

- 21** A spring is stretched over a range within which elastic deformation occurs. Its spring constant is 3.0 N cm^{-1} .

Which row, for the stated applied force, gives the correct extension and strain energy?

| | force / N | extension / cm | strain energy / mJ |
|----------|--------------|-------------------|-----------------------|
| A | 3.0 | 1.0 | 1.5 |
| B | 6.0 | 2.0 | 120 |
| C | 12.0 | 3.0 | 180 |
| D | 24.0 | 8.0 | 960 |

- 22** Which statement about different types of electromagnetic wave is correct?

- A** The frequency of infra-red waves is less than the frequency of blue light.
- B** The frequency of radio waves is greater than the frequency of gamma rays.
- C** The wavelength of red light is less than the wavelength of ultraviolet waves.
- D** The wavelength of X-rays is greater than the wavelength of microwaves.

- 23** Orange light has a wavelength of 600 nm.

What is the frequency of this light?

- A** 180 GHz **B** 180 Hz **C** 500 THz **D** 500 kHz

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