



10. Mycobacterium tuberculosis has a complex cell wall which confers many properties to the organism:
- a) Why is heating required in the staining process in the Zeihl Neelson method? 1
  - b) Name four complex lipids and the properties they confer to the Mycobacterium. 4

11.

## The Sydney Morning Herald

The above mentioned newspaper reported the following news item.

### SMUG AS A BUG:

"He was so sure he was right and conventional medical wisdom wrong about the cause of stomach ulcers that he swallowed bacteria to prove his point. Now once-skeptical peers are talking about a possible Nobel prize. MELISSA SWEET reports." Saturday, August 2, 1997

Finally Barry **Marshall** and Robin **Warren**, got half the Nobel prize each, in 2005, by proving that most stomach ulcers and gastritis were caused by infection by this bacterium and not by stress or spicy food as had been assumed before:

- a) Which bacteria was one of them talking about? 1
  - b) How were Koch's postulates fulfilled to prove, whether an organism was pathogenic in the disease it caused in this case. Narrate in less than seventy words? 4
12. a) Name the protozoan which affects the maximum women in the world. 1
- b) Give its route of infection. 2
- c) Mention two symptoms produced by this protozoan. 2
13. a) What is the name given to the study of the most common infectious agents? 1
- b) Give three properties of the infectious agent which makes them differ from bacteria. 3
- c) Name an infectious particle smaller than this particle. 1
14. Nearly 300 of the 100,000 to 200,000 species (depending on how they are classified) are thought to cause disease.
- a) What is the study of these organisms known as? 1
  - b) Classify mycosis in FOUR groups. 4