10. KAUMARBHRITYA-BALA ROGA

PAPER – I Bija, Garbha Vigyaniya (Human Genetics, Embryology) Marks: 100

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:
   1. Cell, cell division, nucleus, DNA, chromosomes, classification, karyotype, molecular and cytogenetics, structure of gene, and molecular Screening.

   Pathogenesis
   1. Pathogenesis of chromosomal aberrations and their effects, recombinant DNA, genetic inheritance, inborn errors of metabolism
   2. Chromosomal abnormalities: Autosomal & Sex chromosomal abnormalities, syndromes
   4. Chromosomal disorders
   5. Chromosomal aberration (Klinefelter, Turner and Down’s syndrome

B. Prakrita Bija-Bijabhaga-Bijabhagavayava evam Tadjanya Vikriti (Genetics and related disorders)

1. Garbha (embryo), Garbhawastha (gestation period), sperm, ovum; spermatogenesis; oogenesis; structure of ovum
2. Sperm in the male genital tract; sperm in the female genital tract, activation and capacitation of sperm.
3. Garbha Masanumasika Vriddhi evam Vikasa (Ayurvedic and modern concepts of Embryo and Fetal development)
   - First week of development
   - Second week of development
   - Third week of development
   - Fourth to eighth week of development (Embryonic period)
   - Development from third month till birth (Fetal period)
5. Apara (Placenta) Apara Nirmana (Formation of placenta), Apara Karya (Functions of placenta); Apara Vikara (Placaental abnormalities)
6. Nabhinadi (Umbilical Cord)
   Formation and features of umbilical cord
7. Garbha Poshana ( Nutrition- from conception to birth)
8. Yamala Garbha( twins)
10. Effect of maternal medication, diet and illness over fetus.
11. Teratology including defects of bija, atma karma, kal, ashaya etc.: causative factors for teratogenecity, mode of actions of teratogenes, critical periods
12. Perinatal Care and Perinatal complications
14. Prenatal diagnosis
15. Samanya Janmajata Vikara (Common congenital anomalies of different systems): Sahaja Hridaya Vikara (Congenital Cardiac Disorders) Jalashirshaka (Hydrocephalus), Khandoushtha (cleft lip), Khand-Talu (cleft palate), Sanniruddha Guda (Anal stricture / imperforated anus), Pada-Vikriti (Talipes equanovarus and valgus), Tracheoesophageal Fistula (TOF), Spina bifida, Meningocele, Meningomyelocele, Pyloric Stenosis.

PAPER-II Navajata Shishu Vigyan evam Poshana

PART-A
1. Navajata Shishu Paribhasha, Vargikarana (Important definitions and classification related to neonates.)
2. Navajata Shishu Paricharya evam Prana-Pratyagamana (Care of the newborn including recent methodology for the resuscitation)
3. Samanya Navajata Shishu Paricharya (General Neonatal Care –Labour room onwards)
4. Samaya purva evam Samaya pashchat Jata Shishu Paricharya (Management of preterm, post term and IUGR newborn)
5. Prasava Kalina Abhightataja Vyadhi (Birth injuries): Upashirshaka (Caput, cephalohematoma), Bhagna (Fractures), Mastishkantargata Rakta srava (ICH, IVH, Subdural hemorrhage)
6. Navajata Shishu Parikshana (Examination of new born): Ayu Parikshana (including Lakshanadhyaya) Modern approach of Neonatal Examination including gestational age assessment
7. Kumaragara: Navajata Shishu Kaksha Prabandhan a (Nursery management), NICU, Nursery plan, staff pattern, medical records, Visankramnikarana (sterilization), Knowledge of equipments used in nursery.

PART-B
9. Navjata Kshudra Vikara (Minor neonatal ailments): Chhardi (Vomiting), Vibandha (constipation), Udara shul (Infantile colic), Puya Sphota (Pyoderma), Shishu Netrabhishyanda (Ophthalmia neonatorum).
10. Sadyojatasya Atayayiika Chikitsa (Management of neonatal emergencies): Shock, Fluid and electrolyte imbalance, Convulsion, Hemorrhagic diseases of Newborn etc.
11. Procedures: Shiro-Pichu, Abhyanga, Parisheka, Pralepa, Garbhodaka Yamana (Stomach wash), Ashchyotana Neonatal resuscitation techniques, Blood sampling, Intravenous canulation, Umbilical vein catheterization, Bone marrow aspiration, Phototherapy, Naso-Gastric tube insertion, Urethral catheterization, Exchange blood transfusion, Thoracocentesis, Bone marrow infusion, Lumbar puncture
12. Nutrition:
   A. Navjat Shishu Ahara (Neonatal feeding):
1. 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.
2. 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 parkshana (Examination of breast milk), Stanyabhave Pathya Vyavastha (Alternative feeding methods in absence of breast milk), Various feeding methods, TPN( Total Parenteral Nutrition)
3. Stanyadosha (Vitiation of Breast milk), Stanya Shodhana (Purification of breast milk), Stanya Janana and Vardhanopakrama (Methods to enhance breast milk formation)
4. Dhatri (Wet nurse): Dhatri Guna and Dosha (Characteristics of Wet nurse), Concept of Breast Milk Banking.
5. Lehana (Elucturies)

