Surname	StemUp Model Solution	Centre Number	Candidate Number
Other Names			2

GCE AS/A LEVEL

2290U20-1

S19-2290U20-1

PSYCHOLOGY – AS unit 2
Using Psychological Concepts

THURSDAY, 16 MAY 2019 – AFTERNOON

1 hour 30 minutes

For Examiner's use only		
Question	**Maximum Mark**	**Mark Awarded**
1.	**20**	
2.	**2**	
3.	**3**	
4.	**12**	
5.	**2**	
6.	**2**	
7.	**3**	
8.	**7**	
9.	**9**	
10.	**20**	
Total	**80**	

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01

ADDITIONAL MATERIALS

You may require a calculator and a ruler.

INSTRUCTIONS TO CANDIDATES

Use black ink or black ball-point pen. Do not use pencil or gel pen. Do not use correction fluid.

Write your name, centre number and candidate number in the spaces at the top of this page.

Answer **all** questions.

Write your answers in the spaces provided in this booklet. If you run out of space, use the additional page(s) at the back of the booklet, taking care to number the question(s) correctly.

INFORMATION FOR CANDIDATES

The number of marks is given in brackets at the end of each question or part-question.

You are reminded of the necessity for good English and orderly presentation in your answers.

Assessment will take into account the quality of written communication used in your answers.

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Answer **all** *questions in Section A* **and** *Section B.*

SECTION A – Contemporary Debate

1. 'In a world with increasing economic and social problems, positive psychology is entirely relevant to today's society'. Discuss. [20]

Positive psychology, founded by Seligman in 1998, focuses on human strengths, wellbeing and what makes life worth living, rather than only treating mental illness. Seligman's PERMA model proposes five elements of wellbeing: positive emotion, engagement, relationships, meaning and accomplishment. With rising mental health problems, unemployment and a cost of living crisis, it is important to judge whether this approach is really relevant to society today.

Supporters point to its many applications. In therapy, mindfulness-based cognitive therapy is recommended by NICE to prevent relapse in recurrent depression, and quality of life therapy can complement traditional treatments, as Seligman suggested. In schools, the Penn Resilience Program (PRP) teaches pupils to challenge pessimistic thinking; a meta-analysis by Brunwasser et al. (2009) found it reduced depressive symptoms for up to a year afterwards. The US Army's Comprehensive Soldier Fitness programme trained over a million soldiers in resilience. At work, Csikszentmihalyi and LeFevre (1989) used the experience sampling method and found people reported flow far more often at work than in leisure, suggesting jobs can be designed to increase engagement. Kubzansky and Thurston (2007) found that adults high in emotional vitality had a lower risk of coronary heart disease over about 15 years, so happiness also benefits physical health.

The social implications are therefore desirable: if positive psychology reduces psychological distress, fewer people would need treatment at a time of growing mental health problems. There are economic benefits too. Oswald et al. (2009) found that participants made happier by a comedy clip were about 12% more

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productive, so happier workers could save businesses money and reduce absenteeism, and better physical health would remove some strain on the NHS. The evidence has also influenced politics: Bhutan measures Gross National Happiness, and the UK's Office for National Statistics now measures national wellbeing, which could lead to changes such as working hours that allow a better work/life balance.

However, there are strong arguments against the statement. Projects such as Action for Happiness and the positive psychology curriculum have been criticised for being aimed at wealthier groups who already have good life chances, so they may not reach those hit hardest by economic problems. Critics also argue that telling people to think positively ignores the real causes of distress, such as poverty, debt and poor housing, and may blame individuals for being unhappy. It is also based on Western, individualistic ideas of happiness, so it may not suit collectivist cultures, which reduces its relevance in a diverse society.

The evidence is also limited. PRP results are inconsistent: effects were small and often disappeared when the programme was delivered by ordinary teachers rather than trained researchers. Comprehensive Soldier Fitness was introduced across the whole army without a proper control group, so it is hard to show it caused any improvement. Much research relies on self-report measures of happiness, which may be affected by social desirability bias, and correlational findings such as Kubzansky's cannot show that vitality causes better health.

Other approaches may be more relevant. The biological approach, through advances in neuroscience, has produced drug treatments such as SSRIs that help people with severe depression who could not simply be trained to be happier. The cognitive approach offers CBT, which has a strong evidence base and is widely available on the NHS. However, positive psychology can work alongside these treatments, and mindfulness

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SECTION B – Principles of Research

2. Identify the level of measurement defined in each statement below:

(a) The level of measurement that shows categories of data represented by frequencies. The data sets have no relative numerical value. [1]

Nominal

(b) The level of measurement that has equal intervals between scores and has an absolute or true zero point. [1]

Ratio

3. Using an example, define what is meant by the term 'external validity'. [3]

External validity is the extent to which the findings of a study can be generalised beyond the research setting to other settings, people and times. For example, Milgram's obedience study took place in a laboratory at Yale and the task of giving electric shocks to a stranger lacked mundane realism, so his findings may not generalise to obedience in everyday life, lowering external (ecological) validity.

