1. **The divisions of the nervous system: central and peripheral (somatic and autonomic).**

0 7 Identify the **two** components of the peripheral nervous system, and explain **two** differences in their organisation and/or functions.

[4 marks]

2. **The structure and function of sensory, relay and motor neurons. The process of synaptic transmission, including reference to neurotransmitters, excitation and inhibition.**

0 9 Outline the structures and processes involved in synaptic transmission.

[6 marks]

3. **The function of the endocrine system: glands and hormones.**

1 0 Identify **two** glands that form part of the endocrinal system and outline their functions.

[4 marks]

4. **The fight or flight response including the role of adrenaline.**

0 6 Outline the role of adrenaline in the fight or flight response.

[4 marks]

5. **Localisation of function in the brain and hemispheric lateralisation: motor, somatosensory, visual, auditory and language centres; Broca's and Wernicke's areas, split brain research. Plasticity and functional recovery of the brain after trauma.**

➔ Briefly outline research using split brain patients to investigate hemispheric lateralisation of function (4 marks)

6. **Ways of studying the brain: scanning techniques, including functional magnetic resonance imaging (fMRI); electroencephalogram (EEGs) and event-related potentials (ERPs); post-mortem examinations.**

0 6 The electroencephalogram (EEG) and event-related potentials (ERPs) both involve recording the electrical activity of the brain.

Outline **one** difference between the EEG and ERPs.

[2 marks]

7. **Biological rhythms: circadian, infradian and ultradian and the difference between these rhythms. The effect of endogenous pacemakers and exogenous zeitgebers on the sleep/wake cycle.**

0 7 Read the item and then answer the question that follows.

> Sam is a police officer. She has just started working the night shift and after a week, she finds that she has difficulty sleeping during the day and is becoming tense and irritable. Sam is also worried that she is less alert during the night shift itself.

Using your knowledge of endogenous pacemakers and exogenous zeitgebers, explain Sam's experiences.

[4 marks]