chromosomal and DNA analysis. Genetic counseling. Molecular and genetic heterogeneity. Phenotype/genotype correspondence. Nutritional disorders: protein energy malformation, vitamin deficiency disease and its relation to psychiatric disorders. Pathology of obesity. Human Genom Project.
- III. **Behavioral Science:**  
*Neuropsychology:* Brain organization in relation to memory, language, perception, attention-concentration, Visio-spatial ability and frontal lobe functions.  
*Psychometrics:* Psychological testing: knowledge about different psycho-logical tests and clinical implications, special emphasis on tests for intelligence, personality and developmental assessments. Neuropsychological testing: application of neuropsychological tests particularly to measure cognitive impairments in organic disorders especially dementia. Comprehensive test batteries and specialized approaches.

### Comprehensive Psychiatry

#### a) General Adult Psychiatry

- I. Biological therapies:
- II. Clinical psychopharmacology and therapeutics: basic guidelines of presenting psychotropics including typical and atypical antipsychotics, antidepressants, mood stabilizing agents, sedative-hypnotics for specific psychiatric disorders. Monitoring, management of adverse effects, drug interactions.
- III. Prescribing psychotropic in general medical conditions: specially in stroke, epilepsy, Parkinson's disease, cardiovascular diseases, hepatic and renal impairment.
- IV. Electroconvulsive therapy (ECT): mechanism of action, indications, contraindications, clinical guidelines, technique of administrations, adverse effects.
- V. Other biological therapies: light therapy, psychosurgery, neurostimulation, chronotherapy, placebo and others.
- VI. Psychological therapies:
- VII. General considerations: development and perspectives of psychotherapies and classifications. Indications for the use of counseling and psychotherapy.
- VIII. Specific psychotherapy for the management of psychiatric disorders
- IX. Social therapies:

- X. General considerations: Development of social treatment and community care, major theoretical influences, principles of community care, different methods of social treatments including therapeutic communities and milieu therapy.
- XI. Community psychiatric care: primary care, acute specialized care, long-term care.
- XII. Rehabilitation: provision for rehabilitation for psychiatric disorders with special emphasis on schizophrenia, intellectual disability, substance use related disorders.
- XIII. Social work: values of social work. Interventions - casework and counseling, working with the family and volunteers, group work. Social work contribution to the multidisciplinary team; collaboration with other agencies; effective collaboration. Evaluation of social treatment and its future.

**b) Psychotherapy:**

- I. Development of psychotherapy, common factors in psychotherapy.
- II. Psychoanalytic psychotherapy: development of psychoanalytic concepts of Freud, the Neo-Freudians, Anna Freud, Klein and Winnicott. An understanding of classical psychoanalysis and its components. Psychodynamic psychotherapy.
- III. Indications of expressive, brief, long term and supportive psychotherapy.
- IV. Behaviour therapy: development of behaviour therapy, classical and operant conditioning. Dialectic behaviour therapy. Social skill training, assertiveness training. Understanding of systematic desensitization graded and cue exposure, flooding, extinction, token economies and other techniques. Functional analysis of behaviour. Formulate a treatment plan and use measurements to assess changes.
- V. Cognitive therapy: development of cognitive therapy and principles of cognitive treatment. Cognitive model for depression and other non-psychotic disorders. The importance of schemas, negative automatic thoughts and maladaptive assumption. Strategies and techniques of cognitive therapy. Cognitive therapy, Rational-Emotive therapy, Stress-inoculation therapy, Personal Construct therapy, Social Cognitive therapy, Cognitive analytic therapy.
- VI. Humanistic-experiential therapy. Concepts and therapeutic approaches; person –Centered therapy, Existential therapy, Gestalt therapy, Transactional analysis.
- VII. Family therapy: development of family therapy. Understanding of family system and social change, subsystem, family rules, homeostasis, family life cycle framework, genogram. Different models of family therapy: dynamic, structural strategic, systemic, psycho educational and behavioural. Parenting techniques. Goals of treatment.
- VIII. Group therapy: therapeutic factors in groups. Types of groups and group therapy. Understanding mechanisms, techniques of therapy in small and large groups. Inpatients group therapy, Therapy groups including self-help groups.
- IX. Special considerations: interpersonal psychotherapy (IPT), counseling. Crisis intervention, multi-systemic therapy, EMDR, meditation, hypnosis, abreaction, psychodrama, Medistic therapy, biofeedback, and computer based psychotherapeutic programme, combined psychotherapy and pharmacotherapy.
- X. Evaluation of psychotherapy: efficacy, difficulties in defining outcome, understanding of effect, size and meta-analysis, specific and nonspecific effects of psychotherapy.
- XI. Psychotherapy: science, humanistic, philosophy, religion and spirituality - common elements and differences.
- XII. Prevention: Definition, types of preventive activity, preventive activities directed towards children at different development levels, preventive approaches to the children in high risk situations.
- XIII. Treatment for delinquents: General issues; study design and evaluation of programmes, characteristics of delinquents, characteristics of the programme, characteristics of the therapist;

