Chapter 1. History of Pharmacology

Multiple Choice
Identify the choice that best completes the statement or answers the question.

____ 1. The Greek word *pharmakon* means
a. medicine.
b. poison.
c. remedy.
d. medicine, poison, and remedy.

____ 2. The Dutch word *droog* means
a. drop.
b. drug.
c. dry.
d. dirge.

____ 3. Most ancient societies treated illness based on
a. visions received by medicine men.
b. trial and error.
c. religion.
d. animal sacrifice.

____ 4. Early records show that pharmacological treatments consisted of
a. plants.
b. minerals.
c. animal products.
d. plants, minerals, and animal products.

____ 5. What did the Chinese document *The Yellow Emperor's Inner Classic* discuss for the first time?
a. Yin and yang
b. Acupuncture
c. Meditation
d. Yin and yang and acupuncture

____ 6. The first Chinese manual on pharmacology included 365 medicines and was written in the
a. 1st century CE.
b. 2nd century CE.
c. 3rd century CE.
d. 4th century CE.

____ 7. The Ebers Papyrus is
a. an Iranian medical text written approximately 400 BCE.
b. an Egyptian medical document written approximately 1550 BCE.
c. an Eskimo medical paper written approximately 750 BCE.
d. a Roman medical document written approximately 600 BCE.

____ 8. The Ebers Papyrus contains

a. recipes for treating a variety of illnesses.
b. the first detailed drawing of the human anatomy.
c. journal entries of early healers.
d. none of the above.

____ 9. Al-Razi, an Iranian, wrote a 20-volume medical book named
a. *Hawi-Al.*
b. *Rad-Mal.*
c. *Al-Hawi.*
d. *Mal-Rad.*

____ 10. Examples of healers include all of the following except
a. wise men.
b. shamans.
c. medicine men and women.
d. Tiki men.
e. witch doctors.

____ 11. What event marked the beginning of modern pharmacology?
a. Chemists isolating pure chemicals from plants
b. The discovery of microorganisms
c. The ability to create medication in a laboratory setting
d. Mass production of medication

____ 12. The main cause of death of U.S. soldiers during World War I was
a. infection.
b. accidents.
c. combat injuries.
d. infection and accidents.

____ 13. What obstacle needed to be overcome to provide penicillin to soldiers during World War II?
a. The high cost of the drug
b. Transportation of the drug
c. Production of penicillin in large enough quantities
d. Education of doctors about penicillin

____ 14. Alternative medicine includes natural or homeopathic remedies and all of the following except
a. aromatherapy.
b. electroshock therapy.
c. massage.
d. acupuncture.

____ 15. The science of altering the source of drugs, allowing more to be produced or creating different variations of the source, is known as
a. genetic engineering.
b. pharmacological engineering.
c. medication manipulation.
d. none of the above.

____ 16. Pharmacological advances in the 21st century include which of the following?
a. Genetic engineering
b. Stem cell research
c. Plant hybrid development
d. Genetic engineering, stem cell research, and plant hybrid development

____ 17. What substance is tested daily to find new sources of antibiotics?
a. Plants
b. Soil
c. Minerals
d. Water

____ 18. The alternative medicine that involves the use of fragrant oils is known as
a. aromatherapy.
b. acupressure.
c. acupuncture.
d. therapeutic touch.

____ 19. The alternative medicine that involves the application of pressure at certain points of the body to promote healing is known as
a. aromatherapy.
b. acupressure.
c. acupuncture.
d. therapeutic touch.

____ 20. The alternative medicine that involves insertion of thin needles at certain points of the body to promote healing is known as
a. aromatherapy.
b. acupressure.
c. acupuncture.
d. therapeutic touch.

____ 21. The alternative medicine that involves the use of hand movements to stimulate circulation and healing is known as
a. aromatherapy.
b. acupressure.
c. acupuncture.
d. therapeutic touch.

____ 22. Sources of drugs include all of the following except
a. plants and animals.
b. synthetic materials.
c. minerals.
d. toxins.
e. air.

____ 23. All of the following drugs are derived from plants except
a. aspirin.
b. epinephrine.

c. ibuprofen.
d. digoxin.
e. Novocain.

