9. Define, describe, and provide a biblical evaluation of the following: 12-step recovery programs, cognitive-behavioral therapy, the biogenic theory of mood disorders, and electroconvulsive therapy.

- Overview
 - Introduction
 - 12-Step Programs
 - Cognitive-Behavioral Therapy (CBT)
 - Biogenic Theory of Mood Disorders
 - Electroconvulsive Therapy

I. Introduction

- A. As you begin to look at various types of therapy used by the secular world, with varying degrees of success, please consider the actual goal of biblical counseling. Our goal is to bring our counselees into a saving relationship with Jesus Christ and to equip them to use the Scriptures to solve the problems of life that they may encounter. To accomplish this goal, we are aiming at the heart or root, not the outward behavior or the fruit issue (although we are still concerned about the outward behavior or fruit issue).
- B. "There are a number of very real and serious diseases that come with a disturbed mood. They include things like hypothyroidism, hyperthyroidism, Cushing's disease, Huntington's disease, and pancreatic cancer. It is very important that those ills be identified and properly treated."¹
- C. "When we decide that our ache, pain, sad mood, or worry is caused by a medical malfunction, our options are limited to medicine. If we choose not to make that assumption, we can look for other explanations of our troubles."²

II. 12-Step Programs

- A. Description
 - "Twelve-step programs are international mutual aid programs supporting recovery from substance addictions, behavioral addictions and compulsions. Developed in the 1930s, the first twelve-step program, Alcoholics Anonymous (AA), aided its membership to overcome alcoholism."³

¹ Charles Hodges, Good Mood Bad Mood: Help and Hope for Depression and Bipolar Disorder, 37.

² Charles Hodges, *Good Mood Bad Mood: Help and Hope for Depression and Bipolar Disorder*, 37.

³ https://en.wikipedia.org/wiki/Twelve-step_program

B. Process

1. "In the twelve-step program, the human structure is symbolically represented in three dimensions: physical, mental, and spiritual. The problems the groups deal with are understood to manifest themselves in each dimension. For addicts and alcoholics, the physical dimension is best described by the allergy-like bodily reaction resulting in the compulsion to continue using substances even when it's harmful or wanting to quit. The statement in the First Step that the individual is "powerless" over the substance-abuse related behavior at issue refers to the lack of control over this compulsion, which persists despite any negative consequences that may be endured as a result."⁴

a. Biblical Response

- 1) The Scriptures support a dichotomist view of man, that all mankind is consists of both body and soul. However, the 12-step programs believe that there are three dimensions, each having issues manifested that need to be addressed.
 - i. Matthew 10:28 And do not fear those who kill the body but cannot kill the soul. Rather fear him who can destroy both soul and body in hell.
 - ii. **Genesis 2:7** then the LORD God formed the man of the dust from the ground and breathed into his nostrils the breath of life.
 - iii. **Romans 8:10** *But if Christ is in you, although the bod is dead because of sin, the Spirit is life because of righteousness.*
 - iv. Ezekiel 37:1-10 The hand of the LORD was upon me, and he brought me out in the Spirit of the LORD and set me down in the middle of the valley; it was full of bones. And he led me around among them, and behold, there were very many on the surface of the valley, and behold, they were very dry. And he said to me, "Son of man, can these bones live?" And I answered, "O Lord GOD, you know." Then he said to me, "Prophesy over these bones, and say to them, O dry bones, hear the word of the LORD. Thus says the Lord GOD to these bones: Behold, I will cause breath to enter you, and you shall live. And I will lay sinews upon you, and will cause flesh to come upon you, and cover you with skin, and put breath in you, and you shall live, and you shall know that I am the LORD." So I prophesied as I was commanded. And as I prophesied, there was a sound, and behold, a rattling, and the bones came together, bone to its bone. And *I looked, and behold, there were sinews on them, and flesh had come* upon them, and skin had covered them. But there was no breath in them. Then he said to me, "Prophesy to the breath; prophesy, son of man, and say to the breath, Thus says the Lord GOD: Come from the four winds, O breath, and breathe on these slain, that they may live." So I prophesied as he commanded me, and the breath came into them, and they lived and stood on their feet, an exceedingly great army.

