Study Questions
Determinants of Tobacco Use Disorder: Biopsychosocial Factors

1) Which is accurate in listing criteria that are included in the description of Tobacco Use Disorder?
   a. **Tolerance, withdrawal symptoms, and inability to cut down**
   b. Using more than one addictive substance, and spending a great deal of time to obtain substances
   c. Continued use despite knowledge of problems and recent hospitalization/ER visit
   d. Lack of motivation to quit, and blaming others for continued use

2) Which best describes issues related to the development of dependence in adolescents
   a. It takes many years of continued use before dependence develops
   b. Adolescents do not experience any withdrawal symptoms
   c. **The adolescent’s brain appears to be more responsive to nicotine’s rewarding effects than the adult brain**
   d. Most tobacco users start after the age of 21

3) Which socio-demographics factors like are among the strongest predictors of smoking status.
   a. Place of residence, religious group and marital status
   b. **Age, gender, ethnicity, education, and income**
   c. Parents’ country of origin, immigration status and language
   d. Number of family members in household, occupation and health status

4) The majority of research has shown that:
   a. **Minorities make more quit attempts than Caucasians**
   b. Caucasians make more quit attempts than Minorities
   c. Minorities are more successful at quitting than Caucasians
   d. Caucasians are less successful at quitting than Minorities

5) Jane enjoys hanging out with her best friend, Samantha, who also smokes. The two have always smoked together while hanging out. Jane wants to quit and has stayed quit for 1 week. Unfortunately, immediately upon seeing Samantha, although she was not smoking, Jane had urges to smoke and smoked 1 cigarette. Jane’s relapse is most likely due to:
   a. Samantha giving Jane a glass of wine
   b. Jane’s motivation to stay quit was not very high
   c. **Jane has associated Samantha with the pleasurable effects from smoking**
   d. Jane’s withdrawal symptoms
6) Compared to populations with no mental illnesses, those with any mental illness
   a. Smoke fewer cigarettes per day
   b. **Have higher relapse rates**
   c. Are more likely to smoke around peers who smoke
   d. Are less likely to smoke

7) Those with current depressed mood symptoms are
   a. **Less likely to quit smoking**
   b. More likely to make quit attempts
   c. Less likely to relapse upon quitting.
   d. Never motivated to quit

8) Dopamine is the primary neurotransmitter involved in movement, motivation, reward — and substance use disorders. Nearly all drugs of abuse directly or indirectly increase dopamine, which activates the
   a. **Reward pathway**
   b. Withdrawal drug pathway
   c. Tolerance pathway
   d. Ventral tegmental pathway

9) Nicotine activates nicotinic acetylcholine receptors (nAChRs), resulting in dopamine release. This creates a feeling of pleasure and activates memory pathways that help maintain motivation for continued use. With continued use these receptors go through a cycle that includes
   a. Destabilization then increased stimulation
   b. **Desensitization and increased numbers of receptors**
   c. Tolerance and withdrawal
   d. Decreased numbers of receptors and unresponsiveness

10) Increased activity of which neurotransmitter has a direct effect on the autonomic nervous system (ANS), and results in anxiety and increased heart rate and blood pressure, thus leading to acute withdrawal?
    a. Dopamine
    b. Serotonin
    c. **Norepinephrine**
    d. Acetylcholine
11) Absorption of nicotine is dependent on pH levels. Which of the following is accurate?
   a. Spit tobacco, pipes, and cigars are acidic and are absorbed in the mouth.
   b. Cigarette smoke is absorbed in the lungs and is alkaline.
   c. The range of pH varies greatly in e-liquid.
   d. Nicotine from e-cigarettes is only absorbed in the mouth.

12) When nicotine from combustible tobacco is inhaled it reaches the brain in 7 to 10 seconds because
   a. The nicotine goes from the lungs to the heart to the brain
   b. Each inhale lasts about 10 seconds
   c. The molecules are smaller
   d. There are more nicotinic acetylcholine receptors in the brain

13) Nicotine is metabolized extensively in the liver and to a lesser extent in the kidney and lung. Approximately 70–80% of nicotine is first metabolized to
   a. Dopamine
   b. Nicotine-oxide
   c. 3’-hydroxycotinine
   d. Cotinine

14) What can be described as a smoker’s need to smoke more to attain the same desired effects as achieved previously with a lower dose?
   a. Withdrawal
   b. Toxicity
   c. Tolerance
   d. Addiction