

RAJASTHAN PUBLIC SERVICE COMMISSION, AJMER
SYLLABUS OF COMPETITIVE EXAMINATION FOR THE
POST OF LECTURER
KAUMARBHRITYA (AYUSH DEPARTMENT)

PART-A

General Knowledge of Rajasthan

Culture & Heritage of Rajasthan:-

1. Dietary Practices of Rajasthan:
 - 1.1 Indigenous food- Cereal and millets, fruits and vegetables, food of various regions.
 - 1.2 Seasonal dietary practices, festivals and their Ayurvedic rationale.
 - 1.3 Tradition of fasting and Upvas.
2. Crops of Rajasthan:
 - 2.1 Evidence of Crop production in Pre-Historic sites of Rajasthan.
 - 2.2 Evidence of Crop production in Ancient and Medieval Rajasthan.
3. Minerals of Rajasthan- Evidence of knowledge of minerals in Ancient and Medieval Rajasthan.
4. Medicinal Herbs of Rajasthan.
5. Society of Rajasthan:
 - 5.1 Traditions, dress and ornaments, fairs & festivals.
 - 5.2 Folk and Tribal Society: Fairs and festival, social customs, social life and beliefs.
6. Making of Modern Rajasthan:
 - 6.1 Political and social awakening in 19th century.
 - 6.2 Peasant movements, tribal movements and Prajamandal movements in 20th century. Integration of Rajasthan.

Geography of Rajasthan:-

Broad Physical Features: Mountains, Plateaus, Plains and Deserts; Major Rivers and Lakes; Climatic Characteristics; Major Soil types and their distribution; Vegetation types and their distribution; Agricultural types; Livestock; Demographic Characteristics.

Total Questions 40

PART-B

01. Knowledge of pediatric fundamental principles

- Ayurveda and modern classification of childhood period.
- Basic Concepts of growth and development, and its assessment, age specific physiological and neurological mile stone assessment.
- Ayurvedic and modern concepts of drug doses, and administration.
- National programs related to paediatrics
- Vaccination - National Immunization program, WHO and IAP guideline for pediatric vaccination.
- Concept of Suvarnprashan, Lehana and Prashan.
- Concept and clinical understanding of Childhood Samskara
- Regulatory laws related to child health management.

02. Kaumarabhritya in Ancient Classics and recent Advances

- Significant contributions of Kashyapa samhita, Arogya Raksha Kalpadrum, Harita Samhitain, Sharangdhar Samhita in the field of Kaumarabhritya including relevant parts from Brihatrai.

03. Ayurvedic genetics with modern interpretations

- Knowledge of basic concept of Bija-Bijabhaga-Bijabhagavayava Vikriti, Matrija and Pitraja Bhavas, Atulyagotriya.
- Pathogenesis of chromosomal aberrations and their effects, genetic inheritance, and inborn errors of metabolism.
- Chromosomal abnormalities - Autosomal & Sex chromosomal abnormalities, syndromes, Teratology, Klinefelter, Turner and Down's syndrome.

04. Fetal development -

- Garbha Masanumasika Vriddhi evam Vikasa (Ayurvedic and modern concepts of Embryo and Fetal development)
- Knowledge of Aparā (Placenta), Aparā Nirmana (Formation of placenta), Aparā Karya (Functions of placenta), Aparā Vikara (Placental abnormalities).
- Nabhinadi (Umbilical Cord) - Formation and features of umbilical cord.
- Effect of maternal medication, diet and illness over fetus.
- Basic knowledge of Garbha Poshana (Nutrition- from conception to birth).

05. Samanya Janmajata Vikara (Common congenital anomalies of different systems):

- Sahaja Hridaya Vikara (Congenital Cardiac Disorders)
- Jalashirshaka (Hydrocephalus),
- Khandaoushtha (cleft lip), Khanda-Talu (cleft palate),
- Pyloric Stenosis

- Sanniruddha Guda (Anal stricture / imperforated anus),
- Pada-Vikriti (Talipes equinovarus and valgus),
- Tracheoesophageal Fistula (TOF),
- Spina bifida, Meningocele, Meningomyelocele.

06. Navjaat Shishu Paricharya / Neonatal care

- Care of the newborn at the time of delivery, including Ayurveda principals and recent methodology.
- Identification of fetal distress, birth asphyxia, APGAR score, Pranpratyagman, and recent updates in resuscitation.
- Knowledge of gestational age assessment of newborn and basics of Aayu Parikshan as per Kashyap's Lakshna-addhyay.
- Knowledge of identification features of Preterm, Post term and IUGR newborn and their management.
- Examination of newborn and identification of birth injuries – Caput succedaneum, Cephalohematoma, Upshirshak, Bhagna (Fractures), Intra cranial hemorrhage - (ICH, IVH, Subdural hemorrhage), facial paralysis etc.

