



**FACULTY OF MEDICINE**

**UNIVERSITY OF RUHUNA**

**FINAL EXAMINATION FOR MEDICAL DEGREES – JANUARY 2024  
PAEDIATRICS PAPER I**

**18.01.2024**

**1.00 p.m. – 4.00 p.m. (Three hours)**

1. There are six parts (A, B, C, D, E & F).
2. There is one question in each part.
3. Answer all six questions.
4. Answer each question in the space provided.
5. Write the index number in the space provided on top of each part.

**PAEDIATRICS - PAPER 1**  
**Final Examination for Medical Degrees – January 2024**  
**Faculty of Medicine, University of Ruhuna**

**Part A - Question No 1**

Index No: - .....

1. An -11 -month old boy is admitted to the paediatric casualty ward with fever and excessive crying while passing urine. On examination, baby is febrile, ill looking, irritable and the right kidney is palpable.

1.1 List **four [4]** steps in the initial management. (20marks)

.....

.....

.....

.....

.....

1.2 List **five [5]** causes for palpable right kidney in this child. (20 marks)

.....

.....

.....

.....

.....

Despite appropriate treatment, baby still remains ill and febrile even at 72 hours after admission.

1.3 List **four [4]** possible reasons you would consider at this stage. (20 marks)

.....

.....







**PAEDIATRICS - PAPER 1**  
**Final Examination for Medical Degrees – January 2024**  
**Faculty of Medicine, University of Ruhuna**

Part C - Question No 3

Index No: - MD/2017/5188

An eight week-old infant who was born at 30 weeks of gestation is being reviewed at well baby clinic before immunization. He had been treated for early respiratory distress and sepsis in the Neonatal Intensive Care Unit for 4 weeks. His length is on 10<sup>th</sup> centile for corrected gestational age while the head circumference is above 97<sup>th</sup> centile.

3.1 What complication could have occurred in this baby?

(10 marks)

Bronchopulmonary dysplasia

3.2 List four [4] other features you would look for to confirm the diagnosis.

(20 marks)

Respiratory rate - tachypnoeic child with rate  $> 40/\text{min}$

Use of accessory muscles of respiration.

Presence of bilateral diffused rhonchi and coarse crepitations

Presence of intercostal, subcostal recessions with grunting.

3.3 Briefly describe two (2) factors that may have contributed to the diagnosis mentioned in 3.1.

(20 marks)

• Prematurity - being born prematurely is a risk factor for development of this condition due to pulmonary hypoplasia and lack of surfactant.

• Being ventilated due to respiratory distress at NICU - Due to frequent respiratory infection and long term oxygen therapy cause frequent airway compromise.

3.4 Describe briefly the management options of the condition mentioned in 3.1.

(30 marks)

Management is mainly supportive with supplemental oxygen via nasal prongs according to level of saturation. Prevention of recurrent respiratory tract infection with empirical antibiotics in susceptible patients. Use of bronchodilators and steroid therapy is though practiced is of no proven benefit. Nebulization with saline can be helpful. Pulmonology input would be required in complicated cases with chest physiotherapy as well. Address co-morbid nutritional deficiency by assessing the nutritional status of the child according to age specified charts with ready to use therapeutic formula or thripasha as per the level of malnutrition. Parental education about hand hygiene, cleaning the child and identification of illness early to prevent respiratory infections.

Cancel

3.5 List five [5] long term complications that could occur following management you mentioned in

3.4.

(20 marks)

Branchiectasis

Serere acute malnutrition

Learning disability

**PAEDIATRICS - PAPER 1**  
**Final Examination for Medical Degrees – January 2024**  
**Faculty of Medicine, University of Ruhuna**

**Part D - Question No 4**

Index No: - .....

A 3-year-old child is admitted to the Emergency Treatment Unit with acute severe asthma. She is a known child with chronic asthma for more than 1 year and was on inhaler steroids for 6 months.

4.1. List **five (5)** clinical parameters that would help in grading the severity of asthma.

(10 marks)

.....

.....

.....

.....

.....

4.2. Describe briefly **two (2)** most important initial therapeutic interventions you would consider in managing this patient. (indicate the drug doses if any)

(20 marks)

.....

.....

.....

.....

4.3. List **three (3)** alternative medications that can be used if the child does not respond to the initial steps in the management mentioned in 4.2.

(15 marks)

.....

.....

.....



4.4. Mention **two (2)** adverse effects of each drug mentioned in 4.3

(15 marks)

.....

.....

.....

.....

4.5. While managing acute severe asthma, this child deteriorated suddenly. Mention the most likely cause and briefly describe the immediate intervention.

(20 marks)

.....

.....

.....

4.6. Briefly describe **five (5)** reasons that would have contributed for the poor control of asthma in this girl.

(20 marks)

.....

.....

.....

.....

.....

.....

.....

**PAEDIATRICS - PAPER 1**  
**Final Examination for Medical Degrees – January 2024**  
**Faculty of Medicine, University of Ruhuna**

Part E - Question No 5

Index No: - .....

A term new-born baby was born by an emergency lower segment caesarian section. The baby did not cry at birth, he was pale and floppy. There was no breathing, and the heart rate was less than 60 beats per minute.

5.1 List **three (3)** steps that you would carry out in opening of the airway in this baby. (30 marks)

.....

.....

.....

5.2 When would you consider chest compressions in this neonate? (10 marks)

.....

.....

.....

5.3 Mention **one (1)** indication of the following drugs used in newborn resuscitation with the dose and the route in each. (30 marks)

a) 10% Dextrose

.....

.....

b) Naloxone

.....

.....



**PAEDIATRICS - PAPER 1**  
**Final Examination for Medical Degrees – January 2024**  
**Faculty of Medicine, University of Ruhuna**

**Part F - Question No 6**

Index No: - .....

A 7-month old boy is referred by a general practitioner for further evaluation of pallor. On examination, the baby has 4cm hepatomegaly and 3cm splenomegaly below the costal margins.

6.1 List **four (4)** differential diagnoses for the above presentation. (20 marks)

.....

.....

.....

.....

6.2 Mention **five (5)** other important physical signs you would look in this child to arrive at the diagnosis. (10 marks)

.....

.....

.....

.....

.....

Full blood counts results of both parents and the child are as follows.

	Reference range	Child	Mother	Father
White Cell count	4.0-12.0 x10 <sup>9</sup>	13.0	6.7	4.5
Haemoglobin	11.0 – 14.0 g/dL	7.5	9.5	10.5
MCV	70 – 86 fl	55	66	69
MCHC	32 –35 g/dl	31	31	32
MHC	23 – 31 pg	20	21	22
Platelets	150-450 x10 <sup>9</sup>	234	345	245
Retic count	<2%	5%	2%	2%