____ 24. Animal sources for drugs include
a. horses.
b. cows.
c. pigs.
d. horses, cows, and pigs.

____ 25. The term that refers to the effect a drug has on the body is
a. *pharmacodynamics*.
b. *pharmacokinetics*.
c. *pharmacocites*.
d. *pharmacyclics*.

____ 26. Which of the following drugs is prophylactic?
a. Estrogen
b. Diuretic
c. Flu vaccine
d. Radiopaque dye
e. Fever reducer

____ 27. Which of the following is a replacement drug?
a. Estrogen
b. Diuretic
c. Flu vaccine
d. Radiopaque dye
e. Fever reducer

____ 28. Which of the following drugs is palliative?
a. Estrogen
b. Diuretic
c. Flu vaccine
d. Radiopaque dye
e. Fever reducer

____ 29. What is the source of potassium chloride?
a. Animal
b. Plant
c. Mineral
d. Human
e. Synthetic

____ 30. What is the source of barbiturates?
a. Animal
b. Plant
c. Mineral
d. Human

e. Synthetic

____ 31. Which of the following is a replacement drug?
a. Digoxin
b. Lasix
c. Accutane
d. Synthroid
e. Plavix

____ 32. Which of the following is a diagnostic drug?
a. Estrogen
b. Barium
c. Flu vaccine
d. Anti-cancer drug
e. Vitamin C

____ 33. Which of the following is a destructive drug?
a. Antibiotic
b. Insulin
c. Diuretic
d. Psychotropic
e. Potassium chloride

Matching

Match the following medication categories with their definitions.
a. Curative
b. Prophylactic
c. Diagnostic
d. Palliative
e. Replacement
f. Destructive

____ 34. Medication that prevents a problem from occurring

____ 35. Medication that helps determine if disease is present

____ 36. Medication that treats and corrects an illness

____ 37. Medication that destroys something

____ 38. Medication that makes the patient more comfortable

____ 39. Medication that supplements or provides something that the patient is lacking

Chapter 1. History of Pharmacology
Answer Section

MULTIPLE CHOICE

1. ANS: D
   Rationale: *Pharmakon* refers to the curing of illness, thus meaning medicine and remedy, as well as to poison, because early medicines were toxic enough to kill a patient or enemy.

   PTS: 1 DIF: Easy REF: Page 3
   TOP: Unit 1: Introduction to Pharmacology KEY: History
   MSC: ABHES goal — Define and use entire basic structure of medical words and be able to accurately identify in the correct context | CAAHEP goal IV.3 — Use medical terminology
2. ANS: C
   Rationale: *Droog,* which means dry, is the origin of the word *drug*, such as in the use of dry herbs as medications.

   PTS: 1 DIF: Intermediate REF: Page 3
   TOP: Unit 1: Introduction to Pharmacology KEY: History
   MSC: ABHES goal — Define and use entire basic structure of medical words and be able to accurately identify in the correct context | CAAHEP goal IV.3 — Use medical terminology
3. ANS: B
   Rationale: Ancient societies had little knowledge of how the human body worked; therefore, treating illness was often based on trial and error.

   PTS: 1 DIF: Intermediate REF: Page 3
   TOP: Unit 1: Introduction to Pharmacology KEY: History
   MSC: ABHES goal — Analyze the effect of hereditary, cultural, and environmental influences
4. ANS: D
   Rationale: Early records show that plants, minerals, and animal products were the only sources available; therefore, they were the only things used.

   PTS: 1 DIF: Easy REF: Page 3
   TOP: Unit 1: Introduction to Pharmacology KEY: History
5. ANS: D
   Rationale: This was a very early document discussing yin and yang and acupuncture.

   PTS: 1 DIF: Intermediate REF: Page 4
   TOP: Unit 1: Introduction to Pharmacology KEY: History
6. ANS: A
   Rationale: The first Chinese manual on pharmacology was written in the 1st century CE and included 365 medicines, 252 of which were herbs.

