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Q36

In which of the following are hydrogels used? 1. Controlled drug delivery in patients 2. Mobile air- conditioning systems 3. Preparation of industrial lubricants Select the correct answer using the code given below: (a) 1 only (b) 1 and 2 only (c) 2 and 3 only (d) 1, 2 and 3 Official key: A.

UPSC Civil Services Prelims 2024 · General Studies · 2 marks · Current Affairs and GK
Current events, government schemes, miscellaneous GK - Prelims GS Paper I.

Explanation**(a) Official key**

1 only. Hydrogels are used in controlled drug delivery. Mobile AC and industrial lubricants are not the keyed uses here.

(b)

1 and 2 only. Statement 2 is not keyed.

(c)

2 and 3 only. Drops the true biomedical use.

(d)

All three. The paper keys only drug delivery.

Summary

Official key is (a) 1 only. Hydrogels (water-swollen polymer networks) are used to release drugs in a controlled way. On this paper, mobile air-conditioning and industrial lubricants are not counted as **hydrogel** uses. So only 1.

Related possible facts

These can be asked in a future Prelims paper.

Hydrogel

Cross-linked hydrophilic polymer; high water content.

Controlled release

Drug diffuses from the gel matrix over time.