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MANIPAL UNIVERSITY

THIRD YEAR B.Sc. R.T. DEGREE EXAMINATION – MAY/JUNE 2013

SUBJECT: ADVANCED NEONATAL RESPIRATORY CARE

Wednesday, May 29, 2013

Time: 10:00-13:00 Hrs.

Max. Marks: 80

✍ **Draw diagrams wherever necessary.**

1. A call is given from labor room for a normal term delivery. When you received the baby he was non-vigorous full of meconium stain. What steps will you take to resuscitate this baby? What are the initial ventilatory settings you would set on a ventilator? What are the advance ventilatory management which may help this baby?

(6+5+5 = 16 marks)

2. Discuss on the indication of Continuous Positive Airway Pressure in neonates. What are the types of devices available? Add a note on the interface of noninvasive ventilation.

(8+8 = 16 marks)

3. **Write short notes on:**

3A. List the cyanotic and Acyanotic congenital heart defects.

(8 marks)

3B. Define apnea. Add a note of management of apnea of prematurity.

(2+6 = 8 marks)

3C. Discuss the clinical and radiological features associated with transient tachypnea of new born.

(4+4 = 8 marks)

3D. Lung development

(8 marks)

3E. Principle and indication of pulse oximeter

(8 marks)

3F. How will you transport a 30 week gestation female baby with an approximate weight of 1200 grams from a primary hospital to a tertiary care hospital?

(8 marks)



MANIPAL UNIVERSITY

THIRD YEAR B.Sc. R.T. DEGREE EXAMINATION – MAY/JUNE 2013

SUBJECT: PULMONARY REHABILITATION

Wednesday, June 05, 2013

Time: 10:00-13:00 Hrs.

Max Marks: 80

Answer the following questions:

1. What are the suggested goals of paediatric pulmonary rehabilitation? Describe briefly the pathophysiology and clinical features of asthma. Describe your strategy for pulmonary rehabilitation of a child with asthma.

(5+3+8 = 16 marks)

2. Describe the pathophysiology and treatment of tobacco dependence.

(8+8 = 16 marks)

3. Write short notes on:

- 3A. Small volume nebulizers
3B. Home oxygen delivery systems
3C. Six minute walk test
3D. Guidelines for evaluating sputum samples
3E. Mechanism and methods to measure dyspnoea
3F. Lung volume reduction surgery

(8×6 = 48 marks)



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MANIPAL UNIVERSITY

THIRD YEAR B.Sc. R.T. DEGREE EXAMINATION – MAY/JUNE 2013

SUBJECT: CARDIOPULMONARY INTENSIVE CARE INCLUDING ADVANCED CARDIAC LIFE SUPPORT

Friday, May 31, 2013

Time: 10:00-13:00 Hrs.

Max Marks: 80

1. What is the mechanism of tension pneumothorax? Mention clinical features and outline the management of a patient with tension pneumothorax.
(2+6+8 = 16 marks)
2. Classify types of acute renal failure. Add a note on management of established renal failure.
(6+10 = 16 marks)
3. **Write short notes on:**
 - 3A. Management of hypovolaemic shock
 - 3B. Management of flial chest
 - 3C. Airway gadgets in CPR
 - 3D. Adenosine
 - 3E. Heimlich manuever
 - 3F. Treadmill test

(8×6 = 48 marks)



MANIPAL UNIVERSITY

THIRD YEAR B.Sc. R.T. DEGREE EXAMINATION – MAY/JUNE 2013

SUBJECT: RESEARCH METHODOLOGY AND STATISTICS

Monday, May 27, 2013

Time: 10:00-13:00 Hrs.

Max. Marks: 80

1. List the principles of qualitative research. (5 marks)
2. Describe internal validity and face validity. (5 marks)
3. What is the difference between qualitative and quantitative variables? Explain with examples. (5 marks)
4. Classify the following into different scales of measurements (Nominal, Ordinal, Interval and Ratio).
 - 4A. Address
 - 4B. Height
 - 4C. Heart rate
 - 4D. Ph value
 - 4E. Pain score
 (5 marks)
5. Explain judgment sampling. (5 marks)
- 6A. In a study of 252 patients admitted in a hospital, it was assessed whether patients were 'likely to be discharged', 'possibly to be discharged' or 'unlikely to be discharged'. The frequencies of these categories are shown in table below. Represent the data with the help of a pie chart.

