**DIFFERENCES (12 marks for any 6 differences clearly compared)**

|  |  |
| --- | --- |
| **MITOSIS** | **MEIOSIS** |
| * Necessary for cell growth and repair (1) | * Necessary for gametogenesis/ production of gametes (1) |
| * Occurs in somatic cells (1) | * occurs in gonads (1) |
| * Produces 2 diploid cells (1) | * Produces 4 haploid cells (1) |
| * genetically identical to the parent cell (1) | * genetically different from the parent cell (1) |
| * 1 nuclear division (1) | * 2 nuclear divisions (1) |
| * Consists of 1 cycle of IPMAT (1) | * Consists of 2 cycles of IPMAT (1) |
|  | * Crossing over occurs in prophase 1 (1) |

**SIMILARITIES (3 marks for any 3 points as similarities)**

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| --- |
| * 1 duplication of chromosomes (1) |
| * separation of chromatids at some stage (1) |
| * essential for life (1) |
| * chromosomes shorten and thicken before cell division (1) |
| * chromosomes attach to spindle fibres at centromere (1) |
|  |

* marks deducted if not a comparison or contrast. – deduct a mark for each point not describing similarities or differences. **Maximum of 5 marks deducted**
* if no plan handed in, then **deduct 2 marks** overall