Molecular Medicine WAPT

Here are a couple of examples of questions:

1. **With respect to the chemical causes of cancer:**
   a. Mutations can be completely avoided by controlling the environment and exposure to mutagens
   b. Some carcinogens may be ingested as harmless chemicals but then metabolised into mutagens by the cytochrome P450 system
   c. Tumour promoters are potent direct causes of mutations
   d. Tumour initiators tend to cause cell proliferation
   e. All chemical carcinogens can easily be identified by epidemiological studies.

   **Correct:** b, **Incorrect:** a, c, d, e

2. **Functions of antibodies include:**
   a. Activating the alternate pathway of complement
   b. Recognising antigen via their constant regions
   c. Neutralising toxins by binding and preventing their uptake by cells
   d. Opsonising viruses so that they can be phagocytosed by macrophages
   e. Activating CD4 T cells to release cytokines

   **Correct c, d**  **Incorrect:** a, b, e

3. **Gram-positive cell walls:**
   a. Contain more peptidoglycan than Gram-negative cell walls
   b. Are limited exteriorly by an outer membrane
   c. Stain dark-blue to purple with the Gram stain
   d. Are susceptible to lysozyme
   e. May be covered by a polysaccharide capsule

   **Correct: a, c, d**  **Incorrect:** b, e