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4. Discuss how a psychologist could improve the way Milgram dealt with ethical issues in his *'Behavioral study of Obedience'* (1963). [12]

Milgram deceived his 40 male volunteers: the draw for teacher was rigged, 'Mr Wallace' was a confederate and the shocks were fake. A psychologist today would first submit the study to an ethics committee and follow the BPS Code of Human Research Ethics.

Deception could be reduced. Mixon (1972) used role play, telling participants the true aims, and found similar results, although role play may lack validity. If deception is necessary, a full debrief and de-hoax should happen straight away, with counselling offered to anyone who showed distress, as some of Milgram's participants sweated, trembled and three had seizures.

Consent could be improved. Milgram gained only general consent, and presumptive consent by asking others, who predicted that 0 to 3% would go to 450 volts. A psychologist could warn participants in advance that the study may be distressing and that they may be deceived, gaining prior general consent, and ensure all are able to consent.

The right to withdraw was undermined by the four prods, e.g. 'You have no other choice, you must go on', although 35% still withdrew. It should be stated clearly and repeatedly; Burger (2009) told participants three times they could leave and stopped at 150 volts, yet 70% still continued.

Vulnerable people could be screened out, as Burger excluded anyone a clinical psychologist judged at risk of a negative reaction. Confidentiality could be improved by using pseudonyms and not publishing films of participants without consent.

However, these changes may reduce validity, as participants who know they can stop may obey less, so ethics must be balanced against validity.

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5. Briefly explain **one** disadvantage of quota sampling. [2]

Quota sampling may contain researcher bias: the researcher chooses who fills each quota at his own convenience (e.g. whoever is nearby), so those chosen may not be representative of everyone in that subgroup, reducing population validity.

6. Using an example, state **one** difference between a directional and non-directional hypothesis. [2]

A directional hypothesis predicts the direction of the result, e.g. 'girls will score higher than boys on a memory test', whereas a non-directional hypothesis only predicts a difference, e.g. 'there will be a difference between boys' and girls' memory test scores'.

7. Kohlberg conducted his 1968 research *'The child as a moral philosopher'* to track the development of boys, every 2-3 years, over a 12 year period.

(i) Identify the methodology used by Kohlberg. [1]

Case study (a longitudinal case study using interviews)

(ii) Briefly explain **two** features of the methodology you identified in part (i). [2]

Longitudinal: the same boys were followed over a long period (12 years), so changes in moral reasoning could be tracked.

In-depth: detailed interviews on moral dilemmas gave rich, qualitative data about each boy's reasoning.

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8. A head teacher gathered a sample of 360 students from a local sixth form college. They gave all students a questionnaire about happiness, which categorised the students into four groups – Very Happy, Happy, Ambivalent (neither happy nor unhappy) and Unhappy.

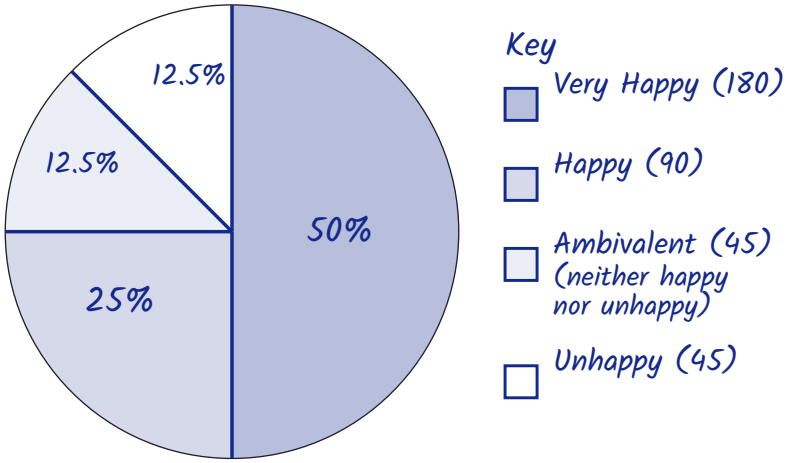
Happiness category	Number of students
Very Happy	180
Happy	90
Ambivalent (neither happy nor unhappy)	45
Unhappy	45

(a) Identify an appropriate sampling method and explain how the head teacher could have used it to collect the participants for this research. [3]

Quota sampling. The head teacher would split the target population into year groups, Year 12 and Year 13, and set a quota of 180 students from each (360 in total). He would then use opportunity sampling, asking the first students he finds in each year group, e.g. in the common room, to complete the questionnaire, until each quota of 180 is filled.

