

SYLLABUS FOR RESEARCH ENTRANCE TEST (RET) OF AYURVEDA
VIDYAVARIDHI (Ph.D AYURVEDA)
KAUMARBHRITYA-BALA ROGA

Bija, Garbha Vigyaniya (Human Genetics, Embryology)

Marks-7

1. A. Prakrita Bija-Bijabhaga-Bijabhagavayava evam Tadjanya Vikriti (Genetics and related disorders) 1. Ayurvedic genetics with modern interpretations: Shukra, Shonita, Shukra Shonita Doshas, Bija-Bijabhaga-Bijabhagavayava Vikriti, Matrija and Pitraja Bhavas, Yajjah Purushiya and Atulyagotriya; Measures for obtaining good progeny. 2. Modern genetics Basic concepts: Cell, cell division, nucleus, DNA, chromosomes, classification, karyotype, molecular and cytogenetics, structure of gene, and molecular Screening., Human Chromosomes - Structure, number and classification, methods of chromosome preparation, banding patterns, Single gene pattern inheritance: Autosomal & Sex chromosomal pattern of inheritance, Intermediate pattern and multiple alleles, Mutations, Non Mendelian inheritance, mitochondrial inheritance, Genomic imprinting, parental disomy, Criteria for multi-factorial inheritance, Pathogenesis of chromosomal aberrations and their effects, recombinant DNA, genetic inheritance, inborn errors of metabolism, Chromosomal abnormalities: Autosomal & Sex chromosomal abnormalities, syndromes, Multifactorial pattern of inheritance: Teratology, Cancer Genetics – Hematological malignancies, Pharmacogenetics, Chromosomal disorders, Chromosomal aberration (Klinefelter, Turner and Down's syndrome, Genetic Counseling, Ethics and Genetics,

Marks-7

B. Prakrita Bija- Bijabhaga-Bijabhagavayava evam Tadjanya Vikriti (Genetics and related disorders) Garbha (embryo), Garbhawastha (gestation period), sperm, ovum; spermatogenesis; oogenesis; structure of ovum, Sperm in the male genital tract; sperm in the female genital tract, activation and capacitation of sperm, Garbha Masanumasika Vriddhi evam Vikasa (Ayurvedic and modern concepts of Embryo and Fetal development), Formation of Prakriti, their assessment in children viz. Bala, Kumara, Yauvana; Pathya-Apathya according to Prakruti, Apra (Placenta) Apra Nirmana (Formation of placenta), Apra Karya (Functions of placenta); Apra Vikara (Placental abnormalities) , Nabhinadi (Umbilical Cord) Formation and features of umbilical cord, Garbha Poshana (Nutrition- from conception to birth), Yamala Garbha(twins), Garbha Vriddhikara Bhavas, Garbhopaghatkara Bhavas, Effect of maternal medication, diet and illness over fetus, Teratology

including defects of bija, atma karma, kal, ashaya etc.: causative factors for teratogenecity, mode of actions of teratogenes, critical periods, Perinatal Care and Perinatal complications, Scientific study of Jataharini specific to children, Prenatal diagnosis, Samanya Janmajata Vikara (Common congenital anomalies of different systems): Sahaja Hridaya Vikara (Congenital Cardiac Disorders) Jalashirshaka (Hydrocephalus), Khandaoushtha (cleft lip), Khanda-Talu (cleft palate), Sanniruddha Guda (Anal stricture / imperforated anus), Pada-Vikriti (Talipes equinovarus and valgus), Tracheoesophageal Fistula (TOF), Spina bifida, Meningocele, Meningomyelocele, Pyloric Stenosis.

