

## STUDY GUIDE

# 5: States of Consciousness

### UNIT OVERVIEW

Consciousness – our awareness of ourselves and our environment – can be experienced in various states. Unit 5 examines not only normal consciousness but also sleep and dreaming, hypnotic states, drug-altered states, and near-death experiences.

Most of the terminology in this unit is introduced in the sections on Sleep and Dreams and on Drugs and Consciousness. Among the issues discussed are why we sleep and dream, whether hypnosis is a unique state of consciousness, and possible psychological and social-cultural roots of drug use.

### UNIT REVIEW

First, skim each section, noting headings and boldface items. After you have read the section, review each objective by answering the fill-in and essay-type questions that follow it. As you proceed, evaluate your performance by consulting the answers. Do not continue with the next section until you understand each answer. If you need to, review or reread the section in the textbook before continuing.

### Introduction (pp. 175-176)

Objective 1: Discuss the significance of consciousness in the history of psychology.

1. The study of \_\_\_\_\_ was central in the early years of psychology and in recent decades, but for quite some time it was displaced by the study of observable \_\_\_\_\_ .
2. Advances in neuroscience made it possible to relate \_\_\_\_\_ to various mental states; as a result, psychologists once again affirmed the importance of \_\_\_\_\_ .

Define consciousness in a sentence.

### Sleep and Dreams (pp. 176-192)

Objective 2: Describe the cycle of our circadian rhythm, and identify some events that can disrupt this biological clock.

1. Our bodies' internal "clocks" control several \_\_\_\_\_ .
2. The sleep-waking cycle follows a 24-hour clock called the \_\_\_\_\_ .
3. Body temperature (rises/falls) as morning approaches and begins to (rise/fall) again before we go to sleep.
4. When people are at their daily peak in circadian arousal, \_\_\_\_\_ is sharpest and \_\_\_\_\_ is most accurate.
5. Our biological clock is reset each day by exposure to \_\_\_\_\_ , which triggers proteins in the \_\_\_\_\_ of the eyes to signal the brain's \_\_\_\_\_ which causes the \_\_\_\_\_ gland to increase or decrease its production of \_\_\_\_\_ .
6. Under unnatural conditions, most animals (will/will not) exceed a 24-hour day.

Objective 3: List the stages of the sleep cycle, and explain how they differ.

7. The sleep cycle consists of \_\_\_\_\_ distinct stages.

8. The rhythm of sleep cycles was discovered when Aserinsky noticed that, at periodic intervals during the night, the \_\_\_\_\_ of a sleeping child moved rapidly. This stage of sleep, during which \_\_\_\_\_ occur, is called \_\_\_\_\_ .
9. The relatively slow brain waves of the awake but relaxed state are known as \_\_\_\_\_ waves.
10. During Stage 1 sleep, people often experience \_\_\_\_\_ sensations similar to \_\_\_\_\_ . These sensations may later be incorporated into \_\_\_\_\_ .
11. The bursts of brain-wave activity that occur during Stage 2 sleep are called \_\_\_\_\_ .
12. Large, slow brain waves are called \_\_\_\_\_ waves. They occur first in Stage \_\_\_\_\_, and increasingly during Stage \_\_\_\_\_ sleep, which are therefore called \_\_\_\_\_ sleep. A person in the latter stage of sleep generally will be (easy / difficult) to awaken. It is during this stage that children may wet the bed or begin \_\_\_\_\_ .

Describe the bodily changes that accompany REM sleep.

13. During REM sleep, the motor cortex is (active/relaxed), while the muscles are (active/relaxed). For this reason, REM is often referred to as sleep.
14. The rapid eye movements generally signal the beginning of a \_\_\_\_\_, which during REM sleep is often story-like, \_\_\_\_\_, and more richly hallucinatory.
15. The sleep cycle repeats itself about every \_\_\_\_\_ minutes. As the night progresses, Stage 4 sleep becomes (longer/briefer) and REM periods become (longer /briefer). Approximately \_\_\_\_\_ percent of a night's sleep is spent in REM sleep.

Objective 4: Describe individual differences in sleep duration and the effects of sleep loss, noting five reasons that we need sleep.

