Quiz #11 key, all sections:

1. Define:

Bactericidal – A treatment is bactericidal if it kills bacteria. The treatment can involve physical factors (temperature, pressure, radiation, etc.), or chemical agents, and may be applied in a variety of settings.

Therapeutic dose – The therapeutic dose is the concentration of an antimicrobial agent designed to yield clinical control of a pathogen, i.e., designed to control pathogenic microorganisms inside the body. In reality, there is no single therapeutic dose because patients vary in terms of size, age and physiological status, and these factors must be taken into account. If the drug concentration is too low, control will not be achieved, and if the drug concentration is too high, the patient may experience damaging side effects.

Bacitracin – Bacitracin is an antibiotic produced initially by bacteria identified as *Bacillus subtilis* isolated from a girl named Tracey. This antibiotic acts on cell membranes to block the transport of cell wall components, so disrupts production of peptidoglycan. It is most often used in topical applications, because when ingested, it is not readily available.

2. Bacteristatic/ psychroduric

3. Pasteurization/ Tyndallization

4. Ionizing radiation

5. Filtration

6. These chemicals must be safe for the persons applying them; they must be readily soluble and able to penetrate into small spaces where bacteria might accumulate; they must be non-damaging to surfaces or materials they might be used on; and finally, they must be biodegradable within a reasonable time period so they do not accumulate within food webs.

7. Matching letter sequence is: C, F, E, B, D, and A.

8. Antibiotics/ differential toxicity

9. Sulfa drugs

10. Inhibiting the formation of peptidoglycan. Since bacteria decompose their peptidoglycan during elongation, these drugs will kill them, but only if they are actively growing.

11. Preventing the binding of aminoacyl-t-RNA molecules to the A-sites of ribosomes. The binding of Tetracyclines to ribosomes is reversible, so they are bacteristatic rather than bactericidal./ Streptomyces

Bacteria identified as *Helicobacter pylori* are the etiological agents of gastic ulcers.