Marks-12

2. Navajata Shishu Vigyan evam Poshana - Navajata Shishu Paribhasha, Vargikarana (Important definitions and classification related to neonates.), Navajata Shishu Paricharya evam Prana-Pratyagamana (Care of the newborn including recent methodology for the resuscitation), Samanya Navajata Shishu Paricharya (General Neonatal Care –Labour room onwards), Samaya purva evam Samaya pashchat Jata Shishu Paricharya (Management of preterm, post term and IUGR newborn), Prasava Kalina Abhighataja Vyadhi (Birth injuries): Upashirshaka (Caput, cephalohematoma), Bhagna (Fractures), Mastishkantargata Raktasrava (ICH, IVH, Subdural hemorrhage), Navajata Shishu Parikshana (Examination of new born): Ayu Parikshana (including Lakshanadhyaya) Modern approach of Neonatal Examination including gestational age assessment, Kumaragara: Navajata Shishu Kaksha Prabandhana (Nursery management), NICU, Nursery plan, staff pattern, medical records, Visankramnikarana (sterilization), Knowledge of equipments used in nursery, Navajata Shishu Vyadhi (Early neonatal disorders): Hypothermia, Shvasavarodha (Asphyxia Neonatorum/Respiratory distress), Ulvaka (Aspiration pneumonia), Rakta Vishamayata (Neonatal septicemia), Kamala (Neonatal Jaundice), Akshepaka (Neonatal convulsion), Pandu (Anemia), Atisara (Diarrhea), Asamyaka Nabhinal kartanjanya vyadhi, Navjata Kshudra Vikara (Minor neonatal ailments): Chhardi (Vomiting), Vibandha (constipation), Udara shul (Infantile colic), Puya Sphota (Pyoderma), Shishu Netrabhishyanda (Ophthalmia neonatorum), Sadyojatasya Atyayayika Chikitsa (Management of neonatal emergencies): Shock, Fluid and electrolyte imbalance, Convulsion, Hemorrhagic diseases of Newborn etc, Procedures: Shiro-Pichu, Abhyanga, Parisheka, Pralepa, Garbhodaka Vamana (Stomach wash), Ashchyotana Neonatal resuscitation techniques, Blood sampling, Intravenous canulation, Umbilical vein catheterization, Bone marrow aspiration, Phototherapy, NasoGastric tube insertion, Urethral catheterization, Exchange blood transfusion, Thoracocentesis, Bone marrow infusion, Lumbar puncture, Nutrition: A. Navjat Shishu Ahara (Neonatal feeding):

Specific Feeding methodology as per Ayurveda and recent advances; Day to day fluid, milk, caloric requirement for the newborn, feeding technique for the preterm baby. Stanyotpatti and Prasruti (Lactation physiology), Stanya Samghatana (Composition of breast milk), Stana Sampat (Characteristics of normal breast), Stanya Sampata evam Mahatva (Properties & importance of pure milk), Stanya-Piyusha (Colostrum); Stanya-Pana-Vidhi (Method for breast milk feeding), Stanyakshaya / Stanyanasha (Inadequate production and absence of breast milk), Stanya parikshana (Examination of breast milk), Stanyabhava Pathya Vyavastha (Alternative feeding methods in absence of breast milk), Various feeding methods, TPN(Total Parenteral Nutrition) ,Stanyadosha (Vitiation of Breast milk), Stanya Shodhana (Purification of breast milk), Stanya Janana and Vardhanopakrama (Methods to enhance breast milk formation), Dhatri (Wet nurse): Dhatri Guna and Dosha (Characteristics of Wet nurse), Concept of Breast Milk Banking. , Lehana (Elucturies) B. Bala-Poshana (Child Nutrition): Daily requirements of nutrients for infant and children, Common food sources 8. Satmya and Asatmya Ahara (Compatible and incompatible diet), Pathya evam Apathya Ahara (Congenial and non-congenial diet), Stanyapanayana (Weaning)

