

3.2 Physical Development Across the Lifespan

Name: _____ Class: _____ Date: _____

Total: 11 marks

KEY WORDS teratogen 致畸物 • late adulthood 老年期 • adolescence 青春期 • motor 运动
• prenatal 产前

Objective

Build the skills to answer exam questions on **physical development** 生理发展.

You must be able to:

- describe **prenatal** 产前 development and the effect of a **teratogen** 致畸物
- state the sequence of **motor** 运动 development in infancy
- describe the physical changes of **adolescence** 青春期
- state the main physical changes of **late adulthood** 老年期

1 Worked examples

Study these first. Each one shows the method for a task used later.

■ Prenatal development and teratogens

Development proceeds from zygote to embryo to foetus. A **teratogen** is any agent — alcohol, certain infections, some drugs — that can cross the placenta and disrupt development. Effects depend on **timing**: the same exposure does more damage during the formation of the affected structure.

■ Motor development

Maturation gives a broadly fixed **sequence** — sitting, crawling, standing, walking — but the **timing** varies between individuals and cultures. Sequence is biological; pace is not purely so.

■ Adolescence

Puberty brings a growth spurt and reproductive maturity. Brain development continues, with the prefrontal regions supporting planning and impulse control maturing later than the reward-sensitive regions.

■ Late adulthood

Sensory acuity declines, reaction time slows, and muscle mass falls. Well-practised knowledge and vocabulary are typically preserved, while speed-dependent tasks decline first.

2 Practice

2.1 Define a teratogen and give one example. [2]

2.2 Explain why the timing of an exposure matters as much as the dose. [2]

2.3 Two infants walk at 10 and at 15 months.

(a) State what is fixed across infants. [1]

(b) State what varies. [1]

3 Exam-style questions

3.1 In adolescence, the brain regions supporting planning and impulse control mature [1]

- | | |
|---|---|
| A | B |
| C | D |
- A before reward-sensitive regions
 - B after reward-sensitive regions
 - C at exactly the same time
 - D only after age 40

3.2 In late adulthood, the abilities usually best preserved are [1]

- | | |
|---|---|
| A | B |
| C | D |
- A reaction speed
 - B vocabulary and well-practised knowledge
 - C hearing acuity
 - D muscle mass

3.3 A public health campaign targets alcohol use in early pregnancy.

(a) State the reason for targeting that period. [1]

(b) Explain one difficulty in measuring the campaign's effect. [2]
