

Rajiv Gandhi University of Health Sciences, Karnataka

Fellowship Examination - 07-Sep-2023

Time: Three Hours**Max. Marks: 100 Marks****PAEDIATRIC INTENSIVE CARE - PAPER – I****QP Code: 4143**

Your answers should be specific to the questions asked.

Draw neat, labeled diagrams wherever necessary.

Answer All The Questions**10 X 10 = 100 Marks**

1. Define volume of distribution. Outline the factors affecting volume of distribution and explain how it may be measured.
2. Classify antibiotics with respect to their mechanism of action. Outline the mechanisms of antimicrobial resistance. Give specific examples of each.
3. Outline the anatomy relevant to the insertion of a Dorsalis Pedis arterial cannula. Explain the differences between blood pressure measurement at this site compared to measurement at the aortic arch.
4. Outline the principles underlying pulse oximetry. Briefly describe the effect of an elevated level of the following upon pulse oximetry values. a) Carboxyhaemoglobin b) Methaemoglobin
5. Describe the types of dead space in the respiratory system. Explain the consequences of increased dead space on gas exchange.
6. Describe the mechanism of action of drugs commonly used to treat acute severe asthma.
7. Outline the determinants of oxygen delivery to the tissue.
8. Describe the cardiovascular effects of a sudden increase in afterload.
9. Describe the physiological regulation of intracranial pressure.
10. Describe the factors that determine glomerular filtration rate (GFR) in the kidney. Outline methods by which GFR can be measured.

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