16. Newborns spend nearly \_\_\_\_\_ (how much?) of their day asleep, while adults spend no more than \_\_\_\_\_ .
17. Sleep patterns are influenced by \_\_\_\_\_, as indicated by the fact that sleep patterns among (identical! fraternal) twins are very similar. Sleep is also influenced by \_\_\_\_\_, as indicated by the fact that people now sleep (more/less) than they did a century ago.
18. Allowed to sleep unhindered, most people will sleep (how many?) hours a night.
19. Teenagers typically need \_\_\_\_\_ hours of sleep but now average nearly \_\_\_\_\_ hours less sleep than teenagers of 80 years ago. To psychologist William \_\_\_\_\_, this indicates that the vast majority of students are dangerously sleep-deprived. One effect of this state is to promote weight gain by increasing the hormone \_\_\_\_\_, decreasing the hormone \_\_\_\_\_, and increasing the stress hormone \_\_\_\_\_. Another is that sleep deprivation may suppress the functioning of the body's system and alter metabolic and hormonal functioning in ways

that mimic \_\_\_\_\_ and are conducive to \_\_\_\_\_ and \_\_\_\_\_  
\_\_\_\_\_. Another indication of the hazards of this state is that the rate of \_\_\_\_\_ tends  
to increase immediately after the spring time change in Canada and the United States.

Describe the behavioral effects of sleep loss.

20. Two possible reasons for sleep are to \_\_\_\_\_ us and to help restore body tissues, especially those of the  
\_\_\_\_\_. Animals with high waking \_\_\_\_\_ produce an abundance of chemical  
\_\_\_\_\_ that are toxic to \_\_\_\_\_. Sleep also facilitates our of  
the day's experiences and stimulates \_\_\_\_\_ thinking.
21. During sleep a growth hormone is released by the \_\_\_\_\_ gland. Adults spend (more/less) time in deep  
sleep than children and so release (more/less) growth hormone.

Objective 5: Identify the major sleep disorders.

22. A persistent difficulty in falling or staying asleep is characteristic of \_\_\_\_\_. Sleeping pills and alcohol may make the problem  
worse because they tend to (increase/reduce) REM sleep.

State several tips for those suffering from insomnia.

23. The sleep disorder in which a person experiences uncontrollable sleep attacks is \_\_\_\_\_. People with  
severe cases of this disorder may collapse directly into sleep and experience a loss of \_\_\_\_\_  
\_\_\_\_\_. This disorder may be linked to low levels of the neurotransmitter \_\_\_\_\_,  
which is linked to alertness.
24. Individuals suffering from \_\_\_\_\_ stop breathing while sleeping. This disorder  
is especially prevalent among \_\_\_\_\_.
25. The sleep disorder characterized by extreme fright and rapid heartbeat and breathing is called \_\_\_\_\_.  
\_\_\_\_\_. Unlike nightmares, these episodes usually happen early in the night, during Stage \_\_\_\_\_  
sleep. The same is true of episodes of \_\_\_\_\_ and \_\_\_\_\_, problems that (run/do not  
run) in families. These sleep episodes are most likely to be experienced by (young children/adolescents/ older adults), in  
whom this stage tends to be the \_\_\_\_\_ and \_\_\_\_\_.

Objective 6: Describe the most common content of dreams, and compare the five major perspectives on why we dream.

26. Dreams experienced during \_\_\_\_\_ sleep are vivid, emotional, and bizarre.
27. For both men and women, 8 in 10 dreams are marked by (positive/negative) emotions, such as fears of being  
\_\_\_\_\_.
28. Freud referred to the actual content of a dream as its \_\_\_\_\_ content. Freud believed that this is a  
censored, symbolic version of the true meaning, or \_\_\_\_\_, of the dream.

29. According to Freud, most of the dreams of adults reflect \_\_\_\_\_ wishes and are the key to understanding inner to understanding inner \_\_\_\_\_. To Freud, dreams serve as a psychic \_\_\_\_\_ charges otherwise unacceptable feelings.
30. Researchers who believe that dreams serve an \_\_\_\_\_ -processing function receive support from the fact that REM sleep facilitates \_\_\_\_\_.
31. Brain scans confirm the link between \_\_\_\_\_ sleep and \_\_\_\_\_.
32. Other theories propose that dreaming serves some \_\_\_\_\_ function, for example, that REM sleep provides the brain with needed \_\_\_\_\_. Such an explanation is supported by the fact that (infants/adults) spend the most time in REM sleep.
33. Still other theories propose that dreams are elicited by random bursts of \_\_\_\_\_ activity originating in lower regions of the brain, such as the \_\_\_\_\_. According to the \_\_\_\_\_ - \_\_\_\_\_ theory, dreams are the brain's attempt to make sense of this activity. The bursts are believed to be given their emotional tone by the brain's \_\_\_\_\_ system. PET scans of sleeping people reveal increased activity in the brain's \_\_\_\_\_ system, especially the \_\_\_\_\_. Other theorists see dreams as a natural part of brain \_\_\_\_\_ and \_\_\_\_\_ development.
34. Researchers agree that we (need/do not need) REM sleep. After being deprived of REM sleep, a person spends more time in REM sleep; this is the \_\_\_\_\_ effect.
35. REM sleep (does/does not) occur in other mammals. Animals such as fish, whose behavior is less influenced by learning, (do/do not) dream. This finding supports the \_\_\_\_\_ - \_\_\_\_\_ theory of dreaming.

