Assessment details:

A minimum of five of the eight references provided as resources must be used and cited in this case study.

You must use the supplied template, which must be accessed from the Assessment 2 tab in the subject’s vUWS site,

to answer the questions that follow the case study below.

Case Study:

Peter Smith, a 19-year-old man, was suffering from influenza and visited his local GP. He said he began to feel unwell

two days earlier and his condition had worsened since, with an acute onset of a sore throat (pharyngitis).

On examination the following observations were made:

- Fever of 38.9 degrees C

- Runny nose

- Sneezing

- Enlarged anterior cervical lymph nodes (lymphadenopathy)

Peter’s throat was observed to have the following signs:

- Redness

- Swelling

- Having a patchy covering of yellow-white exudate over his tonsils

The doctor prescribed phenoxymethylpenicillin 500 mg twice per day for ten days.

Using the supplied template (to be accessed from the Assessment 2 tab in the subject’s vUWS site), answer the following questions:

Q1. Explain what fever is and the pathophysiology of how Peter’s fever developed. State, with explanation, two

benefits of fever. (Total: 20 marks)

Q2. Given that influenza is caused by a virus, why was Peter prescribed an antibiotic? The doctor prescribed

phenoxymethylpenicillin. Discuss the mode of action of phenoxymethylpenicillin. Explain why antibiotics are not

effective against viruses. (Total: 25 marks)

Q3. Name and describe three (3) possible ways that Peter could have contracted the influenza virus (starting from

the source followed by modes of transmission). Identify and explain two (2) ways by which each of these three

modes of transmission could be broken. (Total 25 marks)

Q4. Compare and contrast the processes by which viruses and bacteria replicate (Total:10marks)

Presentation: (20 marks)

Resources:

Boland, M. (Director), Santall, J. (Presenter), & Video Education Australasia. (2011). Infection control in healthcare

[Videorecording]. Bendigo, Australia: VEA.

Bullock, S., & Manias, E. (2017). Fundamentals of pharmacology (8th ed.). Pearson Australia.

Burchum, J. R., & Rosenthal, L. (2019). Lehne’s pharmacology for nursing care (10th ed.). Elsevier/Saunders.

OR: Lehne, R. A., Moore, L., Crosby, L., & Hamilton, D. (2016). Pharmacology for nursing care (9th ed.). Saunders/Elsevier.

OR: Lehne, R. A., Moore, L., Crosby, L., & Hamilton, D. (2013). Pharmacology for nursing care (8th ed.). Saunders/Elsevier). (Available online).

Craft, J., & Gordon, C. (Eds.). (2019). Understanding pathophysiology (3rd, Australian and New Zealand ed.).

Elsevier. (Available Online)

Lee, G., & Bishop, P. (Eds.). (2016). Microbiology and infection control for health professionals (6th ed.). Pearson

Australia.

Marieb, E.N., & Hoehn, K. (2019). Human anatomy & physiology. Global edition. (11th ed.). Pearson Education

Limited.

Norris, T. L., (2019). Porth’s pathophysiology: Concepts of altered health states (10th ed.). Wolters Kluwer.

OR: Grossman, S. C., & Porth, C. M. (2014). Porth’s pathophysiology: Concepts of altered health states (9th ed.).

Wolters Kluwer Health/Lippincott Williams & Wilkins.

OR: Porth, C. M., & Matfin, G. (2014). Pathophysiology: Concepts of altered health states (9th ed.). Lippincott

Williams & Wilkins.)

WHO. (2015). Influenza, an unpredictable threat. Retrieved from: https://www.who.int/health-topics/influenzaavian-and-other-zoonotic#tab=tab\_1

Format

All assignments are to be typed.

Typing must be according to the following format: 3 cm left and right margins, lines double spaced.

Font: Arial or Times New Roman

12

Font size: 12p

***This template must be used to answer the case study.***

*(Please type your answers within the box underneath each question)*

*Student name (LAST NAME first name):*

*Student number:*

*Campus:*

*Tutorial session (time and room no.):*

*Tutor’s name:*

1. **Fever development and benefits (Total: 20 marks)**
   1. What is fever? Explain how Peter’s fever developed. *14 marks*

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* 1. State, with explanation, two benefits of fever**.**  *6 marks*

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1. **Prescription, mode of action and effectiveness of phenoxymethylpenicillin. (Total: 25 marks)** 
   1. Given that influenza is caused by a virus, why was Peter prescribed an antibiotic? *5 marks*

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* 1. The doctor prescribed phenoxymethylpenicillin. Discuss the mode of action of phenoxymethylpenicillin. *15 marks*

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* 1. Explain why antibiotics are not effective against viruses.*5 marks*

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1. **Spreading of influenza and breaking its mode of transmission. (Total: 25 marks)** 
   1. Name and describe three (3) possible ways that Peter could have contracted the influenza virus (modes of transmission). *15 marks*

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* 1. Identify and explain two (2) ways by which each of these three modes (that you have noted in 3.1 above) of transmission could be broken. *10 marks*

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1. **Replication of microorganisms (Total: 10 marks)** 
   1. Compare and contrast the processes by which viruses and bacteria replicate. *10 marks*

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1. **Presentation (Total: 20 marks)** 
   1. Referencing in-text and in reference list conforms to APA 7th Ed. referencing style.

*(10 marks)*

* 1. Critique supported by relevant literature as prescribed. Correct sentence structure, paragraph, grammatical construction, spelling, punctuation and presentation. *(10 marks)*