⁴ https://en.wikipedia.org/wiki/Twelve-step_program

- 2) The 12-step programs teach that addiction is best described as an allergy-like bodily reaction. This description takes all responsibility for the sinful behavior and places it on an uncontrollable bodily response to external stimulus. Instead, the Bible teaches that we are responsible for our sins and remain in sin despite the negative consequences because of our sinful flesh. It's noteworthy that the body will begin to crave the substance in the same we experience thirst or hunger, pointing to the sinful flesh.
- b. The first step of the 12-step program states that an "... individual is "powerless" over the substance-abuse related behavior ..." The Bible teaches that believers are never powerless over sin. However, there are warnings for unbelievers concerning sin.
 - 1) **1 Corinthians 10:13** *No temptation has overtaken you that is not common to man. God is faithful, and he will not allow you to be tempted beyond your ability, but with the temptation he will provide the way of escape, that you will be able to endure it.*
 - 2) **Proverbs 5:22** *The iniquities of the wicked ensnare him, and he is held fast in the cords of his sin.*
 - *i.* Romans 7:18-24 For I do not understand my own actions. For I do not do what I want, but I do the very thing I hate. Now if I do what I do not want, I agree with the law, that it is good. So now it is no longer I who do it, but sin that dwells within me. For I know that nothing good dwells in me, that is, in my flesh. For I have the desire to do what is right, but not the ability to carry it out. For I do not do the good I want, but the evil I do not want is what I keep on doing. Now if I do what I do not want, it is no longer I who do it, but sin that dwells within me. So I find it to be a law that when I want to do right, evil lies close at hand. For I delight in the law of God, in my inner being, but I see in my members another *law waging war against the law of my mind and making* me captive to the law of sin that dwells in my members. Wretched man that I am! Who will deliver me from this *body of death?*
 - 3) **Romans 1:24-25** *Therefore God gave them up in the lusts of their hearts to impurity, to the dishonoring of their bodies among themselves, because they exchanged the truth about God for a lie and worshiped and served the creature rather than the Creator, who is blessed forever! Amen.*
 - 4) The statement in the First Step that the individual is "powerless" over the substance-abuse related behavior at issue refers to the lack of control over this compulsion, which persists despite any negative consequences that may be endured as a result.

2. "The process of working the steps is intended to replace self-centeredness with a growing moral consciousness and a willingness for self-sacrifice and unselfish constructive action. In the twelve-step groups, this is known as the - spiritual awakening."

a. Biblical Response

- 1) Removing the focus from oneself is an aspect of the goal, however, who or what should we, as biblical counselors, be directing as the object of our counselees' focus?
 - i. Luke 9:23 And he said to all, "If anyone would come after me, let him deny himself and take up his cross daily and follow me.
 - ii. **Philippians 2:1-7** So if there is any encouragement in Christ, any comfort from love, any participation in the Spirit, any affection and sympathy, complete my joy by being of the same mind, having the same love, being in full accord and of one mind. Do nothing from selfish ambition or conceit, but in humility count others more significant than yourselves. Let each of you look not only to his own interests, but also to the interests of others. Have this mind among yourselves, which is yours in Christ Jesus, who, though he was in the form of God, did not count equality with God a thing to be grasped, but emptied himself, by taking the form of a servant, being born in the likeness of men.
- 2) The true spiritual awakening comes from the Holy Spirit working in our hearts, causing us to live for Christ.
 - i. Ezekiel 36:26-27 And I will give you a new heart, and a new spirit I will put within you. And I will remove the heart of stone from your flesh and give you a heart of flesh. And I will put my Spirit within you, and cause you to walk in my statutes and be careful to obey my rules.
 - ii. **Romans 12:2** *Do not be conformed to this world, but be transformed by the renewal of your mind, that by testing you may discern what is the will of God, what is good and acceptable and perfect.*
- 3. "A sponsor is a more experienced person in recovery who guides the lessexperienced aspirant ("sponsee") through the program's twelve steps. New members in twelve-step programs are encouraged to secure a relationship with at least one sponsor who both has a sponsor and has taken the twelve steps themselves. . . Sponsors and sponsees participate in activities that lead to spiritual growth. Experiences in the program are often shared by outgoing members with incoming members. This rotation of experience is often considered to have a great spiritual reward."

