SECTION F

Answer all questions. Write your answers in the spaces provided.

***27** After conflicts such as the First or Second World Wars, victims were left with damaged brains. Soldiers who returned home with damaged brains found their level of functioning was impaired. Some also returned home suffering from psychological problems.

Case studies of brain-damaged patients have helped researchers to study the brain and from this they have attempted to propose how the structure and function of the brain affect human behaviour and processing.

Damage to a specific brain area can lead to theories about the function of that region, which may change over time as greater knowledge is amassed through research using improved technology.

Assess how psychological understanding of the brain has changed over time.

(9)

Psychology was born in 1875 when Wundt opened a laborotary in germany to study peoples thoughts. From here the main sources for information on the brain included post mortems: studying the brain after death and case studies; studies in detail about one individual / group on something naturally occuring. One of the most profound case studies was on Phineas Gage which led to an understanding of ~~how~~ the frontal lobe's function. One of the first technologies developed to study the brain was an EEG, developed by Hans Berger, electrodes are placed on the scalp in order to pick up activity in regions of the brain ~~wha~~ during certain activities. Next came PET scans and MRI's which produced detailed live images of the brain's activity, furthering are understanding of functions in different regions. Currently, scientists are working on microscopes to study the brain at the level of nuerons including nuerotrasmitter receptors.

In the World Wars, victims left with damaged brains could be studied for changes in behaviour and ability, such as increased agression or trouble speaking. From here psychologists ~~may~~ were ~~have~~ ~~been~~ able to equate damage to functions. For example if damage to the front of the brain lead to a soldier becoming highly erratic and impulsive, scientists could work out that the front of the brain may be responsible for impulse control and decision making. When improved technology was then developed such as EEG's and PET scans, these ideas may be proved or changed.

Case studies are still an important method for studying the brain especially for scenarios like brain damage in soldiers as it is highly unethical to give someone brain damage in the name of research, so are useful when studying things that couldnt otherwise be studied. They are also focused on real and naturalistic behaviour making them high in validity due to their ability to reflect true life, as that is what is studied. However, new techniques may outstrip old methods in terms of reliability and objective nature. Brain scans produce scientific and ~~qual~~ quantatitive data, requiring no interpretation thus making it a reliable and objective way of studying the brain. In addition they are able to study the living brain unlike older techniques such as post mortems. However they can lack validity due to the highly controlled environments they are conducted him, causing them to unaccurately represent true life.

Overall, a combination of old and new methods is most effective to advance the study of psychology.

(Total for Question 27 = 9 marks)