

### **Respiratory Case Study: Block 3: 125 pts.**

You will be assigned a level of organization to focus on throughout this case study. Your research will apply to the effects on this level of organization and the overall effect on the organism itself. Levels of organization are as follows:

- Chemical level
- Cellular level
- Tissue level
- Organ level
- Organ System level

The case and examination information include the following (Lachman, Cahill, 1997).

#### **HISTORY**

Deeply troubled parents bring their 11-month-old infant daughter to the emergency department of the hospital with a history of cough of two days' duration and noisy respiratory efforts. The infant seems to struggle for air and appears quite frightened.

#### **EXAMINATION**

On examination, the patient's face, and particularly the lips, display bluish discoloration (cyanosis), the nostrils dilate with every breath, and the child struggles for air. In breathing, the accessory muscles of respiration are also used. The infant has a rapid pulse and a temperature of 101°F. From time to time, she has noisy coughing spells. The throat and larynx appear red and inflamed. On auscultation, coarse rales are heard over the chest.

## Assignments:

1. Contact an expert that will agree to critique your final treatment and explanation of this treatment. (10 pts.)
2. Give a thorough explanation of the history and examination. Explain each sign / symptom and how your level of organization is involved. (20 pts.)
3. Make an initial diagnosis; explain this diagnosis and the proof behind your diagnosis with respect to your level of organization. (20 pts.) Use the following questions to guide your research.
  - We are dealing here with an infant in severe respiratory distress. What is the explanation for the cyanosis, particularly noticeable on the lips?
  - What accessory muscles of respiration are used in case of respiratory difficulties?
4. What technique/ surgery/ therapy is used to alleviate these conditions? Explain your ideas and the exact process. (10 pts)
5. Describe and show through dissection all anatomical features affected by your treatment and the treatment process itself. (20 pts.)
6. Show through graphical representation the affects of the treatment on your level of organization and the organism (set up a test using the labpro and sensors). (10 pts.)
7. Discuss / show any complications of the treatment. Remember to discuss any additional complications taking into consideration the age of the patient. (10 pts.)
8. Compile your treatment explanation, process, and any complications into a file to be shared with your expert. Submit this file to your expert for critique. (10 pts.)
9. Make corrections/ additions to your file depending on expert feedback. You should have at least one additional contact with the expert on corrections. (10 pts.)
10. Lastly, contact your expert expressing appreciation for their cooperation. (5 pts.)