

9. **Answer:** d (3 months)

10. **Answer:** d ('Apply to the affected area.')

11.

- a. Creams are semi-solid emulsions, either water-in-oil or oil-in-water. Ointments are also semi-solid, but are greasy. The base in which an ointment is made is immiscible with skin secretions, whilst the surfactants in creams allow better skin penetration
- b. As creams are usually oil-in-water emulsions, they are easily miscible with skin secretions and have a 'vanishing' effect which is more acceptable to patients than the greasy messy alternative of an ointment. Creams are easier to apply and have a more pleasing texture.

12. Cetrimide Emulsifying Ointment BP

1. Used as an antiseptic product for cleansing the skin (*Pharmaceutical Journal* 2004;273:351).
2. This is an official preparation, therefore the formula is safe and suitable for use.
3. Prepare 30 g of Cetrimide Emulsifying Ointment BP.

Product formula (from the *British Pharmacopoeia* 2004, p 2261)

	Master	100 g	10 g	40 g
Cetrimide BP	30 g	3 g	300 mg	1.2 g
Cetostearyl Alcohol BP	270 g	27 g	2.7 g	10.8 g
White Soft Paraffin BP	500 g	50 g	5 g	20 g
Liquid Paraffin BP	200 g	20 g	2 g	8 g

4.

- a. Not applicable.
- b. White Soft Paraffin BP is used as the diluent in this preparation as per the product formula.
- c. There is no preservative included as per the product formula.
- d. Ointments are for external use and so no flavouring is required.

The following method would be used to prepare 40 g of Cetrimide Emulsifying Ointment BP from the formula above:

Noting that the melting points of the ingredients are:

Cetostearyl Alcohol BP: 49–56°C

(*British Pharmacopoeia* 1988, p 111)

White/Yellow Soft Paraffin BP: 38–56°C (*British Pharmacopoeia* 1988, p 416)

1. Weigh 20 g White Soft Paraffin BP on a Class II or electronic balance.
2. Weigh 10.8 g Cetostearyl Alcohol BP on a Class II or electronic balance.
3. Weigh 8 g Liquid Paraffin BP on a Class II or electronic balance.
4. Melt together the White Soft Paraffin BP, Cetostearyl Alcohol BP and the Liquid Paraffin BP.
5. Remove from the heat.
6. Add the Cetrimide BP.
7. Stir until cold.
8. Weigh 20 g and pack into a collapsible tube or amber glass jar. Label and dispense.