### Hypnosis (pp. 192-196)

Objective 7: Discuss the characteristics of people who are susceptible to hypnosis, and evaluate claims that hypnosis can influence people's memory, will, health, and perception of pain.

- Hypnosis is a \_\_\_\_\_ in which a hypnotist suggests that a subject will experience certain feelings or thoughts, for example.
- Most people are (somewhat/not at all) hypnotically suggestible.

Describe people who are the most susceptible to hypnosis.

- The idea that we can relive childhood experiences through hypnosis-referred to as \_\_\_\_\_ – has not been supported by research.
- Research studies show that "hypnotically refreshed" memories combine \_\_\_\_\_ with \_\_\_\_\_.

5. An \_\_\_\_\_ person in a legitimate \_\_\_\_\_ can induce people – hypnotized or not – to perform some unlikely acts.
6. Hypnotherapists have helped some people alleviate headaches, asthma, and stress-related skin disorders through the use of \_\_\_\_\_ suggestions.
7. Hypnosis (is/is not) especially helpful for the treatment of obesity. It (is/is not) useful in treating smoking, drug, and alcohol addictions.
8. Hypnosis (can/cannot) relieve pain.
9. In surgical experiments, hypnotized patients have required less \_\_\_\_\_, have recovered \_\_\_\_\_, and have left the hospital \_\_\_\_\_ than un hypnotized controls.

Objective 8: Give arguments for and against hypnosis as an altered state of consciousness.

10. Skeptics believe that hypnosis may reflect the workings of \_\_\_\_\_. These findings provide support for the \_\_\_\_\_ theory of hypnosis.

Summarize the argument that hypnosis is not an altered state of consciousness.

11. Hilgard has advanced the idea that during hypnosis there is a \_\_\_\_\_, or split, between different levels of consciousness. For example, he believes that there is a split between the \_\_\_\_\_ and \_\_\_\_\_ aspects of pain. Hypnotic pain relief may also be due to selective \_\_\_\_\_, that is, to the person's focusing on stimuli other than pain.

Discuss the current view of hypnosis as a blend of the two views.

## Drugs and Consciousness (pp. 197-210)

Objective 9: Discuss the nature of drug dependence and addiction, and identify three common misconceptions about addiction.

1. Drugs that alter moods and perceptions are called \_\_\_\_\_ drugs.
2. Drug users who require increasing doses to experience a drug's effects have developed \_\_\_\_\_ for the drug. The user's brain counteracts the disruption to its normal functioning; thus, the user experiences \_\_\_\_\_.
3. After ceasing to use a drug, a person who experiences \_\_\_\_\_ symptoms has developed a physical \_\_\_\_\_. Regular use of a drug to relieve stress is an example of a \_\_\_\_\_ dependence.

A person who has a compulsive craving for a substance despite adverse consequences is \_\_\_\_\_ to that substance.

Briefly state three common misconceptions about addiction.

4. The three broad categories of drugs discussed in the text include \_\_\_\_\_, which tend to slow body functions; \_\_\_\_\_ which speed body functions; and \_\_\_\_\_, which alter perception. These drugs all work by mimicking, stimulating, or inhibiting the activity of the brain's \_\_\_\_\_. Psychologically, our culturally influenced \_\_\_\_\_ also play a role.

Objective 10: Explain how depressants affect nervous system activity and behavior, and summarize the findings on alcohol use and abuse.

5. Depressants \_\_\_\_\_ nervous system activity and \_\_\_\_\_ body function. Low doses of alcohol, which is classified as a \_\_\_\_\_, slow the activity of the \_\_\_\_\_ nervous system.
6. Alcohol may make a person more \_\_\_\_\_, more \_\_\_\_\_, or more \_\_\_\_\_ daring. Alcohol affects memory by interfering with the process of transferring experiences into \_\_\_\_\_ - \_\_\_\_\_ memory. Also, blackouts after drinking result from alcohol's suppression of \_\_\_\_\_.
7. Excessive use of alcohol can also affect cognition by \_\_\_\_\_ the brain, especially in (men/women). Alcohol also reduces \_\_\_\_\_ and focuses one's attention on the \_\_\_\_\_ situation and away from \_\_\_\_\_ consequences, thus lessening \_\_\_\_\_.

