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| **Theory Notes Task: Interrupts** |

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| 1a. What is meant by the term, ‘polling’?  Sending signals at regular intervals to check if a device needs attention |

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| 1b. Give an advantage of polling  Simple to code |

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| 1c. Give a disadvantage of polling  Inefficient for the CPU |

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| 2a. What is meant by the term, ‘interrupt’?  When an interrupt signal is sent to the CPU for it to drop what it is doing and process something else first |

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| 2b. Explain the process of how an interrupt takes place  The interrupt controller on the motherboard sends an interrupt signal to the CPU  The CPU copies the contents of its registers to the stack and processes the ISR  After the ISR has been processed, the previous contents of the registers are copied back into the CPU from the stack in main memory |

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| 2c. Explain what happens to the values in the registers when a high priority interrupt arrives  They are placed in the stack |

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| 2d. What is meant by ‘context switching’?  When the registers are copied to the stack and the ISR is carried out |

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| 2e. Why is it that not every interrupt gets an immediate response from the CPU?  There may be a higher priority response getting processed |

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| 2f. What are the two problems that can be caused by using interrupts?  Stack overflow  Latency |