   PTS: 1 DIF: Easy REF: Page 4
   TOP: Unit 1: Introduction to Pharmacology KEY: History
7. ANS: B

Rationale: The Ebers Papyrus is an Egyptian medical document that was written circa 1550 BCE and lists about 700 "recipes" for a host of illnesses, from crocodile bites to psychiatric illnesses.

PTS: 1 DIF: Easy REF: Page 4
TOP: Unit 1: Introduction to Pharmacology KEY: Ebers Papyrus | History

8. ANS: A
Rationale: The Ebers Papyrus is an Egyptian medical document that was written circa 1550 BCE and lists about 700 "recipes" for a host of illnesses, from crocodile bites to psychiatric illnesses.

PTS: 1 DIF: Intermediate REF: Page 4
TOP: Unit 1: Introduction to Pharmacology KEY: Ebers Papyrus | History

9. ANS: C
Rationale: *Al-Hawi* is a 20-volume medical book written by the Iranian Al-Razi. This text was translated into Latin in the 13th century, greatly influencing medicine in medieval Europe.

PTS: 1 DIF: Easy REF: Page 4
TOP: Unit 1: Introduction to Pharmacology KEY: Al-Hawi | History

10. ANS: D
Rationale: Healers were known as wise men, shamans, witch doctors, and medicine men and women.

PTS: 1 DIF: Easy REF: Page 4
TOP: Unit 1: Introduction to Pharmacology KEY: History

11. ANS: A
Rationale: During the 1800s, chemists were finally able to isolate the pure chemicals needed to make medicine from plants, marking the beginning of modern pharmacology.

PTS: 1 DIF: Intermediate REF: Page 4
TOP: Unit 1: Introduction to Pharmacology KEY: History

12. ANS: D
Rationale: More U.S. soldiers died in World War I of infection and accidents than of actual combat injuries.

PTS: 1 DIF: Intermediate REF: Page 4
TOP: Unit 1: Introduction to Pharmacology KEY: History

13. ANS: C
Rationale: During World War II, mass production of penicillin began and was able to provide the antibiotic to the war effort, thus minimizing deaths caused by infection.

PTS: 1 DIF: Intermediate REF: Page 4
TOP: Unit 1: Introduction to Pharmacology KEY: History | Penicillin

14. ANS: B
Rationale: Alternative medicine, also referred to as *natural* or *homeopathic* medicine, includes such therapies as massage, aromatherapy, acupuncture, acupressure, and therapeutic touch.

PTS: 1 DIF: Intermediate REF: Page 5
TOP: Unit 1: Introduction to Pharmacology KEY: History | Homeopathic
MSC: ABHES goal — Analyze the effect of hereditary, cultural, and environmental influences | CAAHEP goal IV.23 — Demonstrate respect for individual diversity, incorporating awareness of one's own biases in

areas including gender, race, religion, age, and economic status

15. ANS: A
Rationale: Genetic engineering can alter the source of drugs, allowing more to be produced or creating different variations of the source.

PTS: 1 DIF: Intermediate REF: Page 5
TOP: Unit 1: Introduction to Pharmacology KEY: History | Genetic engineering
MSC: ABHES goal — Define and use entire basic structure of medical words and be able to accurately identify in the correct context | CAAHEP goal IV.3 — Use medical terminology

16. ANS: D
Rationale: In the 21st century, development of new medications is a never-ending process. New science is developed daily, including genetic engineering, plant hybrid creations, and stem cell research. In addition, new plant discoveries and soil sampling will help with the development of new antibiotics.

PTS: 1 DIF: Easy REF: Page 5
TOP: Unit 1: Introduction to Pharmacology
KEY: History | Genetic engineering | Stem cell research

17. ANS: B
Rationale: Soil samples are tested daily to help scientists develop new antibiotics.

PTS: 1 DIF: Easy REF: Page 5
TOP: Unit 1: Introduction to Pharmacology KEY: History | Medication sources

18. ANS: A
Rationale: Aromatherapy is the use of fragrant oils in baths, as inhalants, or during massage to relieve stress and to treat skin conditions.