Describe how a person's expectations can influence the behavioral effects of alcohol.

8. Tranquilizers, which are also known as \_\_\_\_\_, have effects similar to those of alcohol.
9. Opium, morphine, and heroin all (excite/ depress) neural functioning. Together, these drugs are called the \_\_\_\_\_. When they are present, the brain eventually stops producing \_\_\_\_\_.

Objective 11: Identify the major stimulants, and explain how they affect neural activity and behavior.

10. The most widely used stimulants are \_\_\_\_\_, \_\_\_\_\_, the \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_. Stimulants (are/are not) addictive.
11. Methamphetamine triggers the release of the neurotransmitter \_\_\_\_\_, which stimulates brain cells that enhance \_\_\_\_\_ and \_\_\_\_\_.
12. Eliminating \_\_\_\_\_ would increase life expectancy more than any other preventive measure. Smoking usually begins during \_\_\_\_\_. Smokers (do/do not) become dependent on \_\_\_\_\_, and they (do/do not) develop tolerance to the drug. Quitting causes \_\_\_\_\_.

\_\_\_\_\_ - \_\_\_\_\_ symptoms that include \_\_\_\_\_  
\_\_\_\_\_ .

13. Nicotine quickly triggers the release of \_\_\_\_\_ and \_\_\_\_\_ , two neurotransmitters that diminish \_\_\_\_\_ and boost \_\_\_\_\_ and \_\_\_\_\_ . Nicotine also stimulates the \_\_\_\_\_ system to release \_\_\_\_\_ and \_\_\_\_\_ , neurotransmitters that calm \_\_\_\_\_ and reduce sensitivity to \_\_\_\_\_ .

14. Cocaine and crack deplete the brain's supply of the neurotransmitters \_\_\_\_\_ , \_\_\_\_\_ , and \_\_\_\_\_ and result in depression as the drugs' effects wear off. They do this by blocking the \_\_\_\_\_ of the neurotransmitters, which remain in the nerve cells' \_\_\_\_\_ .

15. Cocaine's psychological effects depend not only on dosage and form but also on \_\_\_\_\_ , and the \_\_\_\_\_ .

16. The drug \_\_\_\_\_ , or MDMA, is both a \_\_\_\_\_ and a \_\_\_\_\_ . This drug triggers the release of the neurotransmitters \_\_\_\_\_ and \_\_\_\_\_ and blocks the reabsorption of \_\_\_\_\_ . Among the adverse effects of this drug are disruption of the body's \_\_\_\_\_ clock, suppression of the \_\_\_\_\_ , and impaired \_\_\_\_\_ and other functions.

Objective 12: Describe the physiological and psychological effects of hallucinogens, and summarize the effects of LSD and marijuana.

17. Hallucinogens are also referred to as \_\_\_\_\_ . Two common synthetic hallucinogens are \_\_\_\_\_ and LSD, which is chemically similar to a subtype of the neurotransmitter \_\_\_\_\_ . LSD works by \_\_\_\_\_ the actions of this neurotransmitter.

18. The reports of people who have had near-death experiences are very similar to the \_\_\_\_\_ reported by drug users. These experiences may be the result of a deficient supply of \_\_\_\_\_ or other insults to the brain.

19. The active ingredient in marijuana is abbreviated \_\_\_\_\_ .

Describe some of the physical and psychological effects of marijuana.

20. All psychoactive drugs trigger \_\_\_\_\_ , which helps explain both \_\_\_\_\_ and \_\_\_\_\_ .

Objective 13: Discuss the biological, psychological, and social-cultural factors that contribute to drug use.

21. Drug use by North American youth (increased/declined) during the 1970s, then declined until the early 1990s due to increased \_\_\_\_\_ and efforts by the media to deglamorize drug use.

22. Adopted individuals are more susceptible to alcohol dependence if they had a(n) (adoptive/biological) parent with a history of alcohol dependence. Also having an \_\_\_\_\_ with alcohol dependence increases the risk of dependence. Boys who at age 6 are (more/less) excitable are more likely as teens to smoke, drink, and use other drugs. Genes that are more common among people predisposed to alcohol dependence may cause deficiencies in the brain's \_\_\_\_\_ system.

Identify some of the psychological and social-cultural roots of drug use.

23. Among teenagers, drug use (varies/is about the same) across \_\_\_\_\_ and \_\_\_\_\_ groups.

24. African-American high school seniors report the (highest/lowest) rates of drug use. A major social influence on drug use is the culture.

