



Hello, I am a Robot Scientist in the University of Bath. But someone has erased my memory! Can you help me to remember my work?

Gender _____ ☐ Prefer not to say

1. Which of these colours of light are in the right order?

☐ I don't know yet.

- | | |
|--|--|
| A Red, Cyan, Green, Blue, Yellow, Orange | B Red, Orange, Yellow, Green, Cyan, Blue |
| C Blue, Yellow, Green, Cyan, Red, Orange | D Orange, Blue, Red, Green, Yellow, Cyan |

2. Which ones are primary colours of light?

☐ I don't know yet.

- | | |
|-------------------------|-----------------------|
| A Pink, Mauve, Black | B Red, Green, Blue |
| C Orange, Yellow, White | D Purple, Cyan, Brown |

3. If you add red, green and blue light together, what colour do you get?

☐ I don't know yet.

- | | |
|----------|----------|
| A Yellow | B Orange |
| C Black | D White |

4. What is light made of?

☐ I don't know yet.

- | | |
|----------|-------------|
| A Air | B Photons |
| C Gluons | D Molecules |

5. Can you mix red light and red light to get blue light?

☐ I don't know yet.

- | | |
|--|---------------------------------------|
| A Never | B Yes, it happens all the time |
| C Yes but only if you use a lot of red laser light | D Yes, but only if you use blue paint |

6. A lens does which of the following?

☐ I don't know yet.

- | | |
|----------------------------------|---------------------------------|
| A Changes the direction of light | B Makes an object appear larger |
| C Makes an object appear smaller | D All of the above |

7. Which of these is actually wrong about laser light?

☐ I don't know yet.

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|---------------------------------------|--|
| A It has very little spread | B It is made of different things than sunlight |
| C It is all precisely the same colour | D It travels in a straight line |

8. The colours in a rainbow are ordered because...

☐ I don't know yet.

- | | |
|--|--|
| A they can smoothly go from one to another. | B they are complementary. |
| C light in each colour vibrates differently. | D they travel at different speed in space. |

9. What do we use metamaterials for?

☐ I don't know yet.

- | | |
|--|--|
| A To trick light into doing unusual things | B To 3D print objects with laser light |
| C To make materials stronger | D For new car engines, driven by laser light |

10. Scientists who work with light use...?

☐ I don't know yet.

- | | |
|----------------|---|
| A screwdrivers | B objects made of glass: mirrors, lenses... |
| C metal rods | D All of the above |

Turn the page



Just a few more questions and I will be OK!

11. What is the colour of the Sun?

☐ I don't know yet.

- | | |
|---------|----------|
| A White | B Yellow |
| C Red | D Orange |

12. Which one IS true about humans?

☐ I don't know yet.

- | | |
|---|---|
| A We can see colours such as they really are. | B Everyone can fail to recognize a colour. |
| C Only some people don't recognize colours. | D Only red and green are hard to recognize. |

13. What do we call "chiral objects"?

☐ I don't know yet.

- | | |
|--|--|
| A Those that look the same in a mirror. | B Those that cannot be seen in a mirror. |
| C Those that look different in a mirror. | D Those from which mirrors are made. |

14. What is a "metamaterial"?

☐ I don't know yet.

- | | |
|--|--------------------------------------|
| A A material with human-made, "fake" atoms | B A material with super heavy atoms |
| C A material with super small atoms | D A material with all the same atoms |

15. The colours of light are like what in music?

☐ I don't know yet.

- | | |
|----------|-----------|
| A rhythm | B volume |
| C notes | D silence |

16. How many colours does a modern smart phone display?

☐ I don't know yet.

- | | |
|-----|---------|
| A 2 | B 256 |
| C 3 | D 64000 |

17. How many types of crystals are there in Nature?

☐ I don't know yet.

- | | |
|-------|------------------|
| A 14 | B 918 |
| C 256 | D More than 1000 |

18. A cubic crystal is what?

☐ I don't know yet.

- | | |
|------------------------|------------------------------------|
| A see through. | B always precious. |
| C made of cubic atoms. | D made of atoms arranged in cubes. |

19. How can we make light?

☐ I don't know yet.

- | | |
|-----------------------------------|--------------------------------------|
| A Using only a wire and a battery | B Using a wire, a bulb and a battery |
| C Using only a bulb and a battery | D All of the above |

20. Which one is true?

- | | |
|--|---------------------------------|
| A I could be a scientist if I wanted to. | B I could never be a scientist. |
|--|---------------------------------|