Control and coordination in mammals

Question Paper 7

| Level | International A Level |
|------------|--------------------------------------|
| Subject | Biology |
| Exam Board | CIE |
| Topic | Control and co-ordination |
| Sub Topic | Control and co-ordination in mammals |
| Booklet | Theory |
| Paper Type | Question Paper 7 |

Time Allowed: 65 minutes

Score : /54

Percentage: /100

Grade Boundaries:

| A* | А | В | С | D | E | U |
|------|--------|-----|-------|-------|-----|------|
| >85% | '77.5% | 70% | 62.5% | 57.5% | 45% | <45% |

| 1 (a) Describe how a nerve impulse crosses a cholinergic synapse. | [9] |
|---|-------------|
| (b) Explain the roles of synapses in the nervous system. | [6] |
| | [Total: 15] |
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- **2 (a)** Complete Table 5.1 to show, for each of the two hormones, follicle stimulating hormone (FSH) and progesterone,
 - the site of secretion
 - the target tissue(s)
 - the action of the hormone during the human menstrual cycle.

Table 5.1

| hormone | site of secretion | target tissue(s) | action during human menstrual cycle |
|--------------|-------------------|------------------|-------------------------------------|
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| FSH | | | |
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| progesterone | | | |
| progesterone | | | |
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| | | [6] |
|-----|--|------|
| (b) | Explain the biological basis of the oestrogen/progesterone contraceptive pill. | |
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| | | .[3] |

[Total: 9]

| 3 (a) Describe the structure of a motor neurone. | [7] |
|---|-------------|
| (b) Explain how an action potential is transmitted along a motor neurone. | [8] |
| | [Total: 15] |
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| 4 (a) Describe how the structure of neurones speeds up the transmission o action potentials. [6] |
|---|
| (b) Explain, using a named example, how sensory receptors in mammals convert energy into action potentials. [9] |
| [Total: 15] |
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