Marks-12

3. Balrog (Pediatric Disorders)

1. Pranvaha Srotasjanya Vyadhi (Respiratory disorders)- Kasa (Cough), Shvasa (respiratory distress syndrome), Tamaka Shwasa (Childhood Asthma), Bronchiolitis, Shvasanaka Jwara (Pneumonia- bacterial, viral etc) Rajyakshma (tuberculosis), VakshaPuyata (Pyothorax), Vaksha Vata-Purnata (Pneumothorax) 2. Annavaha Srotasjanya Vyadhi (Gastrointestinal disorders): Jwar (Fever), Chhardi (Vomiting) Ajirna (Indigestion), Kshiralsaka, Atisara (Diarrhea), Pravahika, Vibandha (Constipation, Udarsula (Pain in abdomen), Guda bhramsh (Rectal prolapse) 3. Rasa evam Raktavaha Srotasjanya Vyadhi (Hematological and circulatory disorders): Pandu (Anemia and its various types like Nutritional, haemolytic etc.) and , Raktapitta (Bleeding disorders), Vishishta Hridrog (Specific cardiac diseases- RHD etc), Hypertension, Leukemia. 4. Mamsavaha Srotasjanya Vyadhi: Myopathies 5. Mutravaha srotasjanya Vyadhi (Urinary System disorders): Vrikkashotha (Glomerulonephritis and nephrotic syndrome), Mutrakriccha (Dysuria), Mutraghata (Anuria), 6. Vataavaha Sansthanjanya Vyadhi (Nervous system disorders): Apasmara (Epilepsy), Mastulunga-Kshaya, Mastishka-Shotha (Encephalitis), Mastishkavrana-Shotha (Meningitis), 7. Pediatric disabilities and Rehabilitation: Cerebral palsy, Ardita (Facial paralysis), Pakshavadha (Hemiplegia), Ekangaghata (Monoplegia),

Adharanga Vayu (diplegia),. Amavata (Juvenile Rheumatoid arthritis) 8. Manovaha Srotasa Vyadhi: Breath holding spell, Shayya mutra (Bed wetting), Autism, ADHD (Attention Deficit and hyperactive disorders), Learning Disability, Mental retardation, Temper tantrum, Pica. 9. Antahsravi evam Chayapachayajanya Rog (Endocrine and Metabolic disorders) 10.Kuposhanjanya Vyadhi (Nutritional disorders): Karshya-Phakka-Balshosha- Parigarbhika (PEM and allied disorders), Vitamin-mineral and trace elements deficiency disorders, Hypervitaminosis, 11.Krimi evam Aupsargika Rog (Infestations and Infections):Krimi (Giardiasis and intestinal helminthiasis,Amoebiasis) Common bacterial, viral infections with special reference to vaccine-preventable diseases: Rohini (Diphtheria), Whooping cough, Aptanaka (Tetanus including neonatal tetanus), Romantika (Measles), Karnamula Shotha (Mumps), Rubella and Masurika (Chickenpox), Antrika Jwar (Typhoid and Paratyphoid), Viral Hepatitis,); Vishama Jwar (Malaria) and Kala-azar, Dengu fever, HIV (AIDS), Poliomyelitis, Mastishkavaran Shotha (Meningitis), Mastishka Shotha (Encephalitis), Chickengunia 12.Tvaka Vikara (Skin disorders): Ahiputana (Napkin Rashes), Shakuni (Impetigo), Sidhma, Pama, Vicharchika, Charmadal (Infantile atopic dermatitis), Gudakutta. 13.Anya Vyadhyi (Miscellaneous disorders): Jalodar (Ascites),Gandamala, Apachi (Cervical lymphadenitis), Kukunakadi Akshi Rog, Hodgkin & non-Hodgkin Lymphoma, Abnormal growth patterns, Short stature , Niruddha prakash (Phimosis), Paridagdha Chhavi, Utphullika 14.Samghata- Bala Pravrita Rog (damstra): Dog bite. Snake bite, Scorpion bite etc 15.Atyayika Balarog Prabandhana (Pediatric emergency management): Shock and Anaphylaxis, Fluid and electrolyte management, Drowning, Foreign body aspiration, Status epilepticus, Acute hemorrhage, Acute renal failure, Febrile convulsion, Status 18 asthmaticus, Burn, Acute Poisoning 16.Balagraha: Scientific study of Graha Rogs 17.Life Style disorders

Marks-12

4. Kaumarabhritya in Ancient Classics and recent Advances

1. Significant contributions of Kashyapa samhita, Arogya raksha Kalpadrum and other texts /treatises of Ayurveda such as Harita Samhitain the field of Kaumarbhritya including relevant parts from Brihatrai 2. Panchakarma: Principles of Panchakarma [Swedan–Hasta–Pata sweda etc], and their application in pediatric practice in detail. 3. Update knowledge of clinical pediatrics including recent researches in Kaumarbhritya. 4. Fundamentals of Hospital management with special emphases on Pediatric Ward.

