

# AP<sup>®</sup> PSYCHOLOGY

## 2007 SCORING GUIDELINES

### Question 2

Often misunderstood, schizophrenia is a psychological disorder affecting one percent of the population. In addition to treating the disorder, psychologists work to identify its nature and origins.

- Identify two characteristic symptoms used to diagnose schizophrenia.
- Discuss a research finding that supports a genetic basis for schizophrenia.
- What is the dopamine hypothesis regarding the origin of schizophrenia?
- Describe how medications used to treat schizophrenia affect the actions of neurotransmitters at the synapses.
- Identify a risk inherent in using medications in the treatment of schizophrenia.
- People sometimes confuse schizophrenia with dissociative identity disorder (DID). Identify two key characteristics that differentiate DID from schizophrenia.

### Scoring Criteria

#### General Considerations

1. Answers must be presented in sentences, and sentences must be cogent enough for the student's meaning to come through. Spelling and grammatical mistakes do not reduce a student's score, but spelling must be close enough so that the reader is convinced of the word.
2. Within a point, a student will not be penalized for misinformation unless it *directly contradicts* correct information that would otherwise have scored a point.
3. A student can only score points if information is presented in the *context* of the question. For example, it must be clear to the reader that the student is discussing characteristic symptoms of schizophrenia to score Points 1 and 2. The best way for a student to establish context is to explicitly state it (e.g., "Two characteristic symptoms of schizophrenia are ..."). In the absence of such language, the reader may infer context if the paragraph structure or order of the answer makes the context clear. One exception is that students may attempt to answer Point 5 while answering Point 4, which is acceptable.

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### Question 2 (continued)

#### POINTS 1 and 2: Two Characteristic Symptoms

Accept any two of the following:

- Delusions (e.g., paranoia, persecutory, reference, thought broadcasting, thought insertion, grandeur)
- Perceptual distortions (e.g., hallucinations, breakdown of cognitive filter/selective attention)
- Disorganized speech (e.g., word salad, incoherence)
- Disorganized thinking (e.g., form of thought disturbances, loosening of associations, blocking, clanging, neologisms)
- Negative symptoms
- Positive symptoms
- Disturbance in affect/emotion (e.g., flat, inappropriate, ambivalence)
- Psychomotor disturbances (e.g., catatonic stupor, rigidity, posturing, waxy flexibility)
- Disturbed reality testing (e.g., “out of touch with reality,” “psychotic”)

Notes:

1. Symptom names or examples alone are acceptable as points. Two examples within a symptom count as two points. But a symptom name with an example from the same symptom scores only 1 point. For example “perceptual distortions and auditory hallucinations” scores only 1 point; “disorganized speech and word salad” scores only 1 point; “auditory and visual hallucinations” scores 2 points.
2. Applications that accurately portray the symptoms also score.
3. Defining one characteristic symptom as another earns only 1 point. Example: “schizophrenia is characterized by paranoia which is hallucinations” scores 1 point because the student is treating this as one characteristic symptom; “schizophrenia is characterized by paranoia and hallucinations” or “schizophrenia is characterized by paranoia which causes hallucinations” both score 2 points.
4. Mentioning a type of schizophrenia does not score. Example: “Schizophrenia is characterized by the paranoid type” does not score because it is a category name and not a characteristic symptom. “Schizophrenia is characterized by paranoia” does score because paranoia is a characteristic symptom.
5. “Hearing a voice in their head” does not score because it is not clear that it is referring to hallucinations. “Hearing voices in their head that aren’t real” does score.

Do Not Score:

1. Biological correlates of schizophrenia (e.g., excess dopamine, enlarged ventricles) are not characteristic symptoms used to diagnose.
2. Overly general descriptions of emotions and behaviors not mentioned above (e.g., mood swings, bizarre behaviors, speaking in run-on sentences, maladaptive behavior, scattered thoughts).
3. Other problems not necessarily characteristic of schizophrenia (e.g., aggression, violence, antisocial behavior, depression, mood swings, synesthesia).

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### Question 2 (continued)

#### POINT 3: Genetic Research Finding

Students must provide an example of a research finding. Simply listing a method of research does not score, but listing the research finding without the method can score.

Examples: “family studies support a genetic basis...” does not score; **but** “schizophrenia runs in families” scores.

Score any of the following:

- Twin Studies + finding (e.g., that show higher concordance rates for identical [MZ] than fraternal [DZ] twins).
- Adoption Studies + finding (e.g., that show individuals are more at risk if a biological parent exhibits schizophrenia than if their adoptive parent exhibits schizophrenia).
- Family Studies + finding (e.g., schizophrenia runs in families, genetic link between parents and their children).
- Diathesis Stress or Vulnerability Models support a genetic influence and score by itself.
- Genetic vulnerability/predisposition for schizophrenia.
- The prevalence of schizophrenia is the same across cultures.

