

1. Medical Researchers:

How many Australian born medical researchers have won the Nobel Prize in Physiology or Medicine? Image: http://nobelprize.org

- a) 5
- b) 6
- c) 7
- d) 8



2. Medical Researchers:

Which of the following Australian Health and Medical Researchers has NOT been Australian of the Year? Image: Alfred Nobel

- a) Sir Gustav Nossel
- b) Professor Donald Metcalf
- c) Professor Fiona Stanley
- d) Dr Fiona Wood



3. Health:

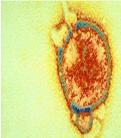
The most useful indicator of health risk associated with overweight and obesity is a combination of waist circumference and Body Mass Index. Using the BMI percentile charts from the US Centers for Disease Control and Prevention (2000), what is classified as overweight in children and adolescents?

- a) a BMI above the 75th percentile
- b) a BMI above the 85th
- c) a BMI above the 90th
- d) a BMI above the 95th

4. Health:

What is the most common cause of death in Australia?

- a) Cancer
- b) Heart disease
- c) Arthritis
- d) Obesity



5. Viruses:

In 1994 an Australian scientist from the CSIRO agency discovered the deadly virus, which was named the Hendra virus. What was the virus named after? image:http://csiro.au/science/Virus-research.html

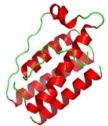
- a) The name of a horse
- b) The name of the scientist
- c) The name of the research
- d) The area the first outbreak occurred



6. Viruses:

Which of the following diseases is not caused by a virus? image:http://www.ambulance.nsw.gov.au/newsletters.winter09/

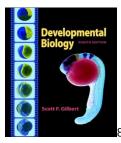
- a) Malaria
- b) Polio
- c) Dengue
- d) Influenza



7. The Human Body:

Where in the human body is the hormone Leptin produced and secreted? image:http://www.3dchem.com/molecules.asp?ID=154

- a) Adipose tissue
- b) Hepatocytes
- c) Blood
- d) Brain



8. The Human Body:

From which embryonic lineage does the liver develop from? image: http://8e.devbio.com/

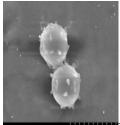
- a) Liverderm
- b) Mesoderm
- c) Ectoderm
- d) Endoderm



9. Blood:

How long does an individual red blood cell approximately take to make a complete circuit of the body? $image: \frac{http://www.ktl.fi/publications/ehr/product2/part_iii4.htm}{}$

- a) 20 seconds
- b) 40 seconds
- c) 60 seconds
- d) 80 seconds



10. Blood:

Which of the following is not a white blood cell? image: http://www.bacteria-world.com/white-blood-cells.htm

- a) Neutrophil
- b) Erythrocyte
- c) B cell
- d) Macrophage



11. The Brain:

The brain uses what percentage of the body's energy? image: http://www.westone.wa.gov.au/

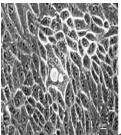
- a) 2 per cent
- b) 10 per cent
- c) 20 per cent
- d) 50 per cent



12. The Brain:

 $Which of the following cells can be found in the brain? {\it image:http://www.nidcd.nih.gov/health/inside/wtr11/pg4.html} and {\it image:http://$

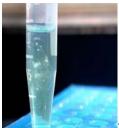
- a) Microglia, oligodendrocytes & hepatocytesb) Oligodendrocytes, hepatocytes & myocytesc) Microglia, oligodendrocytes & astrocytes
- d) All of the above cells can be found in the brain



13. Scientific Method:

If I have 4 x 10⁷ cells in 4mL, how many cells do I have in 2µL? image:http://www.coursel.winona.edu/sberg/image.htm

- a) 200000
- b) 800000
- c) 20000
- d) 1000



14. Scientific Method:

Which of the following assists the precipitation of DNA from solution during the extraction of chicken liver DNA? image: http://www.biotechlearn.org.nz/nz

- a) Heat
- b) Ethanol
- c) DNase
- d) SDS (sodium dodecyl sulphate)



15. Australian Natives:

Tea-tree oil of the Australian native plant Melaleuca alternifolia has been produced and marketed in Australia since the 1920s. It has been researched intensely in Australia and has been shown to

be: image:http://www.bchabg.gov.au/images/photos_cd/632030813539/043.html

- a) anti-bacteria
- b) anti-fungal
- c) anti-inflammatory
- d) all of the above



16. Australian Natives:

 $Which \ of \ the \ following \ Australian \ animals \ is \ venomous? \ {\it image: http://www.dpwi.tas.gov.au/inter/nsf/WebPages/BHAN-54E77W?open} \ animals \ is \ venomous? \ {\it image: http://www.dpwi.tas.gov.au/inter/nsf/WebPages/BHAN-54E77W?open} \ animals \ is \ venomous? \ {\it image: http://www.dpwi.tas.gov.au/inter/nsf/WebPages/BHAN-54E77W?open} \ animals \ is \ venomous? \ {\it image: http://www.dpwi.tas.gov.au/inter/nsf/WebPages/BHAN-54E77W?open} \ animals \ is \ venomous? \ {\it image: http://www.dpwi.tas.gov.au/inter/nsf/WebPages/BHAN-54E77W?open} \ animals \ {\it image: htt$

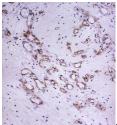
- a) Platypus
- b) Common tree snake

- Frill-necked lizard
- d) Koala



Melanoma is the most deadly form of skin cancer, and can be caused by exposure to UV radiation and sunburn. Australia has the highest rate of melanoma in the world. Melanoma is a cancer arising from which type of cell in $the \ skin? \ {\it image:http://visualonline.cancer.gov}$

- Keratinocyte a)
- b) Melanocyte
- c) langerhans cell
- d) hepatocyte



18. Cancer:

The mammogram is a used to screen for which type of cancer image:http://visualonline.cancer.gov

- a) Prostate
- b) Lung
- c) Breast
- d) Bowel

19. Medical Research in Australia:

In 25 words or less, describe what you think is the most significant contribution Australian researchers have made to health and medical research, and why?



20. Medical Research in Australia:

The Australian Society for Medical Research (ASMR) Medical Research Week brings science to the public and celebrates medical discoveries and the scientists who perform the hard work. The 2011 Medical Research Week dates are: http://www.asmr.org,au

- a) Feb 29 to March 5
- b) March 29 to April 5
- c) April 29 to May 5
- d) June 2 to June 10

Molecular Biology of the Cell

http://www.betterhealth.vic.gov.au/

http://www.abs.gov.au/

http://www.health.gov.au/

http://www.abc.net.au/science/

http://www.science.org.au/nova/index.htm

http://en.wikipedia.org/wiki/Main_Page

http://www.howstuffworks.com/

Answers

- 1. C
- 2. B
- 3. B
- 4. B
- 5. D
- 6. A
- 7. A
- 8. D
- 9. A
- 10. B
- 11. C
- 12. C
- 13. D
- 14. B
- 15. D
- 16. A
- 17. B
- 18. C
- 19. Not applicable
- 20. D