



Unit 11 - Week 9

Course outline

How to access the portal

Week 0 - Self Assessment

Week 1

Week 2

Week 3

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Week 9

- Why Haptics?
- What is Haptics?
- Branches of Haptics
- Human Haptics - Tactile System
- Kinesthetic System
- Motor System
- Haptic Devices and Interfaces - Kinesthetic Devices
- Haptic Devices and Interfaces - Tactile Devices
- Week 9 Feedback -

Week 10 - Assignment 1

The due date for submitting this assignment has passed. **Due on 2018-04-04, 23:59 IST.**

Submitted assignment

1) If we are giving a static compression over the finger pad, which of the following receptors get **1 point** activated?

- i. Pacinian ii. Ruffini iii. Merkel iv. Meissner

- ii and iii only
- iii only
- iii and iv only
- i and iv only

No, the answer is incorrect.

Score: 0

Accepted Answers:

ii and iii only

2) Pick the correct answer(s) about Golgi Tendon Organ (GTO)

1 point

- i. It is a force sensor
ii. It does not deal with safety mechanism
iii. It inhibits muscle contraction

- i and iii only
- iii only
- i, ii and iii
- i only

No, the answer is incorrect.

Score: 0

Accepted Answers:

i and iii only

3) Pick the correct answer(s)

1 point

- i. Alpha motor neuron has high conduction velocity and gamma motor neuron has lower.
ii. Alpha motor neuron innervate intrafusal muscle fibers.
iii. Gamma motor neuron is responsible for muscle readiness in motor action.

- i only
- i and iii only
- iii only
- i, ii and iii are correct

No, the answer is incorrect.

Score: 0

Accepted Answers:

i and iii only

Virtual Reality
Engineering

Quiz : Week 10
- Assignment 1

Week 10

Week 11

Week 12

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4) When you are manipulating an object, the fine details of texture can be sensed precisely by _____ ? **1 point**

i. Pacinian ii. Ruffini iii. Merkel iv. Meissner

- ii and iii only
 iii and iv only
 iv only
 i and iv only

No, the answer is incorrect.

Score: 0

Accepted Answers:

i and iv only

5) What is the maximum frequency of vibration in touch that the human sensation can perceive? **1 point**

- 100 Hz
 1 kHz
 500 Hz
 250 Hz

No, the answer is incorrect.

Score: 0

Accepted Answers:

1 kHz

6) What is the minimum position change that the human finger pad can perceive? **0 points**
Hint: Two Point Discrimination

- 1 micron
 0.1 mm
 about a cm
 none of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

0.1 mm

7) Smaller muscles rely on rate coding and larger muscles rely on recruitment **1 point**

- true
 false

No, the answer is incorrect.

Score: 0

Accepted Answers:

true

8) Fast twitch motor unit (MU) recruited first and slow twitch MU recruited last **1 point**

- false
 true

No, the answer is incorrect.

Score: 0

Accepted Answers:

false

9) Arrange the following regions of human body in terms of increasing order of Two-point threshold – **1 point**

- back, calf, fingers, forehead
 forehead, fingers, back, calf
 fingers, forehead, back, calf

- fingers, calf, forehead, back

No, the answer is incorrect.

Score: 0

Accepted Answers:

fingers, forehead, back, calf

10) Which of the following is being controlled in our hand movements mechanism? **1 point**

- Force, displacement
- Force alone
- Displacement alone
- Velocity alone

No, the answer is incorrect.

Score: 0

Accepted Answers:

Force, displacement

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