BIOLOGY - FOUNDATION

|  |  |  |  |
| --- | --- | --- | --- |
| **Paper 1F** | | **Paper 2 F** | |
| **IN exam** | **NOT in exam** | **IN exam** | **NOT in exam** |
| • Cell structure  • Transport in cells  • Animal tissues, organs and organ systems  • Communicable diseases  • Photosynthesis  Req prac 1: how a light microscope is used to observe plant cells.  • Req prac 3: investigate the effect of a range of concentrations of salt solution on the mass of plant tissue (Potato osmosis).  • Req prac 4: use qualitative reagents to test for a range of carbohydrates, lipids and proteins  (Food tests).  • Req prac 6: investigate the effect of light intensity on the rate of photosynthesis (Pondweed). | • Cell differentiation  • Principles of organisation  • Blood  • Cancer  • Protist diseases  • Uses of glucose from photosynthesis  • Aerobic and anaerobic respiration  •Response to exercise  • Metabolism | • The human nervous system  • Hormonal control in humans  • Plant hormones  • Reproduction  • The development of understanding of genetics and evolution  • Req prac 7: carry out an investigation into human reaction times (Ruler drop).  • Req prac 8: investigate the effect of light on the growth of newly germinated seedlings (Auxins).  • Req prac 9: measure the population size of a common species in a habitat (quadrats and transects). | • The brain  • The eye  • Maintaining water and nitrogen balance in the body  • Advantages and disadvantages of sexual and asexual reproduction  • DNA structure  • Sex determination  • Variation and evolution  • Theory of evolution  • Speciation  • The understanding of genetics  • Resistant bacteria  • Adaptations  • How materials are cycled  • Decomposition  • Biodiversity  • Land use  • Deforestation  • Global warming  • Maintaining biodiversity  • Trophic levels in an ecosystem  • Food production |
| BIOLOGY - HIGHER |  |  |  |
| **Paper 1H** | | **Paper 2 H** | |
| **IN exam** | **NOT in exam** | **IN exam** | **NOT in exam** |
| • Cell structure  •Transport in cells  • Animal tissues, organs and organ systems  • Plant tissues, organs and systems  • Communicable diseases  • Monoclonal antibodies  • Req prac 1: use a light microscope to observe plant cells.  • Req prac 3: investigate the effect of a range of concentrations of salt solution on the mass of plant tissue (potato osmosis).  • Req prac 4: use qualitative reagents to test for a range of carbohydrates, lipids and proteins (Food tests). | • Blood  • Cancer  • Antibiotics and pain killers  • Discovery and development of drugs  • Response to exercise | • The human nervous system  • Hormonal control in humans  • Plant hormones  • Reproduction  • Organisation of an ecosystem  • Req prac 8: investigate the effect of light on the growth of newly germinated seedlings (Auxins).  • Req prac 9: measure the population size of a common species in a habitat (quadrats and transects). | • Structure and function  • The brain  • The eye  • Hormones in human reproduction  • Contraception  • The use of hormones to treat infertility  • Negative feedback  • Use of plant hormones  • Advantages and disadvantages of sexual and asexual reproduction  • Sex determination  • Variation and evolution  • The development of understanding of genetics and evolution  • Classification of living organisms  • Adaptations  • Impact of environmental change  • Biodiversity  • Deforestation  • Maintaining biodiversity  • Trophic levels  • Pyramids of biomass  • Sustainable fisheries  • Role of biotechnology |