Assignment 3

Due date: 2020-02-19, 23:59:59 IST.

1. A point has 30 units in each side which have point-to-point projections and diffuse projections to the corresponding corner. Which of the following is/are INCORRECT statement(s) for the following?

- a) Significance error is the sensory cortex through feedback. 
- b) Motor cortex from motor cortex goes to the thalamus. 
- c) Sensory integration and motor integration occur through the thalamus. 
- d) All of the above.

No answer is INCORRECT.

Answer Accepted: None. Please refer to the statement(s) above.

2. Exemplars of neuronal route that have point-to-point projection and diffuse projection are:

- a) Lateral geniculate nucleus (LGN) and thalamus route respectively.
- b) Limbic route and Lateral geniculate nucleus (LGN) respectively.
- c) Limbic route and Lateral geniculate nucleus (LGN) respectively.
- d) All of the above.

No answer is INCORRECT.

Answer Accepted: None. Please refer to the statement(s) above.

3. Which is the INCORRECT statement regarding diffuse projections from thalamus?

- a) Medial activating system (MA) is one of the exemplars of diffuse projection from thalamus.
- b) Medial activating system (MA) controls overall activity levels of cortices like the motor, parietal, and attention.
- c) Thalamus is expected to control the processing resources of the brain and apply attentional spotlight on one part of interest at one time.
- d) All of the above.

No answer is INCORRECT.

Answer Accepted: None. Please refer to the statement(s) above.

4. Body structures, Brachium, Thalamus, and Thalamus Gyrus is connected by which part of the brain?

- a) Thalamus
- b) Hypothalamus
- c) Rovet gyrus
- d) Hippocampus

No answer is INCORRECT.

Answer Accepted: None. Please refer to the statement(s) above.

5. Write the line and the right column entries:

<table>
<thead>
<tr>
<th>Decision making</th>
<th>Thalamus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interception of pain</td>
<td>Thalamus</td>
</tr>
<tr>
<td>Memory consolidation</td>
<td>Thalamus</td>
</tr>
<tr>
<td>Olfactory projection</td>
<td>Thalamus</td>
</tr>
<tr>
<td>Olfactory System</td>
<td>Thalamus</td>
</tr>
<tr>
<td>Sound System</td>
<td>Thalamus</td>
</tr>
</tbody>
</table>

No answer is INCORRECT.

Answer Accepted: None. Please refer to the statement(s) above.

6. Which is the formula used for complex transformation from visual space to cortical spaces in geodesic warps?

- $Z = f(x, y)$, where $f(x, y)$ is a mapping between the visual space and the cortical space.
- $Z = f(x, y)$, where $f(x, y)$ is a mapping between the visual space and the thalamus.
- $Z = f(x, y)$, where $f(x, y)$ is a mapping between the visual space and a symmetric space.
- None of the above.

No answer is INCORRECT.

Answer Accepted: None. Please refer to the statement(s) above.

7. Choose the CORRECT statement among the following:

- a) Simple cells respond to the line which is not too long. Complex cells respond to the line present almost anywhere in the receptive field. End-stopping cells respond to an orientation present in the center of receptive field.
- b) Simple cells respond to the present anywhere in the receptive field. Complex cells respond to the line present almost anywhere in the receptive field.
- c) Simple cells respond to a coarsely oriented line present in the center of receptive field. Complex cells respond to the line present anywhere in the receptive field.
- d) None of the above.

No answer is INCORRECT.

Answer Accepted: None. Please refer to the statement(s) above.

8. The light angle of the monkeys depicted in monkeys was a threshold of 3 degrees of critical period and when the monkeys came in the normal period the 1.3 degrees, their light angle was extinguished. What kind of visual task response to you expect to see in the monkeys in the normal period?

- a) Yes the neurons in the visual cortex would be responding even in normal period for the light angle of monkeys was extinguished in the critical period, resulting in contrast blindness.
- b) Yes the neurons in the visual cortex would be responding in normal period for the light angle of monkeys was extinguished in the critical period, resulting in contrast blindness.
- c) Yes the neurons in the visual cortex would be responding in normal period for the light angle of monkeys was extinguished in the critical period, resulting in contrast blindness.
- d) None of the above.

No answer is INCORRECT.

Answer Accepted: None. Please refer to the statement(s) above.

9. What are the common features shared by self-organizing maps and cortical maps?

- a) Weekly identical of the maps respond to almost similar cortical functions.
- b) Both the maps work exponentially under the same conditions.
- c) Both the maps need to perform some supervised tasks to learn their response.
- d) None of the above.

No answer is INCORRECT.

Answer Accepted: None. Please refer to the statement(s) above.