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SPECA

GCSE Combined Science (AQA Trilogy) · Biology

Infection and Response · Worksheet

Pathogens and how they cause disease

1) Define a pathogen, and name the four categories of pathogen. **[5]**

2) Explain, in general terms, how bacteria cause illness, and how viruses cause illness. **[2]**

3) Give two ways a pathogen can be spread from one host to another. **[2]**

Named diseases (case studies)

4) State the pathogen type and main symptoms of measles, and how it is controlled. **[3]**

5) Describe how HIV progresses if not controlled with antiretroviral drugs, and state how it is transmitted. **[3]**

6) Explain the effect of tobacco mosaic virus on an infected plant. **[2]**

7) Describe the symptoms of Salmonella food poisoning and how it is controlled in the UK. **[3]**

8) State the pathogen type for gonorrhoea, its symptoms, and how its spread is controlled. **[3]**

9) Describe the symptoms of rose black spot and how it is treated. **[2]**

10) Explain how malaria is transmitted, state its characteristic symptoms, and state one method used to control its spread. **[3]**

The body's defences and the immune system

11) Describe three of the human body's non-specific defences against pathogens. **[3]**

12) Explain the three ways white blood cells defend the body against pathogens that have already entered it. **[3]**

Vaccination and antibiotics

13) Explain how vaccination protects an individual against a specific pathogen. **[3]**

14) Explain why vaccinating a large proportion of a population helps protect people who are not themselves vaccinated. **[2]**

15) Explain why antibiotics can treat bacterial infections but cannot treat viral infections. **[2]**

16) Explain why antibiotic-resistant bacteria are a growing concern. **[2]**

17) Explain the difference between an antibiotic and a painkiller, in terms of their effect on a pathogen. **[2]**

Developing new medicines

18) Give one example of a drug that originated from a natural source, and name its source. **[2]**

19) Describe what happens during preclinical testing of a new drug. **[3]**

20) Describe the stages of clinical testing of a new drug, including the purpose of a double-blind trial. **[4]**

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