

Solutions

2.1

- Ectoderm.

2.2

- Day 6–7.

2.3

- Clinical weeks count from the last menstrual period: ~2 weeks ahead of conception.

3.1

- Ectoderm: nervous system, epidermis, enamel.
- Mesoderm: muscle, bone, heart, kidney, blood.
- Endoderm: gut lining, liver, pancreas, airway lining.
- The layers are adjacent fields: one disruption hits neighbours that will become different organs.

3.2

- Neural-tube closure failure at day 26–28.
- A lumbar lesion can affect leg movement and bladder function; a higher cervical lesion can affect all four limbs. Deficits depend on the level and extent of the lesion.
- AFP leaks from fetal exposure through the open defect into maternal blood/amniotic fluid.