- nonresidential approach, residential approaches in the community, residential approaches removed from the community.
- XIV. Group therapy: therapeutic factors in groups. Types of groups and group therapy. Understanding mechanisms, techniques of therapy in small and large groups. Inpatients group therapy, Therapy groups including self-help groups.
  - XV. Special considerations: interpersonal psychotherapy (IPT), counseling. Crisis intervention, multi-systemic therapy, EMDR, meditation, hypnosis, abreaction, psychodrama, biofeedback, and computer based psychotherapeutic programme, combined psychotherapy and pharmacotherapy.
  - XVI. Evaluation of psychotherapy: efficacy, difficulties in defining outcome, understanding of effect, size and meta-analysis, specific and nonspecific effects of psychotherapy.
  - XVII. Psychotherapy: science, humanistic, philosophy, religion and spirituality - common elements and differences.

### **c) Substance Misuse Psychiatry:**

- I. Overview: terminology- substance abuse, dependence, withdrawal, intoxication. Classification of disorders associated with the use and abuse of alcohol and other psychoactive substances.
- II. Epidemiology and basic pharmacology: alcohol, cannabis, the stimulants (amphetamine, cocaine, caffeine, pemoline etc.), hallucinogens, inhalants, nicotine, solvents and nitrites, opiates, phencyclidine, sedatives, hypnotics and other anxiolytics (benzodiazepine and barbiturates).
- III. Classification, aetiology, presentation and diagnostic criteria, comorbidity, assessment and treatment of substance use related disorders. Personality aspects of drug additions.
- IV. Assessment and management of nonsubstance additive and related syndromes.

### **d) Geriatric Psychiatry:**

- I. Old age: neurobiology of aging. Psychology of aging -psychodynamics, cognition and age, importance of loss.
- II. Socio-economic factors in old age: attitudes status of the elderly, retirement, income, accommodation, socio-cultural differences.
- III. Psychopharmacology of old age.
- IV. Psychological aspects of physical diseases: particular emphasis on possible psychiatric sequelae of cerebrovascular diseases, renal disease, Parkinson's disease, sensory impairments. Emotional reaction to illness and to chronic ill health.
- V. Mental disorders of old age: special emphasis on dementia disorders, delirium, depressive disorders, schizophrenia, delusional disorders, substance use disorders, sleep disorders, anxiety disorders, bereavement and adjustment disorders.
- VI. Deliberate self-harm and suicide in old age.
- VII. Psychiatric aspects of personality in old age.
- VIII. Assessment of a referral in old age. Use of home visits.
- IX. Service provision: principles of service, multidisciplinary work, social services and voluntary agencies. Institutional care of the old, community care, terminal care of the elderly. Hospice concept.
- X. Medico legal issues in geriatric psychiatry: elder abuse. Management of property. Testamentary capacity, driving.

