

## Quiz 2

**By William Reville, University College, Cork.**

1. The number of cells in the average human adult is about - (a) fifty thousand, (b) fifty million, (c) fifty trillion.
2. Each species has a characteristic number of chromosomes. Human cells contain - (a) twenty-three pairs, (b) forty-six pairs, (c) ten thousand pairs.
3. Cell division is called - (a) lordosis, (b) mitosis (c) halitosis.
4. The name of the geneticist who thrived under Stalin and had a devastating effect on Soviet genetics is - (a) Potemkin, (b) Rasputin, (c) Lysenko.
5. The bases in the DNA molecule do not include - (a) cytosine, (b) guanine, (c) anodyne.
6. The number of different genes in a human is estimated to be - (a) ten, (b) ten thousand, (c) ten million.
7. The surface area of the lungs available for exchange of gas is approximately equal to that of a - (a) ping-pong table, (b) tennis court, (c) football field.
8. The body replaces worn-out red blood cells at the rate of 2.5 million cells every - (a) second, (b) minute, (c) day.
9. The skin most sensitive to touch is located on the - (a) earlobes, (b) fingertips, (c) soles of the feet.
10. The most precise voluntary movements are those involving muscles that move the - (a) eyes, (b) lips, (c) tongue.
11. Anatomically, the main difference between the human and the monkey hand is - (a) longer fingers on the monkey hand, (b) the human thumb can rotate, (c) the human has a longer thumb.
12. The second largest organ in the body is the - (a) liver, (b) adrenal gland, (c) stomach.
13. If you receive one gene for blue eyes from each parent, with respect to eye colour you are - (a) homozygous, (b) homogeneous, (c) monogamous.
14. Eye colour is determined by - (a) the size of the eye, (b) the blood supply, (c) the relative amount of a brown pigment.
15. The oldest geological era is the - (a) Precambrian, (b) Palaeozoic, (c) Mesozoic.
16. The present calendar is known as the - (a) Augustan, (b) Gregorian, (c) Julian.

17. Who discovered that a pendulum swing can be used as a clock? - (a) Archimedes, (b) Timaeus, (c) Galileo.
18. One of these fossils turned out to be a hoax - (a) Peking man, (b) Piltdown man, (c) Cro-Magnon man.
19. Stonehenge, in England, is believed to have been constructed (a) five hundred years ago, (b) three to five thousand years ago, (c) ten to fifteen thousand years ago.
20. What colour will you get when you mix a blue and a yellow pigment? - (a) yellow, (b) blue, (c) green, (d) black.
21. If you stand one foot in front of an ordinary mirror, how far 'behind the mirror' is your image? - (a) half a foot, (b) one foot, (c) an infinite distance.
22. Compared to its speed in air, the speed of light in water is - (a) greater, (b) less, (c) the same.
23. Who discovered that white light is composed of a spectrum of colours? - (a) Isaac Newton, (b) Robert Hooke, (c) Thomas Young.
24. Which of the following is qualified to perform eye surgery? - (a) optician, (b) optometrist, (c) ophthalmologist.
25. Eyeglasses have been used since - (a) biblical times, (b) the middle ages, (c) are less than one hundred years old.
26. Carbon-14 ( $^{14}\text{C}$ ) is radioactive and is incorporated into living matter, but not after death.  $^{14}\text{C}$  decays with a half life of 5,000 yrs. What fraction of the  $^{14}\text{C}$  originally present in the living tree will remain 15,000 yrs after its death? - (a)  $\frac{1}{2}$ , (b)  $\frac{1}{8}$ , (c)  $\frac{1}{16}$ .
27. Which of the following would  $^{14}\text{C}$  be most useful in dating? - (a) cave paintings in France and Spain, (b) Rembrandt paintings, (c) dinosaur bones.
28. The age of the moon has been accurately determined by - (a) rocks brought back by astronauts, (b) scriptural revelation, (c) theoretical calculations.
29. The age of the Earth has been determined by - (a)  $^{14}\text{C}$  - dating, (b) the fraction of rock on the surface which is igneous, (c) the ratio of uranium to lead on Earth.
30. Sharks are very primitive, but there are few shark fossils. The reason is - (a) sharks are primitive, but not old, (b) salt water dissolves the skeletons, (c) the skeletons are made of cartilage, and do not last.
31. The Irish Minister for Science and Technology is - (a) Mr. Emmet Stagg, (b) Mr. Bernard Allen, (c) Mr. Pat Rabbitte.
32. The hottest planet in our solar system is - (a) Mercury, (b) Earth, (c) Venus.

33. The most dense planet in our solar system is - (a) Mars, (b) Earth, (c) Jupiter.
34. A famous Irish Scientist who has been called 'the father of chemistry' - (a) Robert Boyle, (b) George Boole, (c) Ernest Walton.
35. The magnitude of earthquakes is measured on the Richter Scale. In this scale each unit is how many times greater than the next lower unit? - (a) 10 times, (b) 5 times, (c) 2 times.
36. The largest planetarium in the world is located in - (a) New York, (b) Niihama City, Japan, (c) London.
37. Who said 'Science without religion is lame, religion without science is blind'? - (a) Isaac Newton, (b) James Watson, (c) Albert Einstein.
38. Harry Ferguson (1884-1960) was born in Co. Down. He revolutionised the design and use of - (a) aircraft, (b) submarines, (c) tractors.
39. Who said 'All Science is either physics or stamp collecting'? - (a) Francis Crick, (b) Ernest Rutherford, (c) Max Planck.
40. Who said 'When a man sits with a pretty girl for an hour, it seems like a minute. But let him sit on a hot stove for a minute, and its longer than any hour. That's relativity'? - (a) Mel Brooks, (b) Carl Sagan, (c) Albert Einstein.