Chapter 7: Suppositories and pessaries

1. **Answer**: b ('For rectal use only.')
2. **Answer**: d (3 months)
3. Zinc Oxide BP has a displacement value of 4.7. This means that 4.7 g of Zinc Oxide BP is required to displace 1 g of Hard Fat BP.

    Each suppository is required to contain 200 mg of Zinc Oxide BP. If 4.7 g of Zinc Oxide BP displaces 1 g of Hard Fat BP, 200 mg displaces (1 ÷ 4.7) × 0.2 = 0.0425 g Hard Fat BP.

    Therefore, each suppository will contain 1 – 0.0425 = 0.9575 g.

    Answer: d (957.5 mg)
4. Each suppository requires 60 mg of Phenobarbital BP. Phenobarbital BP has a displacement value of 1.1. This means that 1.1 g of Phenobarbital BP is required to displace 1 g of Hard Fat BP.

    Therefore, 60 mg of Phenobarbital BP will displace (1 ÷ 1.1) × 0.06 = 0.055 g.

    Therefore, each suppository will require 1 – 0.055 = 0.945 g (945 mg).

    Answer: c (945 mg)
5. **Answer**: d (Stemetil)
6. **Answer**: c (A suppository base should melt at just below 37°C.)
7. The ideal suppository (or pessary) base should (*Pharmaceutical Compounding and Dispensing*, p 77):

*   Either melt after insertion into the body or dissolve in (and mix with) any rectal or vaginal fluid.
*   Melt at body temperature. (It is preferable that the melting range should be slightly lower than 37°C as body temperature may be as low as 36°C at night.)
*   Be non-toxic and non-irritant.
*   Be compatible with any medicament and release it readily.
*   Be easily moulded and removed from the mould.
*   Be stable to heating above the melting point.
*   Be stable on storage and resistant to handling.

8. Paracetamol 180 mg suppositories
    1. Pain relief (*British National Formulary* 51st edn, p 220).
    2. This is an unofficial preparation, therefore the formula will need to be checked to ensure that it is safe and suitable for use. The dose for a child (1–5 years) for paracetamol suppositories is 125–250 mg up to four times a day (*British National Formulary* 51st edn, p 220). Therefore the strength requested is safe and suitable for the intended purpose.
    3. Prepare 4 paracetamol 180 mg suppositories.

    ### Calculations

    Four suppositories are required; however, an overage will be needed to prepare this quantity successfully. Calculations are therefore based on the amounts required to prepare 10 suppositories.