a. Biblical response

- 1) The idea of a sponsor or mentor is great. Having someone who has overcome similar problems and had similar experiences, but has made it through them, is a great idea. The issue here is regarding the standard of right and wrong, of truth and untruth. What is the standard of right and wrong used in this 'discipleship relationship?' This phrase puts significant importance on subjective experiences as opposed to objective truths and principles.
 - i. 2 Peter 1:16-21 For we did not follow cleverly devised myths when we made known to you the power and coming of our Lord Jesus Christ, but we were eyewitnesses of his majesty. For when he received honor and glory from God the Father, and the voice was borne to him by the Majestic Glory, "This is my beloved Son, with whom I am well pleased," we ourselves heard this very voice borne from heaven, for we were with him on the holy mountain. And we have something more sure, the prophetic word, to which you will do well to pay attention as to a lamp shining in a dark place, until the day dawns and the morning star rises in your hearts,

III. Cognitive-Behavioral Therapy (CBT)

A. Description

- "Cognitive behavioral therapy (CBT) is a common type of talk therapy (psychotherapy). You work with a mental health counselor (psychotherapist or therapist) in a structured way, attending a limited number of sessions. CBT helps you become aware of inaccurate or negative thinking so you can view challenging situations more clearly and respond to them in a more effective way."⁵
- 2. "CBT is based on several core principles; psychological problems are based, in part, on faulty or unhelpful ways of thinking, on learned patterns of unhelpful behavior, and that the individual can learn better ways of coping, thereby relieving their symptoms and becoming more effective in their lives."⁶

B. Process

- 1. Steps of CBT
 - a. Identify troubling situations or conditions in your life.
 - b. Become aware of your thoughts, emotions, and beliefs about these problems.
 - c. Identify negative or inaccurate thinking
 - d. Reshape negative or inaccurate thinking.

⁵ https://www.mayoclinic.org/tests-procedures/cognitive-behavioral-therapy/about/pac-20384610

⁶ https://www.apa.org/ptsd-guideline/patients-and-families/cognitive-behavioral

- 2. "Cognitive behavioral therapy may be done one-on-one or in groups with family members or with people who have similar issues."⁷
- 3. "Your therapist will encourage you to talk about your thoughts and feelings and what's troubling you. . . CBT generally focuses on specific problems, using a goal-oriented approach. As you go through the therapy process, your therapist may ask you to do homework — activities, reading or practices that build on what you learn during your regular therapy sessions — and encourage you to apply what you're learning in your daily life. Your therapist's approach will depend on your particular situation and preferences. Your therapist may combine CBT with another therapeutic approach — for example, interpersonal therapy, which focuses on your relationships with other people."8

Biblical Response: a.

- 1) CBT and Biblical Counseling have a bunch of similarities, including the identification of troubling thoughts or attitudes, using a goal-oriented approach, and the use of homework. It might be difficult to find any issues with CBT. The major issue with CBT is with regard to the lack of a biblical standard.
- 2) Openly discussing the issues that are troubling your counselee, and their thoughts and feeling surrounding the issues is wise. This will likely reveal a great deal of data, including sinful thought patterns or sinful attitudes. Addressing sinful thoughts, actions, and attitudes is essential in biblical counseling.
 - i. **Romans 12:2** *Do not be conformed to this world, but be* transformed by the renewal of your mind, that by testing you may discern what is the will of God, what is good and acceptable and perfect.
 - ii. 2 Corinthians 10:3-5 For though we walk in the flesh, we are not waging war according to the flesh. For the weapons of our warfare are not of the flesh but have divine power to destroy strongholds. We destroy arguments and every lofty opinion raised against the knowledge of God, and take very thought captive to obey Christ.
- 3) CBT and Biblical Counseling both use a goal-oriented approach. The core aspect of biblical counseling is the practical application of the Word of God to our counselees life. The problem with CBT in the area of homework arises with what goals are set. Are the god-glorifying goals or selfish sinful goals?
 - i. The Word of God teaches the 'Put off' 'Put on' principle in Ephesians 4:17-24.