25. State three possible channels of influence for drug prevention and treatment programs.

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_

## PROGRESS TEST 1

### Multiple-Choice Questions

Circle your answers to the following questions and check them with the answers. If your answer is incorrect, read the explanation for why it is incorrect and then consult the appropriate pages of the text (in parentheses following the correct answer).

1. As defined by the text, consciousness includes which of the following?
  - a. focused attention
  - b. sleeping
  - c. hypnosis
  - d. all of these conditions
  - a. Stage 2
  - b. Stage 3
  - c. Stage 4
  - d. REM sleep
2. The cluster of brain cells that control the circadian rhythm is the
  - a. amygdala.
  - b. suprachiasmatic nucleus.
  - c. NPY.
  - d. pineal.
  5. During which stage of sleep does the body experience increased heart rate, rapid breathing, and genital arousal?
    - a. Stage 2
    - b. Stage 3
    - c. Stage 4
    - d. REM sleep
3. Compared with their counterparts of 80 years ago, teenagers today average \_\_\_sleep each night.
  - a. 2 hours less
  - b. 4 hours less
  - c. 1 hour more
  - d. about the same amount of
  6. The sleep cycle is approximately \_\_\_minutes.
    - a. 30
    - b. 50
    - c. 75
    - d. 90
4. Sleep spindles predominate during which stage of sleep?

7. The effects of chronic sleep deprivation include
  - a. suppression of the immune system.
  - b. altered metabolic and hormonal functioning.
  - c. impaired creativity.
  - d. all of these effects .
8. One effect of sleeping pills is to
  - a. decrease REM sleep.
  - b. increase REM sleep.
  - c. decrease Stage 2 sleep.
  - d. increase Stage 2 sleep.
9. Cocaine and crack produce a euphoric rush by
  - a. blocking the actions of serotonin.
  - b. depressing neural activity in the brain.
  - c. blocking the reuptake of dopamine in brain cells.
  - d. stimulating the brain's production of endorphins.
10. Which of the following is classified as a depressant?
  - a. methamphetamine
  - b. LSD
  - c. marijuana
  - d. alcohol
11. Which of the following preventive measures would have the greatest impact on average life expectancy?
  - a. eliminating obesity
  - b. eliminating smoking
  - c. eliminating sleep deprivation
  - d. eliminating binge drinking
12. Which of the following statements concerning hypnosis is true?
  - a. People will do anything under hypnosis.
  - b. Hypnosis is the same as sleeping.
  - c. Hypnosis is in part an extension of the division between conscious awareness and automatic behavior.
  - d. Hypnosis improves memory recall.
13. People who heard unusual phrases prior to sleep were awakened each time they began REM sleep. The fact that they remembered less the next morning provides support for the theory of dreaming.
  - a. manifest content
  - b. physiological
  - c. information-processing
  - d. activation-synthesis
14. According to Freud, dreams are
  - a. a symbolic fulfillment of erotic wishes.
  - b. the result of random neural activity in the brainstem.
  - c. the brain's mechanism for self-stimulation.
  - d. the disguised expressions of inner conflicts.
15. Psychoactive drugs affect behavior and perception through
  - a. the power of suggestion.
  - b. the placebo effect.
  - c. alteration of neural activity in the brain.
  - d. psychological, not physiological, influences.
16. All of the following are common misconceptions about addiction, EXCEPT the statement that
  - a. to overcome an addiction a person almost always needs professional therapy.
  - b. psychoactive and medicinal drugs very quickly lead to addiction.
  - c. biological factors place some individuals at increased risk for addiction.
  - d. many other repetitive, pleasure-seeking behaviors fit the drug-addiction-as-disease-needing-treatment model.
17. At its beginning, psychology focused on the study of
  - a. observable behavior.
  - b. consciousness.
  - c. abnormal behavior.
  - d. all of these factors.
18. Which of the following is NOT a theory of dreaming mentioned in the text?
  - a. Dreams facilitate information processing.
  - b. Dreaming stimulates the developing brain.
  - c. Dreams result from random neural activity originating in the brainstem.
  - d. Dreaming is an attempt to escape from social stimulation.
19. The sleep-waking cycles of young people who stay up *too* late typically are hours in duration.
  - a. 23
  - b. 24
  - c. 25
  - d. 26

### Matching Items

Match each term with its appropriate definition or description.