Discharge	Frequency
Unlikely	126
Possibly	84
Likely	42
- 6B. Following are the fasting blood glucose level (mg/dl) of 30 children. Prepare a frequency table with 5 equal class intervals. Also find the relative frequencies.

62	65	56	64	63	77	72	79	62	73
57	57	59	67	62	61	61	60	55	75
57	65	75	65	68	61	60	68	69	67

 (5+5 = 10 marks)
7. Systolic blood pressure levels (mmHg) of ten patients who visited the OPD is as follows. Calculate mean, median, inter-quartile range and standard deviation.
105 120 125 112 125 120 115 130 116 101 (10 marks)

8. Given the mean and standard deviation of weight of new born babies are 3 kg and 0.5 kg respectively. Assuming normality estimate the percentage of newborns with weight.
- 8A. More than 2.5 kg
- 8B. Between 2.5 kg and 4 kg
- (5 marks)
9. Enumerate the properties of correlation with the help of scatter diagrams.
- (5 marks)
10. Describe health information system and its uses.
- (5 marks)
11. Define prevalence and incidence with examples. Distinguish between ratio and proportion.
- (10 marks)
12. What is descriptive epidemiology? Enumerate its uses and explain case series studies.
- (10 marks)



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THIRD YEAR B.Sc. R.T. DEGREE EXAMINATION – MAY/JUNE 2013

SUBJECT: PSYCHOLOGY

Friday, June 07, 2013

Time: 10:00-13:00 Hrs.

Max Marks: 80

1. Choose the single best answer:

- 1A. Which of the following is unrelated to clinical psychology?
- a) Neuropsychology b) Behavior medicine
c) Forensic Psychology d) Psychoanalysis
- 1B. Which of the following is not identified as a source of stress?
- a) Pressure b) Frustration
c) Anxiety d) Change
- 1C. Which of the following is not related to cognitive therapy?
- a) Cognitive dissonance b) Cognitive error
c) Cognitive triad d) Cognitive schema
- 1D. Grief refers to the _____
- a) State of loss b) Reaction to the loss
c) State of depression d) State of anxiety
- 1E. Which of the following test is related to intelligence assessment?
- a) 16 PF b) Rorschach Ink blot test
c) MMPI d) Wechsler test

(1×5 = 5 marks)

2. Write definitions on any FIVE of the following:

- 2A. Clinical Psychology
2B. Normality
2C. Rehabilitation
2D. Intelligence
2E. Chaining
2F. Bereavement
2G. Stress

(3×5 = 15 marks)

3. **Write short notes on any SIX of the following:**

- 3A. Supportive psychotherapy
- 3B. Phases of crisis
- 3C. Group therapy
- 3D. Substance use disorders
- 3E. Death and dying
- 3F. Psychodynamic model of mental disorders
- 3G. Case history method of psychology
- 3H. Personality assessment
- 3I. Bereavement counseling

(5×6 = 30 marks)

4. **Write essay on any TWO of the following:**

- 4A. Discuss the effects of stress and its management.
- 4B. Explain various crisis intervention strategies.
- 4C. Explain various aspects of psychosocial rehabilitation.

(15×2 = 30 marks)



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MANIPAL UNIVERSITY

THIRD YEAR B.Sc. R.T. DEGREE EXAMINATION – MAY/JUNE 2013

SUBJECT: RESPIRATORY THERAPY SCIENCE – III

Monday, June 03, 2013

Time: 10:00-13:00 Hrs.

Max Marks: 80

Answer to the point. Draw diagrams wherever necessary.

1. Write the indications for BIPAP (Biphasic positive airway pressure). With the help of diagrams explain types of BIPAP. Differentiate between APRV and BIPAP. What are the complications of BIPAP?

(2+6+4+4 = 16 marks)

2. Write the indications of putting the patient on high frequency ventilation. What are the different types of high frequency oscillatory ventilation? Write the different physiological principles involving in high frequency oscillatory ventilation. Enumerate the complications of high frequency ventilation.

(2+4+6+4 = 16 marks)

3. **Write short notes on:**

- 3A. Write a short note on lung mechanics (compliance and resistance)
3B. Ventilatory management of a COPD patients
3C. Oxygen toxicity
3D. Working principle of Drager evita
3E. Technique of prone position ventilation
3F. Nitric oxide therapy

(8×6 = 48 marks)