(b) The head teacher wanted to use a pie chart to show the different levels of happiness for the students. Using the data in the table above, draw and label a pie chart. [4]

Pie chart to show student happiness



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9. A psychologist was interested in whether sex differences in the play of children were innate or learned. For example, whether males and females had different styles of play, such as one sex being more physically active than another. To find out, she planned to study primates (chimpanzees). The psychologist thought that if chimpanzees showed similar differences in their play behaviour to humans, she could conclude that sex differences were evolutionary.

(a) Describe **two** ethical guidelines that must be followed by psychologists when working with animals. [2+2]

Replacement: animals should only be used if there is no alternative, such as computer simulations or observing humans, that could answer the research question; here she must justify why chimpanzees are needed.

Procedures and care: researchers must avoid causing unnecessary pain, distress or harm, hold any Home Office licence needed for protected species, and house and care for captive animals properly, so the chimpanzees' natural play must not be disturbed.

(b) Identify and explain **one** factor that could affect the validity of this research. [3]

Observer bias: the psychologist expects to find sex differences that support her evolutionary view, so she may over-exaggerate how physically active the male chimpanzees are when recording their play. Her records would then reflect her expectations rather than the chimpanzees' real behaviour, lowering internal validity.

(c) Describe **one** disadvantage of non-participant observations. [2]

The observer may not record all behaviour accurately, as behaviour happens quickly and coding is subjective. This means two observers may record differently (low inter-observer reliability), reducing reliability and validity.

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10. Researchers conducted a laboratory experiment to see how 15 minutes of device free solitude (being alone, without the use of mobile phones, tablets etc.) would impact on emotion. Their alternative hypothesis was:

Participants who spend 15 minutes alone will have decreased emotional response, compared to a group of participants who spend 15 minutes chatting to a researcher.

(a) Write an appropriate null hypothesis for the above research. [2]

There will be no difference in the emotional response of participants who spend 15 minutes alone (device free solitude) and participants who spend 15 minutes chatting to a researcher; any difference is due to chance.

(b) (i) Identify the independent variable (IV) in this research. [1]

15 minutes of device free solitude vs. 15 minutes chatting to a researcher

(ii) Identify the dependent variable (DV) in this research. [1]

Emotional response (overall score on the emotion questionnaire)

(c) Including an example from this research, identify **and** explain the type of experimental design that has been used. [3]

Independent groups design: different participants take part in each condition. For example, one group spends 15 minutes alone without devices and a completely separate group spends 15 minutes chatting to a researcher, and the emotional responses of the two groups are then compared, so no participant does both conditions.

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(d) Describe **one** strength and **one** weakness of research conducted in a laboratory environment. [2+2]

Strength: there is a high level of control over extraneous variables, e.g. every participant spends exactly 15 minutes in the same room without devices. So cause and effect between the IV and DV can be established, and the standardised procedure can be replicated to check reliability.

Weakness: the setting is artificial and lacks mundane realism, e.g. sitting alone in a lab is not like normal solitude at home. So findings may not generalise to real life, lowering ecological validity.

The researchers used a questionnaire to measure emotion both before and after the 15 minutes, which included measures of being excited, interested, scared or anxious. This provided an overall emotional response score for each participant.

(e) Identify and explain how **one** confounding variable could have affected a participant's emotional response. [3]

The friendliness of the researcher: in the chatting group some participants may like the researcher or talk about interesting topics, while others may dislike them or find the chat dull. This would raise or lower their excitement and interest scores for reasons other than the IV, making comparison with the solitude group invalid.

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(f) Pre-experiment results for the first five participants in the solitude group are shown in the table below. Use this table and the formula provided to calculate the standard deviation. Show your workings. [6]

Participant Number	Emotional response score (x)
1	5
2	4
3	2
4	8
5	1

$$\sqrt{\frac{\sum(x-\bar{x})^2}{n-1}}$$

Mean = (5 + 4 + 2 + 8 + 1) ÷ 5 = 20 ÷ 5 = 4

Score minus mean (x - mean):

5 - 4 = 1, 4 - 4 = 0, 2 - 4 = -2, 8 - 4 = 4, 1 - 4 = -3

Squared $(x - mean)^2$: 1, 0, 4, 16, 9

$\Sigma(x - mean)^2 = 1 + 0 + 4 + 16 + 9 = 30$

n - 1 = 5 - 1 = 4

30 ÷ 4 = 7.5

Standard deviation = √7.5 = 2.74 (2 d.p.)

END OF PAPER

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Question number	Additional page, if required. Write the question number(s) in the left-hand margin.
1.	itself draws on cognitive ideas. In conclusion, positive psychology is clearly relevant today, as it offers low-cost ways to improve wellbeing and productivity at a time of rising mental health problems. However, it is not 'entirely' relevant: the evidence base is still developing, it is not equally accessible to all social groups and it cannot replace treatments for serious illness or tackle the economic causes of distress. It is most relevant when combined with other approaches and with social and economic policy.

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