Unit 6

12.1 Where did the Ind. Rev. begin, & how did it diffuse?
How do location theories explain historical patterns of industrialization?

The following information corresponds to Chapter 12 in your textbook. Fill in the blanks to complete the definition or sentence. Note: All of the following information in addition to your reading is important, not just the information in the blanks.

Field Note: Branding the Backboard

The trademark swoosh of the Nike brand is _________ (everywhere). Although the company’s headquarters in Beaverton, Oregon employs 6000 not a single one in Oregon is involved in Worldwide as many as __________ people work directly or indirectly for Nike. The workers at the headquarters are the ______________ & ______________, ______________ & ______________ (Take a minute to think about those jobs – for a company that makes shoes!) Today, the production and marketing of Nike’s shoes takes an __________ network of international ______________ and having ______________ outcomes & ______________.

Where Did the Industrial Revolution Begin, and How Did it Diffuse?

Industrial production began long before the Industrial Revolution in __________ & __________ workshops.

• By importing ______________ and the development of ______________, the British were able to bury local industries in __________ & __________ by flooding the market with ______________. (Think China today!)

The 18th c (1700s) marked by new __________ that brought new uses for known sources (not petroleum) sparked the Industrial Revolution

○ ______________ = steam engine
○ ______________ = process for smelting iron (iron ore & coke in a blast furnace) to make ______________.

Before the invention of the railroad and the steam ship, manufacturing needed to be located close to the __________ fields, but also needed to be connected to ______________ fields, but also needed to be connected to where ______________ arrived and ______________ could depart. A similar pattern developed as the Industrial Revolution spread to mainland Europe.

The ______________ area of Germany linked with ______________ in the Netherlands, which today is the most important port in Europe and hub of ______________ commerce.

• The RR allowed manufacturing to move to urban areas with large markets like ______________ on the Thames, and ______________ on the __________.

How Do Location Theories Explain Industrial Location?

• ______________ economic activities (extractive) are located where resources (forests, minerals, & good soils) are found

• ______________ economic activities (manufacturing) due to ______________ - improvements in transportation and communication) are less dependent on ______________ location.

○ ______________ - predicts where businesses should or will locate.

○ This assumes that businesses will try to maximize their ______________ over competitors; make as much ______________ as possible; and consider ______________ such as energy, transportation, and labor costs when choosing a location.

○ A key issue in location theory is ______________ (the increase in time and cost that comes with increasing distance). ______________ suggests manufacturing plants will be more concerned with markets of ______________ places than more ______________ places.

• Alfred Weber - German economic geographer (1868-1958) developed a model for the location of ______________. His model eliminated ______________ mobility and varying ______________ rates.
Weber’s **Least Cost Theory** accounted for the ______________ of a manufacturing plant by minimizing (1) ______________ - the most important (2) cost of ________________ (if it made up for the cost of transportation) (3) ________________ (if it overcomes transportation and labor costs)

Some argue that Weber’s model does not account for variations in costs over time (e.g. taxation policies, consumer demand) this **substitution principle** suggests that decreases in certain costs can offset increases in others (e.g. lower transport costs could offset wages)

- **Harold Hotelling** (1895- 1973) studied ______________ by studying ______________ vendors on the beach. As both seek to maximize their sales, they would move closer and closer to the ______________ until they were ________________

- **Hotelling’s point** was that the location of one industry depends on the location of other industries of the same kind.

**August Losch** (1967) added the ______________ influence of ______________ demand and ______________ costs to the location equation to define a zone of ______________ beyond which ______________ will make sales unprofitable.

- **Edward Ullman’s** spatial interaction forms a basis for understanding the volume and timing of the flow of goods between locations
  - (1) **Complementary** – refers to the needs of one region matching the products of another (oranges from Florida to New York)
  - (2) **Intervening Opportunity** – refers to the presence of a nearer opportunity which reduces the attractiveness of a more distant location, and
  - (3) **Transferability** – refers to ease with which products can be moved.

**Major Industrial Regions (before 1950)**

Before 1960 the main locational costs for industry were transportation of raw materials and shipping of finished products.

- There are **four** primary industrial regions: ______________, ______________, ______________, and ______________

**Western Europe** – Britain experienced early industrialization followed by expansion diffusion eastward to Russia. Colonial empires provided ______________ and raw materials for production.

- **Three Manufacturing Belts of Germany**
  - The Ruhr district, based on the ______________ (Heavy industry including tanks for Nazi WWII)
  - Saxony near the border with ______________ (Specializes in lighter manufacturing - optical equipment, cameras, textiles & ceramics)
  - And Silesia (now part of ______________)

- **Other important industrial centers** are in N. ______________, ______________ & N. Spain, S ______________, and S. ______________.

- **WWII** helped to destroy much of Europe’s industrial infrastructure but newly rebuilt factories included the latest technology, helping to give them a ______________

**North America** - has some of the world’s largest coal reserves (from ______________ to the N ______________).

- After WWI the US emerged as the world’s preeminent industrial powers.
  - (It did not suffer the destruction of WWI, had the needed infrastructure, and had a ________________
  - The ________________ extends from the
northeastern ______________ to ______ & from the _________________ valley to the ____________ & ______________ rivers.

- Industrialization began in _____________ with a large _________ population and ________________ that helped it develop. The NY port serves as a ___________________, where cargo is transferred from one type of transportation to another, which generates ________________, __________, & ___________.
- The __________________ helped to connect the __________ to the ________________.
- Canada’s _______________ district links two parts of the US Manufacturing Belt between Buffalo and Detroit (the most route between these two US cities was through _______________)
- ________________, with ________________ refining and ________________ located there.
- Note: the darker areas on the map (previous page or p.394 in text) reflect the industrial RUST BELT with areas of DEINDUSTRIALIZATION today.

The Former Soviet Union (Russia & the Ukraine)

- Under communist rule heavy industry was developed in _____________ (southeast of Moscow) called the “______________” for its auto manufacturing.
- The ____________ Mountains are a source of a variety of metallic ores, including iron, copper, nickel, chromite, bauxite (aluminum).… A large supply of coal and iron ore came from the remote area of ________________
- During WWII many Russian industrial plants were __________ and __________ in Volga cities. A series of ____________ constructed on the Volga River, made electrical power plentiful.
- ________________ had started to industrialize before it was taken over by the Soviet Union (not without a fight!)
- They produced about 90% of all of the ____________ mined in the Soviet Union and helped it grow into one to the world’s largest manufacturing regions.

Eastern Asia – Japan and China (both avoided European colonization)

- Japan has limited ____________, so they must be imported from around the world, and still managed to become an industrial power. It benefited from the ____________ from colonization and government ____________ during the ______________ Restoration.
- WWII decimated Japan’s national economy, but it would rebound quickly and became a global economic power.
- The Japanese Manufacturing Belt
  - _______________ - the dominant region, with about 1/3 of the population includes the megalopolis of _______________. The natural harbor of ________________ is centrally located. The Kanto Plain produces more than _____% of Japan’s annual output.
  - ________________ district – the second largest industrial complex includes ________________. This region is the center for steel mills, chemical industries, auto making, shipping, and textiles and is challenging the Kanto Plain for dominance.
  - Access to a large, low wage, trainable labor force continues to attract manufacturers. Japan’s success in the 1950s was based on its skilled and low wage labor force, which allowed it to flood the market with low priced, low quality goods. When it began to excel in quality, prices rose, wages rose, and they began to experience competition from countries where cheaper labor was found.

China’s industrialization came later than the 1950’s but has made it a strong participant in the global trade network today and will be discussed later.