#### Definitions or Descriptions

- \_\_\_\_\_ 1. surface meaning of dreams
- \_\_\_\_\_ 2. deeper meaning of dreams
- \_\_\_\_\_ 3. stage(s) of sleep associated with delta waves
- \_\_\_\_\_ 4. stage(s) of sleep associated with muscular relaxation
- \_\_\_\_\_ 5. sleep disorder in which breathing stops
- \_\_\_\_\_ 6. sleep disorder occurring in Stage 4 sleep
- \_\_\_\_\_ 7. depressant
- \_\_\_\_\_ 8. hallucinogen
- \_\_\_\_\_ 9. stimulant
- \_\_\_\_\_ 10. disorder in which sleep attacks occur

#### Terms

- a. marijuana
- b. alcohol
- c. Stage 1 sleep
- d. manifest content
- e. cocaine
- f. narcolepsy
- g. sleep apnea
- h. Stages 3 and 4 sleep
- i. REM sleep
- j. latent content
- k. night terrors

### PROGRESS TEST 2

1. Which of the following statements regarding REM sleep is true?
  - a. Adults spend more time than infants in REM sleep.
  - b. REM sleep deprivation results in a REM rebound.
  - c. People deprived of REM sleep adapt easily.
  - d. Sleeping medications tend to increase REM sleep.
2. Alcohol has the most profound effect on
  - a. the transfer of experiences to long-term memory.
  - b. immediate memory.
  - c. previously established long-term memories.
  - d. all of these factors.
3. A person whose EEG shows a high proportion of alpha waves is most likely
  - a. dreaming
  - b. in Stage 2 sleep
  - c. in Stage 3 or 4 sleep
  - d. awake and relaxed
4. Circadian rhythms are the
  - a. brain waves that occur during Stage 4 sleep.
  - b. muscular tremors that occur during opiate withdrawal.
  - c. regular body cycles that occur on a 24-hour schedule.
  - d. brain waves that are indicative of Stage 2 sleep.
5. A person who requires increasing amounts of a drug to feel its effect is said to have developed
  - a. tolerance.
  - b. physical dependency.
  - c. psychological dependency.
  - d. resistance.
6. Which of the following is NOT an example of a biological rhythm?
  - a. the circadian rhythm
  - b. the 90-minute sleep cycle
  - c. the five sleep stages
  - d. sudden sleep attacks during the day
7. Which of the following is characteristic of REM sleep?
  - a. genital arousal
  - b. increased muscular tension
  - c. night terrors
  - d. alpha waves
8. Which of the following is NOT a stimulant?
  - a. amphetamines
  - b. MDMA.
  - c. marijuana.
  - d. cocaine.
9. Hypnotic responsiveness is
  - a. the same in all people.
  - b. generally greater in women than men.
  - c. generally greater in men than women.
  - d. greater when people are led to expect it.
10. According to Hilgard, hypnosis is
  - a. no different from a state of heightened motivation.
  - b. the same as dreaming.
  - c. a dissociation between different levels of consciousness.
  - d. a form of Stage 4 sleep.
11. Which of the following was NOT cited in the text as evidence that heredity influences alcohol use?

- a. Children whose parents abuse alcohol have a lower tolerance for multiple alcoholic drinks taken over a short period of time.
  - b. Boys who are impulsive and fearless at age 6 are more likely to drink as teenagers.
  - c. Laboratory mice have been selectively bred to prefer alcohol to water.
  - d. Adopted children are more susceptible if one or both of their biological parents have a history of alcohol dependence.
12. As a form of therapy for relieving problems such as warts, hypnosis is
- a. ineffective.
  - b. no more effective than positive suggestions given without hypnosis.
  - c. highly effective.
  - d. more effective with adults than children.
13. Which of the following is usually the most powerful determinant of whether teenagers begin using drugs?
- a. family strength
  - b. religiosity
  - c. school adjustment
  - d. peer influence
14. THC is the major active ingredient in
- a. nicotine.
  - b. MDMA.
  - c. marijuana.
  - d. cocaine.
15. Those who believe that hypnosis is a social phenomenon argue that "hypnotized" individuals are
- a. consciously faking their behavior.
  - b. merely acting out a role.
  - c. underachievers striving to please the hypnotist.
  - d. doing all of these things.
16. Consciousness is defined in the text as
- a. mental life.
  - b. selective attention to ongoing perceptions, thoughts, and feelings.
  - c. information processing.
  - d. our awareness of ourselves and our environment.
17. I am a synthetic stimulant and mild hallucinogen that produces euphoria and social intimacy by triggering the release of dopamine and serotonin. What am I?
- a. LSD
  - b. MDMA
  - c. THC
  - d. cocaine
18. According to the activation-synthesis theory, dreaming represents
- a. the brain's efforts to integrate unrelated bursts of activity in visual brain areas with the emotional tone provided by limbic system activity.
  - b. a mechanism for coping with the stresses of daily life.
  - c. a symbolic depiction of a person's unfulfilled wishes.
  - d. an information-processing mechanism for converting the day's experiences into long-term memory.
19. How a particular psychoactive drug affects a person depends on
- a. the dosage and form in which the drug is taken.
  - b. the user's expectations and personality.
  - c. the situation in which the drug is taken.
  - d. all of these conditions.

