Worksheet: Our Home: Earth, a Unique Life Sustaining Planet

Telangana State Board · Class 8 · Science · 7 questions · 11 marks

Name: _____ Date: _____ Score: _____ / 11

Q1. Why is Venus the hottest planet in the solar system, even though Mercury is closer to the Sun? *[1 mark]*

A) Venus's thick carbon dioxide atmosphere traps heat via the greenhouse effect

B) Venus has a stronger magnetic field

C) Venus is actually closer to the Sun than Mercury

D) Venus reflects more sunlight than Mercury

Q2. What is the habitable zone (or Goldilocks zone)? *[1 mark]*

A) The region of a planet with the most biodiversity

B) The distance at which a planet has the strongest magnetic field

C) The layer of the atmosphere where weather occurs

D) The range of distances from a star over which water remains liquid

Q3. What is the chapter's own term for the solid parts of the Earth, including rocks, soils and minerals? *[1 mark]*

A) Lithosphere

B) Crustosphere

C) Mineralsphere

D) Geosphere

Q4. In sexual reproduction, why doesn't an offspring's genetic material double compared to a single parent's? *[1 mark]*

A) Half the genetic material is destroyed after fertilisation

B) Only one parent's genetic material is actually used

C) Genetic material does not combine at all in sexual reproduction

D) Each parent's gamete carries only half of that parent's genetic material

Q5. Explain why Earth's magnetic field is essential for protecting life, tracing the full chain from its source to what it ultimately shields. *[3 marks]*

Q6. Which of the following correctly matches an animal group to its fertilisation and embryo development strategy, as described in the chapter? *[1 mark]*

A) Fish — external fertilisation, embryo develops in water

B) Most mammals — internal fertilisation, embryo develops outside the body in a laid egg

C) Birds — external fertilisation, embryo develops in water

D) Frogs — internal fertilisation, embryo develops inside the female's body

Q7. A student says a garden greenhouse and the greenhouse effect on Venus work by exactly the same mechanism. Correct this using the chapter's own 'A step further' explanation. *[3 marks]*