Do Not Score:

1. “There is a gene that causes schizophrenia.” This does not score because there is no single gene that causes schizophrenia.
2. Nongenetic biological examples (example: mother’s influenza during fetal development causing schizophrenia).
3. “High heritability” by itself.
4. “Predisposition” by itself.

#### POINT 4: Dopamine Hypothesis

The dopamine hypothesis is that schizophrenia is related to overactivity of dopamine. To score this point, students must indicate this relationship. They may indicate this in a general or more specific way:

- General way—schizophrenia is related to an excess amount of dopamine. This can be stated as “overactivity/oversensitivity” or as “too much” or “excess” dopamine.
- Specific way—drugs that block dopamine decrease symptoms.
  - drugs that increase dopamine increase symptoms.
  - dopamine overactivity is related to positive symptoms.
  - describes an accurate relationship between dopamine, Parkinson’s disease, and schizophrenia.

Do Not Score:

1. None of the following score because the over-activity of dopamine is not indicated: “dopamine causes schizophrenia” or “dopamine levels are imbalanced/irregular” or “dopamine levels are too low or too high.”

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### Question 2 (continued)

#### **POINT 5: Psychoactive Medication**

Students should indicate that the psychoactive medications for schizophrenia work by reducing dopamine activity.

Score any of the following examples. Medications work by:

- being dopamine antagonists
- blocking dopamine receptors
- preventing the release of dopamine
- lowering levels of dopamine

Notes:

1. Misidentification of appropriate drug with appropriate drug effect (“Prozac lowers dopamine...”) scores.
2. Misidentification of appropriate drug mechanism with appropriate outcome on dopamine (“blocking reuptake of dopamine which lowers the excess of dopamine ...”) scores.

Do Not Score:

1. “Medications work on dopamine.”
2. Identification of an appropriate drug alone (e.g., Clozapine).

#### **POINT 6: Risks**

Students should indicate one of the following potential risks:

- Side effects—must list some specific negative side effect (e.g., tardive dyskinesia, symptoms like Parkinson’s, tremors, seizures, restlessness, weight gain (agranular cytolysis), loss of white blood cells, damage to immune system, slow mental functioning, blurred vision, losing sense of self, drowsiness, constipation, dry mouth, sexual dysfunction, brain damage, depression/suicide, low blood pressure, reduced appetite)
- May worsen negative symptoms
- Potential for overdose
- Usually have to take additional medications to counteract the side effects
- Social discrimination—stigma of taking antipsychotics (not stigma for having the disorder)
- Potential drug interaction
- Noncompliance: therapy may not work because people may stop taking the medication, resulting in negative effects (e.g., return of symptoms)
- May not receive other treatments (e.g., psychotherapy)

Do Not Score:

1. Addiction, dependency, “might not work,” drug tolerance, drug withdrawal.

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### Question 2 (continued)

#### **POINTS 7 and 8: Schizophrenia versus DID**

Students should specify two characteristics from the lists below **and** indicate whether these characteristics are associated with DID or schizophrenia.

- Any typical characteristic symptom (refer to Points 1 and 2 for list), cause, or treatment of schizophrenia.
- Any biological correlate of schizophrenia (e.g., too much dopamine, enlarged ventricles, genetic predisposition, teratogens).
- Any typical characteristic symptom, cause, or treatment of DID:
  - more than one identity or personality
  - nonpsychotic disorder
  - disagreement about the validity of the category (iatrogenic)
  - associated with child abuse/trauma
  - does not respond to antipsychotic medication
  - more commonly diagnosed in females
  - lower incidence rate
  - memory loss
  - formed as a defense mechanism
  - nonepisodic

Notes:

1. “One characteristic that differentiates DID and schizophrenia is multiple personalities” does not score because it is not clear whether they are referring to DID or schizophrenia with regard to multiple personalities. “DID consists of multiple personalities” does score.
2. Contrasting the same characteristic scores only 1 point. For example “schizophrenia has hallucinations and DID does not have hallucinations” scores only 1 point.

Do Not Score:

1. “Changing into a different person” does not score as a specific characteristic of DID or schizophrenia because changing who you are as a person does not necessarily mean you have more than one personality or that you are delusional.

Schizophrenia is a ~~mental~~ psychological disorder that manifests specific symptoms, which are treatable in different ways.

Two symptoms characteristic of schizophrenics are delusions, or ideas that are very inaccurate, and disorganized and ~~also~~ illogical thought processes, such as stringing random words together.

Schizophrenia ~~is~~ has some hereditability. In twin studies, it was found that ~~is~~ one identical twin was more likely to develop schizophrenia if the other identical twin developed it.

It is believed that too much dopamine in the brain leads to schizophrenia.

Medications used to treat schizophrenia are designed to decrease the amount of dopamine; therefore, they prevent dopamine from being released at the synapse. They are called antagonists.

Unfortunately, one risk of medications that are used to treat schizophrenia is the

potential development of a disorder called tardic dyskinesia, which has Parkinson's-like symptoms, and which results from too little dopamine.

