

12.4_C

1. miniaturization on silicon – finally reaching maximum	
2. greater efficiencies using system on a chip, but growth potential is limited	
3. general purpose AI processors increase system efficiency, but processors not very efficient	
4. dedicated processors for AI applications – e.g., speech recognition → v. important area for development, but physical limitations will still apply	
5. alternatives to silicon (e.g., graphene): fewer physical limitations + significant potential	
6. quantum computing v. long term, but working versions available, huge possibilities, completely reshape industry	

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Answers

1. miniaturization on silicon – finally reaching maximum	a. physical limitations
2. greater efficiencies using system on a chip, but growth potential is limited	b. system miniaturization
3. general purpose AI processors increase system efficiency, but processors not very efficient	d. specialized processing
4. dedicated processors for AI applications – e.g., speech recognition → v. important area for development, but physical limitations will still apply	d. specialized processing
5. alternatives to silicon (e.g., graphene): fewer physical limitations + significant potential	a. physical limitations or c. radical developments
6. quantum computing v. long term, but working versions available, huge possibilities, completely reshape industry	c. radical developments