B Bala-Poshana (Child Nutrition):
6. Daily requirements of nutrients for infant and children
7. Common food sources
8. Satmya and Asatmya Ahara (Compatible and incompatible diet)
9. Pathya evam Apathya Ahara (Congenial and non-congenial diet)
10. Stanyapanayana (Weaning)

PAPER-III  Balrog (Pediatric Disorders)  Marks: 100

PART-A
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), Vaksha-Puyata (Pyothorax),Vaksha Vata-Purnata (Pneumothorax)
2. Annavaha Srotasjanya Vyadhi (Gastrointestinal disorders): Jwar (Fever), Chhardi (Vomiting) Ajirna (Indigestion), Kshiralsaka, Atisara (Diarrhea), Pravahika, Vibandha (Constipation, Udarshula (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. Vatavaha 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.

PART-B
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, Apanakta (Tetanus including neonatal tetanus), Romantika (Measles), Karmamula Shotha (Mumps), Rubella and Masurika (Chickenpox), Antra Jwar (Typhoid and Paratyphoid), Viral Hepatitis,; Vishama Jwar (Malaria) and Kala-azar, Dengue fever, HIV (AIDS), Poliomyelitis, Mastishkavaran Shotha (Meningitis), Mastishka Shotha (Encephalitis), Chickengunia

12. Tvaka Vikara (Skin disorders): Ahiputana (Napkin Rashes), Shakuni (Impetigo), Siddhna, Pama, Vicharchika, Charmadal (Infantile atopic dermatitis), Gudakutta.


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 asthmaticus, Burn, Acute Poisoning


17. Life Style disorders

PAPER-IV Kaumarabhritya in Ancient Classics and recent Advances Marks: 100

1. Significant contributions of Kashyapa samhita, Arogya raksha Kalpadrum and other texts/treatises of Ayurveda such as Harita Samhitain the field of Kaumarabhritya including relevant parts from Brihatrai


3. Update knowledge of clinical pediatrics including recent researches in Kaumarabhritya.


Practical/ Clinical Exposure for (Record of exposures to be produced at the practical examination)

1. Full term, preterm, post term newborn baby care

2. Practical procedures like – phototherapy, premature baby care, KMC, venepuncture, cord blood sampling, stomach wash, suction, resuscitation, etc.

3. Practical skill of Pediatric Panchakarma procedures

4. Child Health Check up

5. IQ Assessment of Children

6. Exposure to National Health Programs related to Children, including Immunization Program.

7. Patient case Records (50 Records)

8. Practical knowledge of modern diagnostic (invasive & non invasive) tools and techniques used in pediatrics.


10. Participation in UG teaching/training from UG syllabus via A-V aids (minimum-3)

11. Minimum 15 days compulsory reciprocal exposures in Kaumarabhritya department of other institution during the study period.

12. Participation in National/international seminars

13. Publication/acceptance of two research papers in indexed/peer reviewed/ISSN journals from the dissertation.

Pattern of practical examination:
1. Case record - 15 Marks
2. Bed side examination
   a) Short Case - 15 Marks
   b) Long Case - 25 Marks
3. Identification of instruments/ spotting - 10 Marks
4. Lecture/Dissertation Presentation - 10 Marks
5. Viva-voce - 25 Marks

Reference Books
1. Kashyapa Samhita Complete Hindi translation by Satyapal Vidhyalankara English translation by Prof. Premvati Tiwari
3. Child Health Care in Ayurveda: Abhimanyu Kumar
5. Kaumarbhritya by Prof. D.N. Mishra
6. Kaumarbhritya Ke Antargata Balgraho Ka Kramika Evam Vaigyanika Adhyana by Prof. Chanchal Sharma
7. Notes on Kaumarbhritya-by Dr. Dinesh K S
8. Pran - Pratyagamanam-by Dr. B.M. Singh
9. Ayurveda Dwara Matra Evam Shishu Paricharya by Dr. KS Patel, V.K. Kori & Rajgopal S
10. Kaumarbhritya related references from Charaka Samhita, Sushruta Samhita Vagbhata etc.
11. Clinical Methods in Paediatrics by Meharban Singh
12. Pediatrics Emergencies by Meharban Singh
13. Essential Pediatrics O.P. Ghai
15. Care of New Born by Meharban Singh

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