

## Acute Respiratory Care of the Neonate, 3rd Edition—Course 2

### TEST DIRECTIONS

1. Please fill out the answer form and include all requested information. We are unable to issue a certificate without complete information.
2. All questions and answers are developed from the information provided in the book. Select the one best answer and fill in the corresponding circle on the answer form.
3. Mail the answer form to NICU INK, 1425 N. McDowell Blvd., Ste. 105, Petaluma, CA 94954-6513 with a check for \$25.00 (processing fee) made payable to NICU INK. This fee is non-refundable.
4. You will be notified of your test results within 6 weeks. Please retain the test for your records.
5. An answer key is available upon request with completion of the exam.
6. A total of 6.8 contact hours\* for the course (including .82 hours of pharmacology credit) may be earned as CNE credit for reading the material and for completing a posttest and evaluation. To be successful the learner must obtain a grade of at least 80% on the test.
7. No relevant financial interest or affiliation with any commercial interests was disclosed by members of the activity test panel. No commercial support/sponsorship was provided for this education activity. The Academy of Neonatal Nursing (ANN)/American Nurses Credentialing Center (ANCC) does not endorse any commercial products discussed in conjunction with this educational activity.  
The Academy of Neonatal Nursing is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation.  
Provider, Academy of Neonatal Nursing, approved by the California Board of Registered Nursing, Provider #CEP 6261; and Florida Board of Nursing, Provider #FBN 3218, content code 2505.  
Accredited status does not imply endorsement by ANN or ANCC of any commercial products displayed or discussed in conjunction with an educational activity.

\* Contact hours based on a 60-minute hour.

### COURSE OBJECTIVES

After reading the book and taking the test, the participant will be able to:

1. Discuss lung mechanics in the premature infant.
2. Describe the pathophysiology of common lung diseases.
3. Summarize the pathophysiology of the three types of apnea.
4. Outline the nursing care of the infant in acute respiratory distress.

- 
1. Which of the following congenital anomalies usually occurs in the embryonic stage?
    - a. congenital cystic adenomatoid malformation
    - b. congenital diaphragmatic hernia
    - c. tracheoesophageal fistula
- 

2. In a term infant, what percentage of alveoli normally develops after birth?
    - a. 55
    - b. 75
    - c. 95
- 

3. Fetal hypoxia results in a decreased secretion of which of the following?
    - a. cortisol
    - b. insulin-like growth factor 1
    - c. surfactant protein A
- 

4. Precapillary veins are present by week \_\_\_\_ of gestation.
    - a. 16
    - b. 20
    - c. 24
- 

- 
5. Ninety-five percent of each alveolus is made up of which type of cell?
    - a. columnar
    - b. cuboidal
    - c. squamous
- 

6. The presence of which of the following in the amniotic fluid is a marker of lung maturity?
    - a. dipalmitoylphosphatidylcholine
    - b. phosphatidylcholine
    - c. phosphatidylglycerol
- 

7. Glucocorticoids affect surfactant synthesis by increasing the rate of:
    - a. glycogen depletion
    - b. pulmonary artery maturation
    - c. Type I cell development
- 

8. Movement of the diaphragm in utero has been shown to affect:
    - a. absorption of lung fluid
    - b. lung cell differentiation
    - c. maturation of surfactant-producing cells
-



- 
31. Which of the following decreases in response to lung distention?  
a. inspiratory time                      c. respiratory rate  
b. expiratory time
- 
32. Mechanisms responsible for increased apnea during rapid eye movement sleep include:  
a. closure of airway during expiration  
b. intercostal muscle inactivation  
c. triggering of the larynx adductor muscles
- 
33. In older infants, severe apnea is a common presentation in:  
a. congenital heart disease  
b. hypoglycemia  
c. respiratory syncytial virus infection
- 
34. In newborns, small-airway closure can be triggered by:  
a. activation of the diving reflex  
b. hyperthermia  
c. inflammation
- 
35. Strategies to prevent apnea in very low birth weight infants include:  
a. keeping oxygen saturations above 90 percent  
b. maintaining temperature at the upper end of normal  
c. prone positioning
- 
36. Side effects of xanthines include:  
a. cardiac dysrhythmias              c. hyperglycemia  
b. constipation
- 
37. The newborn's primary method of heat production is through:  
a. chemical thermogenesis  
b. muscle activity  
c. shivering
- 
38. Stores of brown fat in the newborn can be found in which of the following locations?  
a. diaphragm                              c. liver  
b. mediastinum
- 
39. Hypothermia increases the risk of an infant developing:  
a. hypotension                              c. tissue hypoxia  
b. respiratory alkalosis
- 
40. The range of accuracy for a gestational age assessment is plus or minus how many weeks?  
a. 1    c. 3  
b. 2
- 
41. On auscultation, a shift in the point of maximal impulse should cause the examiner to suspect:  
a. lobar consolidation  
b. pneumothorax  
c. right mainstem intubation
- 
42. Wheezes on auscultation would be an expected finding in infants with:  
a. bronchopulmonary dysplasia  
b. pneumonia  
c. TTN
- 
43. 2,3-diphosphoglycerate acts to enhance the:  
a. oxygen carrying capacity in the blood  
b. release of oxygen from hemoglobin  
c. uptake of oxygen by hemoglobin
- 
44. Fetal hemoglobin levels fall to 5–10 percent by \_\_\_\_\_ months of life.  
a. 2    c. 4  
b. 3
- 
45. Lancets used for capillary blood gas sampling should be \_\_\_\_\_ millimeters.  
a. 1    c. 3  
b. 2
- 
46. In a newborn infant, a normal cardiothoracic ratio does not exceed:  
a. 0.55    c. 0.65  
b. 0.6
- 
47. On x-ray, a displaced mediastinum is a feature of:  
a. congenital heart disease  
b. pneumomediastinum  
c. pneumothorax
- 
48. An expected finding in an infant with a vascular ring would be an x-ray that appears:  
a. bubbly                                      c. overaerated  
b. hazy
- 
49. For most term infants, consistent growth is achieved with a caloric intake of \_\_\_\_\_ kcal/kg/day.  
a. 90–100                                      c. 130–140  
b. 110–120
-