PTS: 1 DIF: Easy REF: Page 5
TOP: Unit 1: Introduction to Pharmacology
KEY: History | Aromatherapy | Alternative medicine
MSC: ABHES goal — Define and use entire basic structure of medical words and be able to accurately identify in the correct context | CAAHEP goal IV.3 — Use medical terminology

19. ANS: B
Rationale: Acupressure is the ancient Chinese art in which application of pressure at certain points of the body is used to promote healing.

PTS: 1 DIF: Easy REF: Page 5
TOP: Unit 1: Introduction to Pharmacology
KEY: History | Acupressure | Alternative medicine
MSC: ABHES goal — Define and use entire basic structure of medical words and be able to accurately identify in the correct context | CAAHEP goal IV.3 — Use medical terminology

20. ANS: C
Rationale: Acupuncture is the Chinese art in which thin needles are inserted at certain points of the body to promote healing.

PTS: 1 DIF: Easy REF: Page 5
TOP: Unit 1: Introduction to Pharmacology
KEY: History | Acupuncture | Alternative medicine
MSC: ABHES goal — Define and use entire basic structure of medical words and be able to accurately

identify in the correct context | CAAHEP goal IV.3 — Use medical terminology

21. ANS: D
Rationale: Therapeutic touch involves the use of hand movements to stimulate circulation and healing.

PTS: 1 DIF: Easy REF: Page 5
TOP: Unit 1: Introduction to Pharmacology
KEY: History | Therapeutic touch | Alternative medicine
MSC: ABHES goal — Define and use entire basic structure of medical words and be able to accurately identify in the correct context | CAAHEP goal IV.3 — Use medical terminology

22. ANS: E
Rationale: Drug sources include synthetic materials (manufactured in a sterile clinical lab), plants, animals, minerals, and toxins.

PTS: 1 DIF: Easy REF: Page 6
TOP: Unit 1: Introduction to Pharmacology KEY: History | Drug sources

23. ANS: C
Rationale: Ibuprofen is an example of a medication that is produced synthetically in a laboratory. Aspirin comes from bark of the white willow tree, epinephrine comes from the ephedra shrub, digoxin comes from the foxglove plant, and Novocain comes from the coca plant.

PTS: 1 DIF: Intermediate REF: Page 6
TOP: Unit 1: Introduction to Pharmacology KEY: History | Drug sources

24. ANS: D
Rationale: Domesticated animals are used for some medications. Premarin is produced from a pregnant mare's urine, cows and pigs provide hormone replacement medications such as insulin, and lanolin is made from sheep's wool.

PTS: 1 DIF: Easy REF: Page 6
TOP: Unit 1: Introduction to Pharmacology KEY: History | Drug sources

25. ANS: A
Rationale: Pharmacodynamics refers to the effect a drug has on the body or, scientifically, the negative and positive biochemical and physiological changes it creates.

PTS: 1 DIF: Intermediate REF: Page 8
TOP: Unit 1: Introduction to Pharmacology KEY: History | Pharmacology
MSC: ABHES goal — Define and use entire basic structure of medical words and be able to accurately identify in the correct context | CAAHEP goal IV.3 — Use medical terminology

26. ANS: C
Rationale: The flu vaccine is administered to prevent the patient from contracting influenza.

PTS: 1 DIF: Intermediate REF: Page 8
TOP: Unit 1: Introduction to Pharmacology KEY: Pharmacology
MSC: ABHES goal — Define and use entire basic structure of medical words and be able to accurately identify in the correct context | CAAHEP goal IV.3 — Use medical terminology

27. ANS: A
Rationale: Estrogen is a female hormone that is lost when the ovaries no longer function appropriately because of disease or surgery. Therefore, estrogen would be administered to replace the naturally occurring estrogen that is now absent.

PTS: 1 DIF: Intermediate REF: Page 9
TOP: Unit 1: Introduction to Pharmacology KEY: Pharmacology
MSC: ABHES goal — Define and use entire basic structure of medical words and be able to accurately identify in the correct context | CAAHEP goal IV.3 — Use medical terminology

28. ANS: E
Rationale: Fever reducers such as acetaminophen are administered as a palliative measure, which means that the patient is being given medication to ease symptoms, not cure disease.

