**Genetic Engineering** (p. 228 – 237)

**I. Basics Steps Of Genetic Engineering**

 **1. What achievement did Stanley Cohen & Herbert Boyer attain in 1973?**

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 **2. Define the term genetic engineering.**

 Genetic Engineering –

 **3. Match he following terms with the correct definitions.**

 1. \_\_\_\_\_\_\_\_ Recombinant DNA A. Agent used to carry a gene of interest

 2. \_\_\_\_\_\_\_\_ Restriction Enzymes B. Circular rings of DNA in bacteria

 3. \_\_\_\_\_\_\_\_ Vector C. DNA made from two or more different organisms

 4. \_\_\_\_\_\_\_\_ Plasmids D. Many copies of a gene are made

 5. \_\_\_\_\_\_\_\_ Gene Cloning E. Bacterial enzymes; cut and bind DNA sequences

 **4. List the four steps of genetic engineering.**

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**II. Confirmation Of A Cloned Gene**

 **1. List the steps of Southern Blot gene testing.** *(Gel Electrophoresis)*

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**III. The Human Genome Project**

 **1. Define the term Human Genome Project.**

 Human Genome Project –

 **2. In what year was the Human Genome Project published?** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 **3. A large amount of DNA does not encode proteins.**

 Circle One : True False

 **4. Differentiate between introns and exons.** (p. 218)

 Introns : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Exons : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 **5. How many genes does a typical human cell contain?**

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**IV. Genetically Engineered Drugs & Vaccines**

 **1. List six types of genetically engineered medicines and their uses.**

 Medicine Use

 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**V. DNA Fingerprinting**

 **1. Define the term DNA fingerprint.**

 DNA Fingerprint –

 **2. How are RFLPs used to create DNA fingerprints?**

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 **3. List three uses of DNA fingerprinting.**

 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_