**e) Forensic Psychiatry:**

- I. Relationship between crime and psychiatric disorders: knowledge of the range of offences committed by mentally disordered offenders. Specific crime and their psychiatric relevance particularly homicide, other crimes of violence, sex offenses, arson, shoplifting and criminal damage. The relationship between specific illness and crime.
- II. Psychiatry and the criminal justice system: an outline of the procedure of arrest, prosecution and sentencing. Role of Police in arrest of mentally disordered offenders, the assessment of defendants at police stations, false confessions.
- III. Facilities and treatment: elements of forensic psychiatric services, their relationship to each other. The use of security in the treatment of psychiatric patients and the arguments for and against seclusion. The long term management of patients on restriction orders. Care in the community for previous violent patients.
- IV. Offending behaviour and its management.
  - V. Victims: the psychological sequelae of victimization, especially anxiety states, anger and aggressive behaviour. Compensation and other medico-legal issues.
- VI. Civil matters: Psychiatric disorders and civil rights including marriage, divorce, custody of children and management of property and affairs.
- VII. Ethics in psychiatry: ethical principles, professional codes, patient - therapist sexual relationship, informed consent, involuntary treatment, privilege and confidentiality, hospitalization, right to treatment, impaired physicians, physicians in training, claim for psychiatric damage. Abortion.

## **Block-8: Assessment and Examination**

Recapitulation of Basic Sciences Relevant to Psychiatry

Recapitulation of General Psychiatry as a whole

Reviewing and assimilation of contents of Liaison Psychiatry

Self preparation for Phase A Final Examination



## Block Division of Clinical Training Rotations

Block 1				
Months	1st	2nd	3rd	
Educational Program	<b>General Psychiatry</b> <b>Basic Courses:</b> Behavioral Sciences, Basic Sciences relevant to Psychiatry			E
Clinical Training Rotations				B
	<ul style="list-style-type: none"> <li>• Inpatient, Outpatient of Department of Psychiatry</li> <li>• Relevant Basic Science departments of BSMMU</li> </ul>			A

Block 2				
Months	4th	5th	6th	
Educational Program	<b>General Psychiatry.</b> <b>Basic Courses:</b> Behavioral Sciences, Basic Sciences relevant to Psychiatry			E
Clinical Training Rotations				B
	<ul style="list-style-type: none"> <li>• Inpatient, Outpatient of Department of Psychiatry</li> <li>• Psychology department, University of Dhaka</li> <li>• Adult, Child and Adolescent, Psychotherapy</li> </ul>			A

Block 3				
Months	7th	8th	9th	
Educational Program	<b>General Psychiatry.</b> <b>Basic Courses:</b> Behavioral Sciences, Basic Sciences relevant to Psychiatry			E
Clinical Training Rotations				B
	<ul style="list-style-type: none"> <li>• Inpatient, Outpatient of Department of Psychiatry</li> <li>• Psychology department, University of Dhaka</li> <li>• Adult, Forensic and Geriatric Psychiatry, ECT</li> </ul>			A

Block 4			
Months	10th	11th	12th
Educational Program	<b>General Psychiatry.</b>		E
	<b>Basic Courses:</b> Behavioral Sciences, Basic Sciences relevant to Psychiatry		O
Clinical Training Rotations	<ul style="list-style-type: none"> <li>Inpatient, Outpatient and Psychiatric emergency</li> <li>Placement in Psychotherapy division of the Department of Psychiatry</li> <li>Adult, Forensic, Geriatric, Psychotherapy, ECT</li> </ul>		B
			A

Block 5			
Months	13th	14th	15th
Educational Program	Liaison Psychiatry :Internal medicine and allied relevant to Psychiatry		E
			O
Clinical Training Rotations	<ul style="list-style-type: none"> <li>Inpatient, Outpatient of Internal Medicine</li> </ul>		B
			A

Block 6			
Months	16th	17th	18th
Educational Program	Liaison Psychiatry :Neuropsychiatry		E
			O
			B
			A
Clinical Training Rotations	Inpatient, Outpatient of Neurology		