07. Navjaat Shishu Vyadhi – Early Neonatal Disorder

- Knowledge of identification and management of disorders occurs in early neonatal period - Hypothermia, Hypoglycaemia, Hypovolemic Shock, Shvasavarodha (Respiratory distress), Meconium Aspiration Syndrome, Ulvaka (Aspiration pneumonia), Rakta Vishamayata (Neonatal Septicemia), Navjaat Shishu Kamala (Neonatal Jaundice - physiological and pathological), Akshepaka (Neonatal seizures), Hemorrhagic disorders of newborn, Asamyaka Nabhinal kartanjanya vyadhi.

08. Navjaat Kshudra Vikara (Minor neonatal ailments):

- Chhardi (Vomiting), Vibandha (constipation), Udara shul (Infantile colic), Puya Sphota (Pyoderma), Shishu Netrabhishyanda (Ophthalmia neonatorum).

09. Poshan / Nutrition –

- **Navjat Shishu Ahara (Neonatal feeding):**
 - Specific Feeding methodology as per Ayurveda, Stanyotpatti and Prasruti (Lactation physiology), Stanya Samghatana (Composition of breast milk), Stanya Sampata evam Mahatva (Properties & importance of pure milk), contraindications of breast feeding.
 - Stages of breast milk and their importance – colostrum, mature milk, foremilk and hind milk.
 - Day to day fluid, milk, caloric requirement for the newborn, feeding technique for the preterm baby, sick newborn, in cleft lip/palate, lactogen intolerance.

- Stanyabhava Pathya Vyavastha (Alternative feeding methods in absence of breast milk) as per Ayurveda, modern aspect and WHO guidelines,
- Concept of human milk banking,
- TPN (Total Parenteral Nutrition).
- **Bala-Poshana /Child Nutrition –**
 - Concept of Phalaprashana, Annaprashana /Weaning
 - Daily requirements of nutrients for infant and children
 - Satmya and Asatmya Ahara (Compatible and incompatible diet)
 - Pathya evam Apathya Ahara (Congenial and non-congenial diet)

10. Bala Roga / Pediatric Disorders -

- **Pranvaha Srotasjanya Vyadhi (Respiratory disorders) -** Kasa (Cough), Shvasa (respiratory distress syndrome), Tamaka Shwasa (Childhood Asthma), Shvasanaka Jwara (Pneumonia- bacterial, viral etc.), Rajyakshma (Tuberculosis), Vaksha-Puyata (Pyothorax), Vaksha Vata-Purnata (Pneumothorax).
- **Annavaha Srotasjanya Vyadhi (Gastrointestinal disorders) -** Jwar (Fever), Chhardi (Vomiting), Kshiralsaka, Atisara (Diarrhea), Pravahika (Dysentery), Vibandha (Constipation), Udarshula (Abdominal colic), Parikartika (Anal fissure), Guda bhramsh (Rectal prolapse).
- **Rasa evam Raktavaha Srotasjanya Vyadhi (Hematological and circulatory disorders) -** Pandu (Nutritional and haemolytic Anemia), Vishishta Hridrog (Specific cardiac diseases- RHD, CHD etc.), Leukemia, Thalassemia, Hepato-splenomegaly, Sick Cell Anemia.
- **Mamsa-Medovaha Srotasjanya Vyadhi -** Apachi (Lymphadenitis), Galaganda (Goitre), Gandamala (Cervical Lymphadenopathy). Myopathies/Muscular dystrophies.
- **Mutravaha Srotasjanya Vyadhi (Urinary System disorders) -** Vrikkashotha (Glomerulonephritis and Nephrotic syndrome), Mutrakriccha (Dysuria), Mutraghata (Anuria).
- **Vatavaha Sansthanjanya Vyadhi (Nervous system disorders) -** Apasmara (Epilepsy), Mastishka-Shotha (Encephalitis), Mastishkavrana-Shotha (Meningitis), Seizure / convulsion disorders.
- **Pediatric Disabilities and Rehabilitation:** Cerebral palsy, Ardita (Facial paralysis), Pakshavadha (Hemiplegia), Ekangaghata (Monoplegia), Adharanga Vayu (Diplegia), Amavata (Juvenile Rheumatoid arthritis).
- **Manovaha Srotasa Vyadhi -** Autism, ADHD (Attention Deficit and hyperactive disorders), Learning Disability, Mental retardation etc.
- **Kuposhanjanya Vyadhi (Nutritional disorders) -** Karshya-Phakka-Balshosha Parigarbhika (PEM and allied disorders),

Vitamin-mineral and trace elements deficiency disorders, Hypervitaminosis.

