**UNIT-5**

**Pervasive Computing**

**Important Questions**

1. **Explain how battery technology has evolved in mobile devices and discuss its impact on device design and functionality.**
2. **Describe the advancements in display technology for mobile devices and how these developments enhance user interaction and device portability.**
3. **Discuss the role of processor technologies like Intel’s SpeedStep and the Crusoe processor in managing power consumption in mobile devices.**
4. **What are the challenges of hardware and software integration in pervasive computing devices as outlined in the documents? Provide examples of how these challenges are being addressed.**
5. **Analyze the significance of human-machine interfaces in mobile devices, focusing on navigation tools and haptic interfaces.**
6. **How do operating systems like Palm OS, EPOC, and Windows CE support the functionality of mobile devices? Compare their features, especially in terms of user interface and multitasking capabilities.**
7. **Discuss the various cryptographic algorithms mentioned, including their roles and the importance of securing mobile communications.**
8. **What are the key considerations in developing device management systems for pervasive computing devices? Include examples of challenges and potential solutions.**
9. **Explain the concept of Mobile IP and how it supports device connectivity in a mobile environment. Include its relationship with IPv6.**
10. **Describe the protocol OBEX and its role in device connectivity. How does it support bi-directional communication unlike HTTP?**
11. **What security measures are proposed in the documents for pervasive computing devices, and how do they address the vulnerabilities inherent in such devices?**
12. **Analyze the role of synchronization protocols like SyncML in maintaining data consistency across devices. How do these protocols manage conflicts and ensure data integrity?**
13. **Discuss the implications of public-key cryptography in pervasive computing as described in the documents. How does it enhance security?**
14. **What are the challenges associated with device management in pervasive computing, and what solutions are proposed to address these challenges?**
15. **Evaluate the impact of new technologies like the 3G mobile systems on the functionality and connectivity of mobile devices. How do these technologies transform mobile communications?**