⁷ 'Cognitive Behavioral Therapy,' Mayo Clinic, accessed 16 Oct 2022, https://www.mayoclinic.org/testsprocedures/cognitive-behavioral-therapy/about/pac-20384610 ⁸ 'Cognitive Behavioral Therapy,' Mayo Clinic, accessed 16 Oct 2022, https://www.mayoclinic.org/tests-

procedures/cognitive-behavioral-therapy/about/pac-20384610

- 1. Ephesians 4:17-24 Now this I say and testify in the Lord, that you must no longer walk as the *Gentiles do, in the futility of their minds. They* are darkened in their understanding, alienated from the life of God because of the ignorance that is in them, due to their hardness of heart. They have become callous and have given themselves up to sensuality, greedy to practice every kind of impurity. But that is not the way *you learned Christ!— assuming that you have* heard about him and were taught in him, as the truth is in Jesus, to put off your old self, which belongs to your former manner of life and is corrupt through deceitful desires, and to be renewed in the spirit of your minds, and to put on the new self, created after the likeness of God in true righteousness and holiness.
- ii. Ephesians 4:25-32 provides practical application for how the 'Put off' 'Put on' principle should be done.

IV. Biogenic Theory of Mood Disorders

- A. Description
 - 1. Biogenic is defined as "resulting from the activity of living organisms, as fermentation."⁹
 - 2. Mood disorders include depression, bipolar disorder, and anxiety disorders.¹⁰
 - 3. Causes of mood disorders include biological factors, genetic factors, and environmental factors.¹¹
 - 4. "What causes mood disorders is not well known. There are chemicals in the brain, called endorphins, that are responsible for positive moods. Other chemicals in the brain, called neurotransmitters, regulate endorphins. Most likely, depression (and other mood disorders) is caused by a chemical imbalance in the brain. Life events (such as unwanted changes in life) may also contribute to a depressed mood."¹²

⁹ 'Biogenic,' Dictionary, accessed on 16 Oct 2022, https://www.dictionary.com/browse/biogenic ¹⁰ "Mood Disorders," Cleveland Clinic, accessed on 16 Oct 2022,

https://my.clevelandclinic.org/health/diseases/17843-mood-disorders

¹¹ "Mood Disorders," Cleveland Clinic, accessed on 16 Oct 2022,

https://my.clevelandclinic.org/health/diseases/17843-mood-disorders

¹² John Hopkins Medicine, "Overview of Mood Disorders," http://www.hopkinsmedicine.org/healthlibrary /conditions/mental_health_disorders/overview_of_mood_disorders_85,P00759/.

- 5. The biogenic amine theory states ". . . that defects in the physiology and metabolism of biogenic amines, especially catecholamines (noradrenaline/norepinephrine and dopamine) and an indoleamine (serotonin), are pathogenically linked to certain psychiatric illnesses, especially depression."¹³
 - a. This theory was theorized ". . . from the discovery that monoamine oxidase inhibitors and some tricyclic drugs had mood-elevating properties, and had a dramatic effect on brain monoamine functions; that phenothiazines inhibit cerebral dopamine activity further support this theory and suggest a link between a disorder of dopamine metabolism and schizophrenia."¹⁴
- 6. "Mood disorders have been shown to have a strong genetic and biological basis. Relatives of those with major depressive disorder have double the risk of developing major depressive disorder, whereas relatives of patients with bipolar disorder have over nine times the risk (Merikangas et al., 2001). The rate of concordance for major depressive disorder is higher among identical twins than fraternal twins (50% vs. 38%, respectively), as is that of bipolar disorder (67% vs. 16%, respectively), suggesting that genetic factors pay a stronger role in bipolar disorder than in major depressive disorder (Merikangas et al., 2001)."¹⁵
- 7. Causes of mood disorders include biological factors, genetic factors, and environmental factors.

B. Process

1. Diagnosis: "A mental health professional, such as a psychologist or psychiatrist, will conduct an interview or survey, asking questions about your symptoms, sleeping and eating habits and other behaviors. They use criteria in the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders to make diagnoses of mood disorders.

In general, a mood disorder is diagnosed when sadness, elation, anger or other emotion is:

- Overly intense and persistent.
- Accompanied by other mood disorder symptoms, such as sleep changes or activity level changes.
- Significantly impairs the person's capacity to function."¹⁶

¹³ "The Biogenic Amine Theory," Segen's Medical Dictionary (Farlex, 2012). Available at: http://medical-dictionary.thefreedictionary.com/biogenic+amine+theory

¹⁴ "The Biogenic Amine Theory," Segen's Medical Dictionary (Farlex, 2012). Available at: http://medicaldictionary.thefreedictionary.com/biogenic+amine+theory