- **Krimi evam Aupsargika Rog (Infestations and Infections)** - Krimi (Giardiasis, Intestinal helminthiasis, Amoebiasis etc.), Common bacterial, viral infections with special reference to Vaccine-preventable diseases: Rohini (Diphtheria), Whooping cough, Aptanaka (Tetanus), Romantika (Measles), Karnamula Shotha (Mumps), Rubella, Masurika (Chickenpox), Antrika Jwar (Typhoid and Paratyphoid), Viral Hepatitis, Vishama Jwar (Malaria), Dengu fever, HIV (AIDS), Poliomyelitis etc.
- **Tvaka Vikara (Skin disorders)** - Ahiputana (Napkin Rashes), Shakuni (Impetigo), Charmadal (Infantile atopic dermatitis).
- **Life style disorders** – Obesity, Diabetes, Anxiety disorders etc.
- **Pran Raksha Vidhi (Life saving measures)** - Principles of management of Shock and Anaphylaxis, Foreign body in respiratory tract, Acute Renal Failure, Febrile Convulsion, Status epilepticus, Status Asthmaticus, Fluid and Electrolyte Management.
- **Balagrah** – classification, general description, and understanding of clinical presentation on recent Scientific parameters/knowledge.

11. Knowledge of commonly used Ayurvedic formulations in pediatric practice

e.g.

- Aravindasava, Baalachaturbhadra Churna, Kumarakalyana Rasa, Ashta Mangal Ghrita, Brahmi Ghrita, Kalyanaka Ghrita, Sitopaladi Churna, Haridra Khanda, Krimikuthara Rasa, Dantodbheda-Gadantaka Rasa, Rajanyadi Churna (Ashtanga Hridaya), Samvardhana Ghrita, Rajataila.

12. Basic concepts of single drugs commonly used in pediatric practice:

- Mandukaparni, Shankhapushpi, Jyotishmati, Brahmi, Jatamansi, Vacha, Guduchi, Yastimadhu, Ativisha, Pippali, Maricha, Shunti, Haritaki, Vidanga, Katuki, Dadima, Ashvagandha, Shatavari, Bala, Durva, Tankana, Sphatika.

13. Procedures –

- **Pediatric Procedures:** Naso-Gastric tube insertion, Stomach wash, Neonatal resuscitation techniques, Phototherapy.
- **Panchkarma Procedures:** Shiro-Pichu, Abhyanga, Parisheka, Pralepa, Ashchyotana, Shastik Shali Pinda Sweda, Basti karma and its types, age specific indications of panchkarma procedures.

14. NICU/ Pediatric ward / Hospital Management –

- Knowledge of Kumaragar, Navajata Shishu Kaksha Prabandhana/Nursery management, NICU management,

Visankramnikarana /sterilization methods, documentation of medical records.

- Fundamentals of Hospital management with special emphases on Pediatric Ward.

15. Knowledge of instruments and diagnostic tools–

- AMBU bag, Laryngoscope, Phototherapy, Radiant warmer, Pediatric incubator,
- Knowledge of modern diagnostic tools like X ray, USG, MRI etc.
- Knowledge of Prenatal diagnosis – Bio physical profile, Amniocentesis, Chorionic villus sampling, Percutaneous umbilical blood sampling, TORCH profile.

16. Research Methodology

- Knowledge of the selection of research problem for clinical study and fundamentals of research designing.
 - Defining research problem and formulation of hypothesis
 - Defining general and specific objectives
 - Research designing - observational and interventional studies, descriptive and analytical studies, preclinical and clinical studies, qualitative and quantitative studies, Longitudinal & Cross-sectional studies, Prospective and Retrospectives studies, Cohort studies
 - Randomized Controlled Trials (RCT) & their types, blinding, allocation, CONSORT statement
 - Sample design, Collection of the data, Analysis of data
 - Ethical aspects related to human and animal experimentation.
 - New concepts in clinical trial- Adaptive clinical trials/ Good clinical practices (GCP), Phases of Clinical studies: 0,1,2,3, and 4.
- Pharmacovigilance for ASU drugs. Need, scope and aims & objectives. National Pharmacovigilance Programme for ASU drugs.
- Update knowledge of clinical pediatrics including recent researches in Kaumarbhritya.
- Specific considerations in research methods related to pediatrics.

Total Questions 110

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Pattern of Question Papers:

1. Objective Type Paper
2. Maximum Marks: 150
3. Number of Questions: 150
4. Duration of Paper: 2.30 Hours
5. All Questions carry equal marks
6. There will be Negative Marking

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