

Chapter 20

Question 20.8

Approximately 20 years, which equals the age of the gorilla, given that primary oocytes are present at birth.

Oogonial stem cells have been identified in the ovary of some adult mammals, as we discuss in Section 20.4.1, and if present in gorillas would produce some younger primary oocytes by mitosis and meiosis 1, as illustrated in Box 20.1.

Question 20.13

Synchronising reproductive events (births and mating) to a calendar year means they occur on a 365 day cycle.

Much of the calendar year is accounted for by the period of gestation after implantation of the blastocyst up until births (= 250 days).

We are told that there is a short period after birth before oestrus (2 days), and a short period before mating (5 days).

Total number of days accounted for = 250 (gestation) + 2 (birth to oestrus) + 5 (before mating) = 257 days

The embryonic diapause between fertilisation and implantation must fill the number of days in a calendar year that are unaccounted for.

Therefore, embryonic diapause = calendar year (days) – period already accounted for (days)
= 365 – 257 days
= **108 days**