

Intermediate Module Examination Paediatrics

Table of Specification

No.	Subject(s)	Topic(s)	Subtopic(s)	No. of MCQs
1	Paediatric Medicine	Nutrition	<ul style="list-style-type: none"> • Maternal nutritional disorders; Impact on fetal outcome • Nutrition for the low birth weight • Breast feeding • Infant feeding including complementary feeding • Protein energy malnutrition • Vitamin and mineral deficiencies • Trace elements of nutritional importance • Obesity • Adolescent nutrition • Nutritional management in diarrhea • Nutritional management of systemic illnesses (celiac disease, hepatobiliary disorders, nephrotic syndrome) • Parenteral and enteral nutrition in neonates and children 	11
		Pediatrics Emergencies	<ul style="list-style-type: none"> • Shock <ul style="list-style-type: none"> ➤ Cardiogenic ➤ Distributive ➤ Hypovolemic ➤ Anaphylactic • Congestive Cardiac Failure • Cardiopulmonary arrest with basic and advanced pediatric life support • Respiratory Failure (requiring mechanical ventilation) • Hypothermia and Hyperthermia (Frost bite, heat stroke) • Status Epilepticus • Status Asthmaticus • Upper Respiratory airway obstruction • Acid-Base, fluid and electrolyte disturbance • Diabetic Ketoacidosis • Acute Kidney Injury • Hepatic Encephalopathy • Hypertensive Encephalopathy 	24



			<ul style="list-style-type: none"> • Acute Respiratory Distress Syndrome • Brain Death • Acute Poisoning • Snake Bite • Insect Bite • Dog Bite • Drowning and Submersion injuries • Child with Roadside injuries • Burns • Electric Injury 	
		Infectious Diseases	<ul style="list-style-type: none"> • Infection Control/PUO • Malaria/Parasitic Infestation • Infections in Immunocompromised/Eye • Bioterrorism/travel related/animal, human bites • Emerging Infections • GU,STDs/Fungal Infections • Upper Resp Tract Infections • Lower Resp Tract Infections • Cardiovascular infections • Mycobacterial Infection • Soft tissue, bone, joint • HIV • Immunization • Anti Infective therapy • CNS Infections • GI infections 	21
		Genetics	<ul style="list-style-type: none"> • Principles of Inheritance (Genes , Mutations , Variation , Alleles) • Pedigree diagram (AD , AR , X link D , X link R , Polygenic , Single gene defects) • Chromosomal defects (Down syndrome , Edward syndrome , fragile X syndrome , Patau syndrome , XXX syndrome , XYY syndrome , Turner syndrome ,Clinefelter syndrome) • Singel Gene Defect (CF , NF 1 , CAH , OI , Ataxia telegenctasia , Friedrich ataxia , Marfan syndrome , Charcot marrie foot disease) 	07


			<ul style="list-style-type: none"> • Multi Factorial / Polygenic Disorders 1 (Heart defects , cleft palate lip , spina bifida , Diaphragmatic hernia) • Genetic Diagnosis (Karyotyping , Cytogenetics , New born screening , Carrier testing , Genetic testing , Enzyme assays , Genetic expression test) • Prenatal Diagnosis (Amniocentesis , CVS , Down syndrome , NIPT test) 	
		Community and Social Pediatrics	<ul style="list-style-type: none"> • National Health Programme (EPI , Breastfeeding initiative Programme , ARI , IMNCI , TB control Programme , HIV Programme , Diarrheal disease Programme , Nutritional programme , National Malaria Eradication Programme , Vitamin A deficiency programme , Polio Eradication programme , National Iodine deficiency programme , Mental health programme and School programme • Child Abuse and Neglect • Legal Laws of Child (National plan of action for child protection , Legal rights of children under laws of pakistan , National Health vision pakistan 2016 – 2025) • Govt and NGO for support of children(Unicef pakistan , SOS village , Child Care Foundation of pakistan , Child labour , Child support programme , Save the children pakistan) • Prevention and Control of Infection (Cause Epidimology , Measures of prevention communicable disease , Waterborne disease , Soil borne , Food borne , Vector borne , Non communicable disease , Investigation of outbreak of measles , Polio , Haemragic disease , Mumps) 	07
	Basic Sciences	Physiology	<ul style="list-style-type: none"> • Structural and Functional Organization of the Cells of Body • Blood • Cardiovascular System • Respiration • Fluid Balance/Acid-Base Balance/ Renal function • Endocrinology • Gastrointestinal function • Central Nervous System/Autonomic Nervous System • Muscle and nerve physiology 	10

			<ul style="list-style-type: none"> • Metabolism & Function of Micro & Macro-Nutrients Growth, Growth Hormone and Puberty • Growth Hormone <ul style="list-style-type: none"> ➤ Physiological actions of growth hormone ➤ Indirect anabolic actions of Growth Hormone ➤ Control of Growth Hormone Secretion • Insulin Like Growth Factor (IGF-1) <ul style="list-style-type: none"> ➤ Specific Properties 	
		Pathology	<ul style="list-style-type: none"> • Cell injury: Atrophy/Hypertrophy / Necrosis/ Gangrene • Inflammation: Exudate & Transudate/ Granulomatous/ Non- Granulomatous Hemodynamic disorders: Shock (compensated/ uncompensated) / Edema • Neoplasia: Tumor staging and tumor grade/ Benign/ Malignant neoplasm • Immunity & Hypersensitivity: Anaphylaxis, Transplantation immunology, • Immunodeficiency disorders • Hematology: Blood picture/ Anemia (Microcytic/ Megaloblastic) • Microbiology: Infection source/ Nosocomial infection/ Important Microbes • Bacterial Growth & Death: Gram staining and AFB staining • Fungal Diseases: Fungal skin infection/ opportunistic infection • Important Parasites: Malaria, Ascariasis, Ancylostomiasis, Amoebiasis, Giardiasis 	10
		Pharmacology	<p>Central Nervous System Pharmacology</p> <ul style="list-style-type: none"> • Anticonvulsants <ul style="list-style-type: none"> ➤ Phenytoin <ul style="list-style-type: none"> ❖ Uses ❖ Side-effects ❖ Teratogenicity ➤ Carbamazepine <ul style="list-style-type: none"> ❖ Uses ❖ Side-effects ❖ Teratogenicity 	10