### ***Matching Items***

Match each term with its appropriate definition or description.

#### ***Definitions or Descriptions***

- \_\_\_\_\_ 1. drug that is both a stimulant and mild hallucinogen
- \_\_\_\_\_ 2. drugs that increase energy and stimulate neural activity
- \_\_\_\_\_ 3. brain wave of awake, relaxed person
- \_\_\_\_\_ 4. brain-wave activity during Stage 2 sleep
- \_\_\_\_\_ 5. sleep stage associated with dreaming
- \_\_\_\_\_ 6. drugs that reduce anxiety and depress central nervous system activity
- \_\_\_\_\_ 7. natural painkillers produced by the brain
- \_\_\_\_\_ 8. our awareness of ourselves and our environment
- \_\_\_\_\_ 9. theory that dreaming reflects our erotic drives
- \_\_\_\_\_ 10. a split between different levels of consciousness
- \_\_\_\_\_ 11. neurotransmitter that LSD resembles

#### ***Terms***

- a. Freud's theory
- b. serotonin
- c. Ecstasy
- d. alpha
- e. dissociation
- f. amphetamines
- g. consciousness
- h. sleep spindle
- i. endorphins
- j. REM
- k. barbiturates

## PSYCHOLOGY APPLIED

Answer these questions the day before a test as a final check on your understanding of the 1.mit's terms and concepts.

### *Multiple-Choice Questions*

1. A person who falls asleep in the midst of a heated argument probably suffers from  
a. sleep apnea.
2. Which of the following was NOT suggested by the text as an important aspect of drug prevention and treatment programs?  
a. education about the long-term costs of a drug's temporary pleasures  
b. efforts to boost people's self-esteem and purpose in life  
c. attempts to modify peer associations  
d. "scare tactics" that frighten prepubescent children into avoiding drug experimentation
3. REM sleep is referred to as paradoxical sleep because  
a. studies of people deprived of REM sleep indicate that REM sleep is unnecessary.  
b. the body's muscles remain relaxed while the brain and eyes are active.  
c. it is very easy to awaken a person from REM sleep.  
d. the body's muscles are very tense while the brain is in a nearly meditative state.
4. An attorney wants to know if the details and accuracy of an eyewitness's memory for a crime would be improved under hypnosis. Given the results of relevant research, what should you tell the attorney?  
a. Most hypnotically retrieved memories are either false or contaminated.  
b. Hypnotically retrieved memories are usually more accurate than conscious memories.  
c. Hypnotically retrieved memories are purely the product of the subject's imagination.  
d. Hypnosis only improves memory of anxiety-provoking childhood events.
5. Dan has recently begun using an addictive, euphoria-producing drug. Which of the following will probably occur if he repeatedly uses this drug?  
a. As tolerance to the drug develops, Dan will experience increasingly pleasurable "highs."  
b. The dosage needed to produce the desired effect will increase.  
c. After each use, he will become more and more elated.  
d. Dependence will become less of a problem.
6. Although her eyes are closed, Adele's brain is generating bursts of electrical activity. It is likely that Adele is  
a. under the influence of a depressant.  
b. under the influence of an opiate.  
c. in REM sleep.  
d. having a near-death experience.
7. The lowest rates of drug use among high school seniors is reported by  
a. Asian-Americans.  
b. Hispanic-Americans.  
c. African-Americans.  
d. Native Americans.
8. Roberto is moderately intoxicated by alcohol. Which of the following changes in his behavior is likely to occur?  
a. If angered, he is more likely to become aggressive than when he is sober.  
b. He will be less self-conscious about his behavior.  
c. If sexually aroused, he will be less inhibited about engaging in sexual activity.  
d. All of these changes are likely.
9. Jill dreams that she trips and falls as she walks up the steps to the stage to receive her diploma. Her psychoanalyst suggests that the dream might symbolize her fear of moving on to the next stage of her life—a career. The analyst is evidently attempting to interpret the content of Jill's dream.  
a. manifest  
c. dissociated  
b. latent  
d. overt
10. Barry has participated in a sleep study for the last four nights. He was awakened each time he entered REM sleep. Now that the experiment is over, which of the following can be expected to occur?  
a. Barry will be too tired to sleep, so he'll continue to stay awake.  
b. Barry will sleep so deeply for several nights that dreaming will be minimal.  
c. There will be an increase in sleep Stages 1-4.  
d. There will be an increase in Barry's REM sleep.
11. Of the following individuals, who is likely to be the most hypnotically suggestible?  
a. Bill, a reality-oriented stockbroker  
b. Janice, an actress with a rich imagination  
c. Megan, a sixth-grader who has trouble focusing her attention on a task  
d. Darren, who has never been able to really "get involved" in movies or novels
12. Which of the following statements concerning alcohol dependence is NOT true?  
a. Adopted individuals are more susceptible to alcohol dependence if they had an adoptive parent with alcohol dependence.  
b. Having an identical twin with alcohol dependence puts a person at increased risk for alcohol problems.  
c. Geneticists have identified genes that are more common among people predisposed to alcohol dependence.  
d. Researchers have bred rats that prefer alcohol to water.