**ANSWER FORM: Acute Respiratory Care of the Neonate, 3rd Edition—Course 2**

Please completely fill in the circle of the **one best answer** using a dark pen.

Questions are numbered vertically.

- 1. a.     6. a.     11. a.     16. a.     21. a.     26. a.     31. a.     36. a.     41. a.     46. a.
- b.          b.          b.          b.          b.          b.          b.          b.          b.
- c.          c.          c.          c.          c.          c.          c.          c.          c.
  
- 2. a.     7. a.     12. a.     17. a.     22. a.     27. a.     32. a.     37. a.     42. a.     47. a.
- b.          b.          b.          b.          b.          b.          b.          b.          b.
- c.          c.          c.          c.          c.          c.          c.          c.          c.
  
- 3. a.     8. a.     13. a.     18. a.     23. a.     28. a.     33. a.     38. a.     43. a.     48. a.
- b.          b.          b.          b.          b.          b.          b.          b.          b.
- c.          c.          c.          c.          c.          c.          c.          c.
  
- 4. a.     9. a.     14. a.     19. a.     24. a.     29. a.     34. a.     39. a.     44. a.     49. a.
- b.          b.          b.          b.          b.          b.          b.          b.          b.
- c.          c.          c.          c.          c.          c.          c.          c.
  
- 5. a.     10. a.     15. a.     20. a.     25. a.     30. a.     35. a.     40. a.     45. a.
- b.          b.          b.          b.          b.          b.          b.          b.          b.
- c.          c.          c.          c.          c.          c.          c.          c.

**Acute Respiratory Care of the Neonate, 3rd Edition—Course 2**

Name \_\_\_\_\_  
Please Print

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Nursing License # \_\_\_\_\_ State(s) of License \_\_\_\_\_

Phone # \_\_\_\_\_ E-mail \_\_\_\_\_  
(optional)

FOR OFFICE USE ONLY	
RECEIVED	
CHECK	
GRADE	
<b>PASSED / FAILED</b>	
CERTIFICATE ISSUED	
MAIL DATE IF DIFFERENT	
REFERENCE #	

Test expires  
 May 20  
 2018

Mail with \$25.00 non-refundable processing fee for 6.8 contact hours  
 (.82 hours of pharmacology credit) payable to NICU INK.<sup>®</sup>  
 NICU INK.<sup>®</sup> 1425 N. McDowell Blvd., Ste. 105, Petaluma, CA 94954-6513.  
**Include an additional \$10.00 for rush processing.**  
 International Participants: International Money Order drawn on U.S. Bank only.

I have enclosed an additional \$10 for rush processing.

## Evaluation Directions

Thank you for taking the time to assist us in evaluating the effectiveness of this course. Using the scale below, darken the circles corresponding to your responses. If an item is not applicable, leave it blank.

①	②	③	④	⑤
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

### Objectives:

I am able to:

- |  |           |
|--|-----------|
| 1. Discuss lung mechanics in the premature infant.                       | ① ② ③ ④ ⑤ |
| 2. Describe the pathophysiology of common lung diseases.                 | ① ② ③ ④ ⑤ |
| 3. Summarize the pathophysiology of the three types of apnea.            | ① ② ③ ④ ⑤ |
| 4. Outline the nursing care of the infant in acute respiratory distress. | ① ② ③ ④ ⑤ |

### Presentation

- |  |           |
|--|-----------|
| 1. The material presented is relevant to my practice.  | ① ② ③ ④ ⑤ |
| 2. The content of this activity is likely to engender a change in my clinical practice.              | ① ② ③ ④ ⑤ |
| 3. The questions on the test reflected the content of the book.                                      | ① ② ③ ④ ⑤ |
| 4. The book content was comprehensive.   | ① ② ③ ④ ⑤ |
| 5. The test directions were clear.   | ① ② ③ ④ ⑤ |
| 6. The CNE activity was free of commercial bias.   | ① ② ③ ④ ⑤ |
| 7. I would recommend this CNE activity to colleagues.  | ① ② ③ ④ ⑤ |
| 8. I perceive the education level of this course to be:<br>1 = Basic; 2 = Intermediate; 3 = Advanced | ① ② ③     |

9. How long did it take you to complete the course? \_\_\_\_\_ hours \_\_\_\_\_ minutes

10. In what level unit do you practice? I\_\_\_ II\_\_\_ III\_\_\_

I am a  staff nurse  NNP  nurse manager \_\_\_\_\_ other (please state)

What subjects would you like to see offered for CE courses? \_\_\_\_\_

Additional comments: \_\_\_\_\_

\_\_\_\_\_