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Q32

With reference to 'Near Field Communication (NFC) Technology', which of the following statements is/are correct? 1. It is a contactless communication technology that uses electromagnetic radio fields. 2. NFC is designed for use by devices which can be at a distance of even a metre from each other. 3. NFC can use encryption when sending sensitive information. Select the correct answer using the codes given below (a) 1 and 2 only (b) 3 only (c) 1 and 3 only (d) 1, 2 and 3 Official key: C.

UPSC Civil Services Prelims 2015 · General Studies · 2 marks · Science and Technology

Science, technology, space, defence, IT - Prelims GS Paper I.

Explanation**(a)**

(a) 1 and 2 only. NFC is short-range radio communication, but the design range is a few centimetres, not a metre. Statement 2 is false, so this pair fails.

(b)

(b) 3 only. Encryption of sensitive NFC payloads is possible, but statement 1 is also correct. 3 only is incomplete.

(c) Official key

(c) 1 and 3 only. NFC **uses** electromagnetic radio fields for contactless links and can encrypt sensitive data. **Typical range** is about 4 cm (order of centimetres), not a metre. 1 and 3 only is the official key.

(d)

(d) 1, 2 and 3. Statement 2's one-metre claim is wrong, so the full set is not the key.

Summary

Official key is (c) 1 and 3 only. Near Field Communication is contactless radio over a few centimetres and can use encryption. It is not specified for devices a metre apart. Statement 2 therefore drops. The keyed pair is 1 and 3.

Related possible facts

These can be asked in a future Prelims paper.

NFC range

Typically up to ~4 cm

Frequency

13.56 MHz (HF RFID family)

Uses

Payments, pairing, access cards

Bluetooth contrast

Metres of range, different pairing model

ISO/IEC 18092

NFC interface and protocol standard

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