

**Cables**

- 1) How many devices can be connected together over an RS 232 connection?
- 2) Which of the following is a valid IP address: 127.300.121.23, 230.0.1.2, 128.4.127, 256.0.12.34, 34.121.67.98.1
- 3) What is meant by **Direct Memory Access** and what is its major advantage and major disadvantage?
- 4) Why is it impractical to use a parallel-type connection over long distances?
- 5) What is meant by the **Protocol Efficiency** of an ethernet connection?
- 6) What is the advantage and disadvantage of 2.3Ghz wireless compared to 5Ghz wireless?
- 7) What is the minimum time taken to transmit a 20MB file over a 10Mbps connection? What is the corresponding time over a 96kbps connection?

**Images**

- 8) What is the raw size of a 1366 x 768 image in RGB?
- 9) What do you think the colour R=200, G=100, B=180 looks like? What about R=80, G=10, B=150?
- 10) Distinguish between raster and vector graphics. Which is better at storing photographs? Which for cartoon drawings?
- 11) Why is compression so effective at reducing the size of raster graphics?
- 12) For the following image file formats, state whether they are lossy or lossless: bitmap, png, gif, and jpg.

**Malware**

- 13) Match each of the following to their definition:  
Trojans, worms, virus's, rootkits, ransomware
  - Code that replicates itself by copying itself into other programmes
  - Encrypts and locks user files in demand of payment
  - Code that disguises itself as a standard programme but contains malicious features
  - Standalone programme that uses the operating system to hide itself and replicates over an internet connection
  - Malicious software that infiltrates the administrator account on a system.