

Students should answer all questions in the scriptbook provided. All questions are of equal weight.

Question 1. (Project Manager's Implementation Activities)

Outline **four** (4) of the **activities** of the project **manager** during the project **implementation** phase.

Question 2. (Risk Management)

Identify the **steps** involved in managing **risk** within a project.

Question 3. (Fire Alarm Project)

Draw *three* (3) **open-collector NAND** (74LS03) gates in a **wire-AND** configuration.

Question 4. (Electronic Wiring)

1. Sketch a **crossover**.
2. Sketch a **four-way junction** so that it does **not at all** resemble a crossover.
3. What is the international standard **letter** code for an **analog** device?

Question 5. (Logic Symbols)

Draw the newer (IEEE or Australian) standard symbols (*but absolutely NOT* the old style logic gate representation) for:

1. A **3-input AND** gate.
2. A **2-input XOR** gate.
3. A *single* device consisting of *two* **3-input AND** gates followed by *one* **2-input XOR** gate.

Question 6. (Logic Signals)

1. What colors are used for wires to VCC and GND?
2. Using the old familiar symbols, sketch the **logic gate** circuit represented by this formula:
 $Z = (\text{not } A).B + A.(\text{not } B).$
3. Give the names or formulas for all *seven* (7) distinct **signals** in the circuit.
4. Create a **color-code table** for the 7 signals, using 7 of the colors available in the first year laboratory.