QP Code: 213378 **Reg. No……**

Second Year MPT Degree Regular/Supplementary Examinations January 2023

Paper III – Cardio Respiratory Physiotherapy

(2016 Scheme)

Time: 3 hrs **Max. Marks: 100**

- ***Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space***
- ***Answer all parts of a single question together • Leave sufficient space between answers***

Essays **(2x20=40)**

1. A 36 years old male admitted in the ICU following motor vehicle accident. His medical diagnosis was subarachnoid hemorrhage. Currently on his 6th day of ICU care, he is on SIMV mode and referred for physiotherapy. His current ABG report PaO_2 – 78 mmHg, $PaCO_2$ – 50 mmHg, pH – 7.32, HCO_3 – 26 mEq/L. (FIO_2 during the ABG – 70 %). Recent chest X ray showed homogenous opacity in the right middle and lower lobe. Ventilator settings is as follows:
   Mode: SIMV; Mandatory breaths: 14; Tidal volume: 450 ml; FIO_2 – 70 %; Airway pressure – 15cm H_2O; Vital parameters heart rate: 88; BP: 110/ 70 mmHg; CVP – 5 Cm H_2O
   - Plan physiotherapy assessment for this patient
   - Identify the goals of physiotherapy management at this stage
   - Select the physiotherapy techniques with rationale (8+4+8)
2. Ms. K, 44 years old homemaker, underwent right middle lobectomy following bronchiectasis. On her 1st POD her RHR = 136bts/min (regular rhythm), BP = 130/86mmHg, SpO_2 = 97% with 4L oxygen through facemask. Currently she is stable, alert and conscious comprehensive with drainage tube in situ. On auscultation therapist noticed reduced air entry on the right side and widespread crackles throughout the lung field. She is a known case of bronchial asthma and under medication.
   - Define lobectomy.
   - Mention the commonly used thoracic incisions
   - Identify the probable problem with rationale
   - Discuss the possible pathophysiology of postoperative pulmonary complications in this patient
   - Rationale the role of physiotherapy in prevention postoperative pulmonary complication (1+3+6+5+5)

P.T.O

Short Notes: **(10x6=60)**

3. Define cardiac rehabilitation. Describe the phases of cardiac rehabilitation. Discuss the goals of phase I (1+2+3)
4. Mention the indications for pulmonary rehabilitation. Discuss the components of pulmonary rehabilitation (2+4)
5. Discuss the process of gaseous exchange
6. Define postural drainage. Mention the contraindications for postural drainage. Specify the position to drain right anterior basal segment (1+3+2)
7. Compare and contrast Active Cycle of Breathing Technique (ACBT) and autogenic drainage
8. Mention the modifiable risk factors of coronary artery disease. Discuss any one factor in details (3+3)
9. Mention acyanotic and cyanotic heart disease. Discuss the hemodynamic of a common cyanotic heart disease (2+4)
10. Define intermittent claudication. Discuss the role of exercise in managing intermittent claudication (2+4)
11. Mention the types of hypoxia. Discuss the role of positioning in managing hypoxia (2+4)
12. Discuss the importance of early mobilization in ICU

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