13. Research studies of the effectiveness of hypnosis as a form of therapy have demonstrated that
  - a. for problems of addiction, such as smoking, hypnosis has not been especially effective.
  - b. posthypnotic suggestions have helped alleviate headaches, asthma, and stress-related skin disorders.
  - c. as a form of therapy, hypnosis is no more effective than positive suggestions given without hypnosis.
  - d. all of these statements are true.
14. A PET scan of a sleeping person's brain reveals increased activity in the amygdala of the limbic system. This most likely indicates that the sleeper
  - a. has a neurological disorder.
  - b. is not truly asleep.
  - c. is in REM sleep.
  - d. suffers from narcolepsy.
15. Which of the following statements concerning marijuana is true?
  - a. The by-products of marijuana are cleared from the body more slowly than are the byproducts of alcohol.
  - b. Regular users may need a larger dose of the drug to achieve a high than occasional users would need to get the same effect.
  - c. Marijuana is as addictive as nicotine or cocaine.
  - d. Even small doses of marijuana hasten the loss of brain cells.
16. Which of the following statements concerning near-death experiences is true?
  - a. They do not produce hallucinations such as those produced by LSD.
  - b. They typically consist of fantastic, mystical imagery.
  - c. They are more commonly experienced by females than by males.
  - d. They are more commonly experienced by males than by females.
17. Those who consider hypnosis a social phenomenon contend that
  - a. hypnosis is an altered state of consciousness.
  - b. hypnotic phenomena are unique to hypnosis.
  - c. hypnotized subjects become unresponsive when they are no longer motivated to act as instructed.
  - d. hypnosis involves different brain states.
18. Which of the following statements concerning the roots of drug use is true?
  - a. Heavy users of alcohol, marijuana, and cocaine often are always on a high.
  - b. If an adolescent's friends use drugs, odds are that he or she will, too.
  - c. Teenagers who are academically average students seldom use drugs.
  - d. It is nearly impossible to predict whether a particular adolescent will experiment with drugs.
19. Concluding her presentation on contemporary theories of why sleep is necessary, Marilyn makes all of the following points EXCEPT
  - a. Sleep may have evolved because it kept our ancestors safe during potentially dangerous periods.
  - b. Sleep gives the brain time to heal, as it restores and repairs damaged neurons.
  - c. Sleep encourages growth through a hormone secreted during Stage 4.
  - d. Slow-wave sleep provides a "psychic safety valve" for stressful waking experiences.

### Essay Question

You have just been assigned the task of writing an article tentatively titled "Alcohol and Alcohol Dependence: Roots, Effects, and Prevention." What information should you include in your article? (Use the space below to list the points you want to make, and organize them. Then write the essay on a separate piece of paper.)

### KEY TERMS

Using your own words, on a separate piece of paper write a brief definition or explanation of each of the following terms.

1. consciousness
2. circadian rhythm
3. REM sleep
4. alpha waves

5. sleep
6. hallucinations
7. delta waves
8. NREM sleep
9. insomnia
10. narcolepsy
11. sleep apnea
12. night terrors
13. dream
14. manifest content
15. latent content
16. REM rebound
17. hypnosis
18. posthypnotic suggestion
19. dissociation
20. psychoactive drugs
21. tolerance
22. withdrawal
23. physical dependence
24. psychological dependence
25. addiction
26. depressants
27. barbiturates
28. opiates
29. stimulants
30. amphetamines
31. methamphetamines
32. Ecstasy (MDMA)
33. hallucinogens ,
34. LSD
35. near-death experience
36. THC