Though dissociative identity disorder is often confused with schizophrenia, they are not the same thing. People who experience DID may have multiple personalities, while schizophrenics do not. Additionally, ~~while~~ while victims of DID ~~or~~ often develop the disorder as a result of severe childhood trauma, schizophrenia is not a result of childhood trauma, though the stress hypothesis theorizes that schizophrenia is brought out in late adolescence and early adulthood because of the new stresses of college, jobs, and finances.

Schizophrenia is a frightening disorder. It is characterized by hallucinations, delusions of grandeur, and paranoia. Scientists have found similar genetic inconsistencies in the genes of schizophrenic patients. It is thought that this deformity or inconsistency could be the cause. The dopamine hypothesis claims that schizophrenia is a direct result of a dopamine imbalance. Medications for this disorder serve to slow neurotransmitter reactions in the synapse. There are a few dangers presented by this medication. The most major one is the fact that the drugs treat the symptoms but do not cure schizophrenia. If a patient stops treatment the symptoms swiftly return. The main differences between schizophrenia and DID are ~~that~~ that DID is caused by repeated traumatic events and is characterized by a fracturing of the personality into multiple ones for self protection. Schizophrenia is thought to be a primarily genetic illness with no external cause, and also remains solid in a single identity.



Everyday, people often misunderstand schizophrenia. Schizophrenia is a psychological disorder affecting one percent of the population. Even though psychologists work to treat the disorder, they also work very ~~hard~~ hard to identify its true nature and origins.

People around the world are diagnosed with this psychological disorder all the time. Multiple personalities and hallucinations both are two characteristic ~~of~~ symptoms used to diagnose schizophrenia.

Even if you have the code for schizophrenia does not mean you will develop the disorder. You only develop it if something triggers it. Usually it is triggered by something in your environmental surroundings.

Many of the medications used to treat this psychological disorder affect the actions of the neurotransmitters at the synapses. The medicine slows down the ~~messages~~ ~~in~~ speed of the messages being sent and received.

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## 2007 SCORING COMMENTARY

### Question 2

#### Overview

This question delved specifically into a controversial point that most teachers of introductory psychology treat comprehensively—the reality of schizophrenia as contrasted with lay information about the condition. The question explicitly asked students to articulate the difference between schizophrenia and dissociative identity disorder (“multiple personality” in lay terms). Clarifying the frequency and severity of schizophrenia is a primary goal of any introductory course, so the intent of this question was to allow students to exhibit depth of understanding rather than breadth across the course. Although the question concentrated specifically on abnormal psychology, it also tapped students’ knowledge of biology and treatment issues.

#### Sample: 2A

**Score: 8**

Points 1 and 2 require identification of two characteristics of schizophrenia. The essay earned these points by specifying “delusions” and “disorganized . . . thought processes” as characteristics of an individual with schizophrenia. Point 3 was awarded when the student cites a higher concordance rate of schizophrenia in twin studies. It is important to note that for this point two elements had to be present: a particular type of study and the finding of the study were both necessary. The student earned Point 4 by stating that “too much dopamine” is related to schizophrenia. The student earned Point 5 by indicating that “[m]edications used to treat schizophrenia are designed to decrease the amount of dopamine.” Point 6 was earned when the student correctly lists tardive dyskinesia as a side effect resulting from medication used to treat schizophrenia. Points 7 and 8 frequently appeared in the same paragraph in student responses. This student correctly identifies “multiple personalities” as characteristic of dissociative identity disorder (DID) and correctly links “childhood trauma” to DID.

#### Sample: 2B

**Score: 5**

This essay earned Points 1 and 2 by correctly identifying “hallucinations” and “delusions of grandeur [sic]” as symptoms of schizophrenia. The essay did not earn Point 3 because suggesting that people with schizophrenia have “similar genetic inconsistencies” is incorrect. Point 4 was not awarded because the reference to dopamine does not reach the desired level of specificity (i.e., too much dopamine). The student mentions that medications “do not cure” schizophrenia, but this is not a side effect and therefore Point 5 was not awarded. The student earned Point 6 by indicating that noncompliance with drug treatment could result in the return of symptoms. The student correctly identifies “traumatic events” as potential precipitating factors of DID, so Point 7 was awarded. The essay also earned Point 8 by indicating DID is characterized by “multiple” personalities.

#### Sample: 2C

**Score: 1**

This essay begins with interesting information; however, the facts presented do not address the elements of the question. The student correctly identifies “hallucinations” as a characteristic of schizophrenia and earned Point 1. However, the symptom of “multiple personalities” is not a characteristic of schizophrenia, thus Point 2 was not awarded. Although the student attempts Point 3 by explaining the etiology of schizophrenia using the diathesis stress model, the explanation does not include reference to *genetic* code. The student does not provide an appropriate level of specificity to earn Point 4. The student does not attempt Points 5, 6, 7, and 8.