PTS: 1 DIF: Intermediate REF: Page 8
TOP: Unit 1: Introduction to Pharmacology KEY: Pharmacology
MSC: ABHES goal — Define and use entire basic structure of medical words and be able to accurately identify in the correct context | CAAHEP goal IV.3 — Use medical terminology

29. ANS: C
Rationale: Potassium is necessary for the heart to function properly, so patients who are at risk for potassium deficiencies are given the medication potassium chloride, which is obtained from the earth in mineral form.

PTS: 1 DIF: Basic REF: Page 7
TOP: Unit 1: Introduction to Pharmacology KEY: Pharmacology

30. ANS: E
Rationale: Barbiturates are examples of medications produced in sterile laboratories and, therefore, are synthetic medications.

PTS: 1 DIF: Intermediate REF: Page 6
TOP: Unit 1: Introduction to Pharmacology KEY: Pharmacology

31. ANS: D
Rationale: Synthroid is a form of thyroid hormone that is used as a replacement when the thyroid gland is not producing enough of the hormone on its own.

PTS: 1 DIF: Intermediate REF: Page 9
TOP: Unit 1: Introduction to Pharmacology KEY: Pharmacology
MSC: ABHES goal — Define and use entire basic structure of medical words and be able to accurately identify in the correct context | CAAHEP goal IV.3 — Use medical terminology

32. ANS: B
Rationale: Barium is used to make soft organs more visible during radiography, thus helping to diagnose disease processes.

PTS: 1 DIF: Intermediate REF: Page 8
TOP: Unit 1: Introduction to Pharmacology KEY: Pharmacology
MSC: ABHES goal — Define and use entire basic structure of medical words and be able to accurately identify in the correct context | CAAHEP goal IV.3 — Use medical terminology

33. ANS: A
Rationale: Antibiotics are considered destructive drugs because they kill or destroy bacteria.

PTS: 1 DIF: Advanced REF: Page 9
TOP: Unit 1: Introduction to Pharmacology KEY: Pharmacology
MSC: ABHES goal — Define and use entire basic structure of medical words and be able to accurately identify in the correct context | CAAHEP goal IV.3 — Use medical terminology

MATCHING

34. ANS: B PTS: 1 DIF: Intermediate REF: Page 8
TOP: Unit 1: Introduction to Pharmacology KEY: Pharmacology
MSC: ABHES goal — Define and use entire basic structure of medical words and be able to accurately identify in the correct context | CAAHEP goal IV.3 — Use medical terminology
35. ANS: C PTS: 1 DIF: Intermediate REF: Page 9
TOP: Unit 1: Introduction to Pharmacology KEY: Pharmacology
MSC: ABHES goal — Define and use entire basic structure of medical words and be able to accurately identify in the correct context | CAAHEP goal IV.3 — Use medical terminology
36. ANS: A PTS: 1 DIF: Intermediate REF: Page 9
TOP: Unit 1: Introduction to Pharmacology KEY: Pharmacology
MSC: ABHES goal — Define and use entire basic structure of medical words and be able to accurately identify in the correct context | CAAHEP goal IV.3 — Use medical terminology
37. ANS: F PTS: 1 DIF: Intermediate REF: Page 9
TOP: Unit 1: Introduction to Pharmacology KEY: Pharmacology
MSC: ABHES goal — Define and use entire basic structure of medical words and be able to accurately identify in the correct context | CAAHEP goal IV.3 — Use medical terminology
38. ANS: D PTS: 1 DIF: Intermediate REF: Page 8
TOP: Unit 1: Introduction to Pharmacology KEY: Pharmacology
MSC: ABHES goal — Define and use entire basic structure of medical words and be able to accurately identify in the correct context | CAAHEP goal IV.3 — Use medical terminology
39. ANS: E PTS: 1 DIF: Intermediate REF: Page 9
TOP: Unit 1: Introduction to Pharmacology KEY: Pharmacology
MSC: ABHES goal — Define and use entire basic structure of medical words and be able to accurately identify in the correct context | CAAHEP goal IV.3 — Use medical terminology