			<ul style="list-style-type: none"> ➤ Valproic Acid <ul style="list-style-type: none"> ❖ Uses ❖ Side-effects ❖ Teratogenicity • Opioid Analgesics <ul style="list-style-type: none"> ➤ Morphine <ul style="list-style-type: none"> ❖ Uses ❖ Toxicity ❖ Antidote; naloxone • Status Epilepticus <ul style="list-style-type: none"> ➤ First-Line drugs ➤ Route of administration ➤ Side-effects <p>Antimicrobial Pharmacology</p> <ul style="list-style-type: none"> • Anti-Bacterial Agents <ul style="list-style-type: none"> ➤ Bactericidals ➤ Bacteriostatics ➤ Synergy ➤ Resistance ➤ Broad-Spectrum antibiotics • Anti-Tubercular Agents <ul style="list-style-type: none"> ➤ Treatment duration ➤ Side-Effects of different Anti-Tubercular Agents • Anti-Viral Agents <ul style="list-style-type: none"> ➤ Uses and Side effects • Treatment of HIV/AIDS • Anti-Fungal Agents • Anti-Protozoal Agents <p>Drugs used in Malaria</p> <p>Respiratory Pharmacology</p> <ul style="list-style-type: none"> • Asthma & COPD <ul style="list-style-type: none"> ➤ First Line treatment for Asthma and COPD ➤ Beta Receptor Agonists; their contraindication, bronchodilator reversibility test (albuterol): role and mechanism ➤ Muscarinic Antagonists; their role and side effects ➤ Methacholine Challenge Test; its mechanism 	
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			<ul style="list-style-type: none"> ➤ Glucocorticoids; their role and long-term use, side-effects. <ul style="list-style-type: none"> • Theophylline <ul style="list-style-type: none"> ➤ Uses ➤ <u>Drug Interactions</u>: Erythromycin, Cimetidine and Fluoroquinolones; (CYP450 Inhibition) • Aminophylline <ul style="list-style-type: none"> ➤ Uses and role of IV Aminophylline in Status Asthmaticus • Antileukotrienes <ul style="list-style-type: none"> ➤ LTD-4 receptor blockers; Zafirlukast and Montelukast ➤ Lipooxygenase inhibitors; Zileuton; role in using as an adjunct to steroids • Status Asthmaticus <ul style="list-style-type: none"> ➤ First Line Drugs <p>Complications and side-effects.</p> <ul style="list-style-type: none"> • Glucocorticoids <ul style="list-style-type: none"> ➤ Synthetic Glucocorticoids and their Potency. ➤ Glucocorticoid versus Mineralocorticoid effect of different synthetic glucocorticoids ➤ Side effects on: <ul style="list-style-type: none"> ❖ ACTH levels ❖ Gluconeogenesis ❖ Bones; Osteoporosis ❖ Electrolyte imbalance; Na⁺/Water retention, edema, hypokalemic alkalosis, hypocalcemia ❖ Skeletal growth of children ❖ Wound Healing ➤ Contraindications. <p>Long-term use and withdrawal.</p> <p>Gastrointestinal Pharmacology</p> <ul style="list-style-type: none"> • <u>Drugs used for constipation</u> <ul style="list-style-type: none"> ➤ Laxatives, types, mechanism of
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			<p>action, indications and side effects</p> <ul style="list-style-type: none"> • <u>Anti helminthic drugs</u>, indications and side effects • <u>Anti emetic drugs</u>, indications and side effects <ul style="list-style-type: none"> ➤ <u>5-HT3 Antagonists</u>; Role in cancer chemotherapy induced vomiting. ➤ <u>Dopamine antagonists</u>; Their pro-kinetic effects and role in cancer chemotherapy induced vomiting. Complications and management, especially Extrapyramidal Symptoms. • <u>Anti-Diarrheal Drugs</u>; <ul style="list-style-type: none"> ➤ <u>Opiate anti-diarrheals</u>; Loperamide. Its safety, advantages and use in cholera endemics. • <u>Antacids</u> <ul style="list-style-type: none"> ➤ Uses ➤ Side-effects: Constipation (Al+++), Diarrhea (Mg++) and Alkalosis (Ca++). <p><u>Anti tumor necrosis factors (TNF) drugs</u> for inflammatory bowel disease, mechanism of action, indications, pre-requisite for initiating treatment, monitoring and resistance.</p>	
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2. Clinical Examination-----

	Sr. #	Content of TOACS	Observed Stations	Marks
Principals of General Medicine	1.	Nutrition	2	20
	2.	Infectious diseases	2	20
	3.	Pediatric emergency and critical care	3	30
	4.	Genetics	1	10
	5.	Community and social pediatrics	2	20
Total			10	100

The candidate scoring 60% marks shall be declared pass in clinical examination.

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