

## Example Questions for a HAPS Exam

These questions can also be downloaded as pdf file [here](#).

- These questions map to the HAPS A&P Learning Outcomes (2019 update). Exams questions that map to other learning outcomes are similar in scope and style.
- HAPS Exams do not show answers to candidates.

1. What cranial nerve innervates the rectus eye muscle that abducts the eye?

- A. Abducens (CN VI)
- B. Facial (CN VII)
- C. Oculomotor (CN III)
- D. Trigeminal (CN V)
- E. Trochlear (CN IV)

Correct Answer: A

Addresses: Module H (Nervous System), Topic 11, Learning Outcome 2

2. What component of the digestive system contains intestinal glands (crypts of Lieberkühn), but lacks villi?

- A. Duodenum
- B. Esophagus
- C. Ileum
- D. Stomach
- E. Transverse colon

Correct Answer: E

Addresses: Module N (Digestive System), Topic 9, Learning Outcome 4

3. If an individual is unable to flex the forearm, a neuron in which region most likely is damaged?

- A. Anterior horn of the spinal cord
- B. Sympathetic trunk ganglion
- C. Posterior horn of the spinal cord
- D. Lateral horn of the spinal cord
- E. Posterior root ganglion

Correct Answer: A

Addresses: Module H (Nervous System), Topic 12, Learning Outcome 3

4. Which of the following muscles is the primary flexor of the forearm?

- A. Biceps brachii m.
- B. Brachialis m.
- C. Brachioradialis m.
- D. Pronator teres m.
- E. Triceps brachii m.

Correct Answer: B

Addresses: Module G (Muscular System), Topic 8, Learning Outcome 1

5. Which of the following occurs during concentric isotonic contraction of skeletal muscle?

- A. A-bands shorten
- B. I-bands shorten
- C. Sarcomeres lengthen
- D. Thick (myosin) myofilaments lengthen
- E. Thin (actin) myofilaments shorten

Correct Answer: B

Addresses: Module G (Muscular System), Topic 4, Learning Outcome 2

6. Of the following locations, where are the cell bodies of somatic afferent neurons found?

- A. Anterior (ventral) horn of spinal cord
- B. Posterior (dorsal) root ganglion
- C. In cerebral white matter
- D. Posterior (horn) horn of spinal cord
- E. Sympathetic trunk (chain) ganglia

Correct Answer: B

Addresses: Module H (Nervous System), Topic 12, Learning Outcome 3

7. At what vertebral level does the esophagus pass through the esophageal hiatus of the diaphragm, to enter the abdominopelvic region?

- A. T4
- B. T6
- C. T8
- D. T10
- E. T12

Correct Answer: D

Addresses: Module N (digestive system), Topic 6, Learning Outcome 1

8. Erythrocytes would swell when placed in which type of solution?

- A. Hydrophilic

- B. Hypertonic
- C. Hypotonic
- D. Isotonic
- E. Lipophilic

Correct Answer: C

Addresses: Module C (Chemistry & Cell Biology), Topic 8, Learning Outcome 6

9. Deoxygenated blood from the superior vena cava drains directly into which region of the heart?

- A. Coronary sinus
- B. Left atrium
- C. Left ventricle
- D. Right atrium
- E. Right ventricle

Correct Answer: D

Addresses: Module K (Cardiovascular System), Topic 8, Learning Outcome 1

10. Primordial follicles, containing primary oocytes, are found in the outer portion of the ovary's cortex. In which stage of meiosis are primary oocytes arrested?

- A. Anaphase of meiosis II
- B. Metaphase of meiosis I
- C. Metaphase of meiosis II
- D. Prophase of meiosis I
- E. Prophase of meiosis II

Correct Answer: D

Addresses: Module R (Reproductive System), Topic 5, Learning Outcome 1

11. What structure conducts sperm from the epididymis to the ejaculatory duct?

- A. Duct of the seminal vesicle
- B. Ductus (vas) deferens
- C. Penile (spongy) urethra
- D. Prostatic urethra
- E. Seminiferous tubule

Correct Answer: B

Addresses: Module R (Reproductive System), Topic 2, Learning Outcome 6

12. What is the name of the process by which neurotransmitters are released from the axon terminal?

- A. Active transport
- B. Endocytosis
- C. Exocytosis
- D. Facilitated diffusion
- E. Simple diffusion

Correct Answer: C

Addresses: Module C (Chemistry & Cell Biology), Topic 8, Learning Outcome 7

13. In a healthy individual, all glucose is reabsorbed from tubular fluid in what kidney structure?

- A. Nephron loop
- B. Proximal convoluted tubule
- C. Collecting duct
- D. Distal convoluted tubule
- E. Renal medulla

Correct Answer: B

Addresses: Module P (Urinary System), Topic 4, Learning Outcome 11

14. Bob is running a digestion experiment in the lab. He wants to determine which substance(s) is/are most efficient at carrying out fat digestion. He puts food containing different fats plus the substance(s) being tested into test tubes, shakes vigorously, and then leaves the tubes to incubate at body temperature for 30 minutes. Which of the following tubes should show the greatest fat digestion?

- A. The tube containing bile salts and lipase.
- B. The tube containing fats and lipase.
- C. The tube containing fats, bile salts, and lipase.
- D. The tube containing fats, bile salts, and maltase.
- E. The tube containing fats, peptidase, and bile salts.

Correct Answer: C

Addresses: Module N (Digestive System), Topic 12, Learning Outcome 4

15. What is the term for the volume of blood pumped by one ventricle in one minute?

- A. Cardiac output
- B. Cardiac velocity of flow
- C. End-diastolic volume

- D. End-systolic volume
- E. Stroke volume

Correct Answer: A

Addresses: Module K (Cardiovascular System), Topic 11, Learning Outcome 1