¹⁵ 'The Biological Basis of Mood Disorders,' Lumen: Introduction to Psychology, accessed on 16 Oct 2022, https://courses.lumenlearning.com/waymaker-psychology/chapter/the-biological-basis-of-mood-disorders/
¹⁶ "Mood Disorders," Cleveland Clinic, accessed on 16 Oct 2022,

https://my.clevelandclinic.org/health/diseases/17843-mood-disorders

- 2. Treatment: "Treatment for mood disorders depends on the specific condition and symptoms. Usually, treatment involves a combination of medication and psychotherapy (also called talk therapy). There are also other types of treatment, such as brain stimulation therapy."¹⁷
 - a. Medications that are typically prescribed for biogenic mood disorders are antidepressants, mood stabilizers, and antipsychotics.¹⁸ The issue with all medication approaches is that none of them deal with the root issue, even the root issue as defined by the 'mental health professionals.'
 - b. "We are also under no obligation to believe that mood disorders are caused by a chemical imbalance or that currently available medication can affect that balance. The scientific evidence is not there to prove either statement. . . What does appear likely is that for nearly 90 percent of the 30 million people diagnosed (or 27 million) there is no true chemical benefit. That would mean that eight billion of the nine billion dollars spent last year on these medicines may have been spent in vain."¹⁹
 - c. As biblical counselors, we should never tell our counselees to stop taking physician-prescribed medications. However, we can encourage them to work with their physician to develop a plan to safely and properly move away from medications.

3. Biblical Response:

- a. The theory of biogenic mood disorders shifts blame and guilt for sinful thoughts, actions, and attitudes from the individual and places them on the illness.
 - 1) The Fall of Man
 - i. Cover it up Genesis 3:7 Then the eyes of both were opened, and they knew that they were naked. And they sewed fig leaves together and made themselves loincloths.
 - Ran & Hid Genesis 3:8 And they heard the sound of the LORD God walking in the garden in the cool of the day, and the man and his wife hid themselves from the presence of the LORD God among the trees of the garden.
 - iii. Blame Shift Genesis 3:12 The man said, "The woman whom you gave to be with me, she gave me fruit of the tree, and I ate."

¹⁸ "Mood Disorders," Cleveland Clinic, accessed on 16 Oct 2022,

¹⁷ "Mood Disorders," Cleveland Clinic, accessed on 16 Oct 2022,

https://my.clevelandclinic.org/health/diseases/17843-mood-disorders

https://my.clevelandclinic.org/health/diseases/17843-mood-disorders

¹⁹ Charles Hodges, Good Mood Bad Mood: Help and Hope for Depression and Bipolar Disorder, 49.

- 2) **Proverbs 28:13** *Whoever conceals his transgressions will not prosper, but he who confesses and forsakes them will obtain mercy.*
- We must teach our counselees to take ownership for their sins (attitudes, thoughts, & deeds) regardless of their circumstances, because no matter our circumstances, we are called to glorify God.
 - *i.* **2 Corinthians 5:9** *So whether we are at home or away, we make it our aim to please him.*
- b. Caution: There are some biblical counselors that have essentially ignored any organic causes of behavioral issues and instead have focused on sin as the root cause. Do not underestimate the depravity of the flesh. If we consider the dichotomy of man, that man is both body and soul, we can see how sin has affected both our body (causing organic behavioral issues) and soul.
 - 1) **Psalm 51:5** *Behold, I was brought forth in iniquity, and in sin did my mother conceive me.*
 - 2) **Psalm 58:3** *The wicked are estranged from the womb; they go astray from birth, speaking lies.*
- c. Sleep: do not underestimate the importance of sleep. Lack of quality sleep can have profound effects.
 - "Sleep deficiency can interfere with work, school, driving, and social functioning. You might have trouble learning, focusing, and reacting. Also, you might find it hard to judge other people's emotions and reactions. Sleep deficiency also can make you feel frustrated, cranky, or worried in social situations. . . Sleep deficiency is linked to many chronic health problems, including heart disease, kidney disease, high blood pressure, diabetes, stroke, obesity, and depression."²⁰

V. Electroconvulsive Therapy

A. Description

- 1. "Electroconvulsive therapy (ECT) is a procedure, done under general anesthesia, in which small electric currents are passed through the brain, intentionally triggering a brief seizure. ECT seems to cause changes in brain chemistry that can quickly reverse symptoms of certain mental health conditions."²¹
- 2. "Electroconvulsive therapy (ECT) can provide rapid, significant improvements in severe symptoms of several mental health conditions. ECT is used to treat:

²⁰ "What Are Sleep Deprivation and Deficiency?" National Heart, Lung, and Blood Institute, Last modified 24 Mar 2022. https://www.nhlbi.nih.gov/health/sleep-deprivation

²¹ "Electroconvulsive Therapy (ECT)," May Clinic (October 25, 2012). Available at:

http://www.mayoclinic.org/tests-procedures/electroconvulsive-therapy/basics/definition/prc-20014161

- a. Severe depression, treatment-resistant depression, severe mania, catatonia, agitation and aggression in people with dementia.²²
- B. Process
 - 1. "The ECT procedure takes about five to 10 minutes, with added time for preparation and recovery. ECT can be done while you're hospitalized or as an outpatient procedure."²³
 - a. The procedure includes general anesthesia (so the patient doesn't remember it, but also so the body does not convulse), a brief physical exam, an IV insertion for medication administration, and electrode pads placed on your head.
 - b. "When you're asleep from the anesthetic and your muscles are relaxed, the doctor presses a button on the ECT machine. This causes a small amount of electric current to pass through the electrodes to your brain, producing a seizure that usually lasts less than 60 seconds."²⁴
 - c. "No one knows for certain how ECT helps treat severe depression and other mental illnesses. What is known, though, is that many chemical aspects of brain function are changed during and after seizure activity. These chemical changes may build upon one another, somehow reducing symptoms of severe depression or other mental illnesses. . . Even after your symptoms improve, you'll still need ongoing depression treatment to prevent a recurrence. Ongoing treatment may be ECT with less frequency, but more often, it includes antidepressants or other medications, or psychological counseling (psychotherapy)."²⁵

2. Biblical Response:

- a. ECT is intended to be used after no other methods were effective. This approach rests on the concept that man is a machine, that there is a malfunction of some organic process, and that the solution is to adjust or manipulate the chemical processes within the brain. ECT seems to even less certain than the biogenic mood disorder approach because it simply introduces electricity into the brain tissue, whereas the biogenic mood disorder approach at least attempts to replace certain chemicals that are suspected to be out of balance.
- b. ECT does not address underlying sin issues and only attempts to fix the organic problem.
- c. It promises a quick and easy solution without addressing inner- man issues.

²² "Electroconvulsive Therapy (ECT)," May Clinic (October 25, 2012). Available at:

http://www.mayoclinic.org/tests-procedures/electroconvulsive-therapy/basics/definition/prc-20014161²³ "Electroconvulsive Therapy (ECT)," May Clinic (October 25, 2012). Available at:

http://www.mayoclinic.org/tests-procedures/electroconvulsive-therapy/basics/definition/prc-20014161 ²⁴ "Electroconvulsive Therapy (ECT)," May Clinic (October 25, 2012). Available at:

http://www.mayoclinic.org/tests-procedures/electroconvulsive-therapy/basics/definition/prc-20014161 ²⁵ "Electroconvulsive Therapy (ECT)," May Clinic (October 25, 2012). Available at:

http://www.mayoclinic.org/tests-procedures/electroconvulsive-therapy/basics/definition/prc-20014161

- VI. Suggested Reading
 - A. Charles Hodges, Good Mood Bad Mood, 37-53.
 - B. Jay Adams, The Christian Counselor's Manual, 37 footnote 9.
 - C. Robert Smith, The Christian Counselor's Medical Desk Reference, 64-71.
 - D. Gary Gilley, "Twelve-Step Recovery Groups and the Christian," Think on These Things 2/6 (April 1996). Available at: https://tottministries.org/twelve-steprecovery-groups-and-the-christian/
- VII. Additional Resources
 - A. "The Twelve Steps of Alcoholics Anonymous." Available at http://www.aa.org/assets/en_US/smf-121_en.pdf
 - B. "Cognitive Behavioral Therapy," May Clinic (February 21, 2013). Available at: http://mayoclinic.org/tests-procedures/cognitive-behavioraltherapy/basics/definition/prc-20013594
 - C. "The Biogenic Amine Theory," Segen's Medical Dictionary (Farlex, 2012). Available at: http://medicaldictionary.thefreedictionary.com/biogenic+amine+theory
 - D. "Electroconvulsive Therapy (ECT)," May Clinic (October 25, 2012). Available at: http://www.mayoclinic.org/tests-procedures/electroconvulsivetherapy/basics/definition/prc-20014161