

Mark Scheme (Results)

Summer 2013

GCE Psychology (6PS04/01)

Edexcel and BTEC Qualifications

Edexcel and BTEC qualifications come from Pearson, the world's leading learning company. We provide a wide range of qualifications including academic, vocational, occupational and specific programmes for employers. For further information, please call our GCE line on 0844 576 0025, our GCSE team on 0844 576 0027, or visit our qualifications website at www.edexcel.com. For information about our BTEC qualifications, please call 0844 576 0026, or visit our website at www.edexcel.com.

If you have any subject specific questions about this specification that require the help of a subject specialist, you may find our Ask The Expert email service helpful.

Ask The Expert can be accessed online at the following link:

http://www.edexcel.com/Aboutus/contact-us/

Alternatively, you can speak directly to the subject team at Pearson about Edexcel qualifications. Their contact details can be found on this link:

www.edexcel.com/teachingservices

Pearson: helping people progress, everywhere

Our aim is to help everyone progress in their lives through education. We believe in every kind of learning, for all kinds of people, wherever they are in the world. We've been involved in education for over 150 years, and by working across 70 countries, in 100 languages, we have built an international reputation for raising achievement through innovation in education. Find out more about how we can help you and your students at: www.pearson.com/uk

Summer 2013
Publications Code UA036702
All the material in this publication is copyright
© Pearson Education Ltd 2013

General Guidance on Marking – GCE Psychology

All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last

Examiners should look for qualities to reward rather than faults to penalise. This does NOT mean giving credit for incorrect or inadequate answers, but it does mean allowing candidates to be rewarded for answers showing correct application of principles and knowledge.

Examiners should therefore read carefully and consider every response: even unconventional answers may be worthy of credit. Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.

Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie. There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.

All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.

Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.

Candidates must make their meaning clear to the examiner to gain the mark. Make sure that the answer makes sense. Do not give credit for correct words/phrases which are put together in a meaningless manner. Answers must be in the correct context.

Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the Team Leader must be consulted.

Using the mark scheme

The mark scheme gives:

- an idea of the types of response expected
- how individual marks are to be awarded
- the total mark for each question
- examples of responses that should NOT receive credit (where applicable).
- 1 / means that the responses are alternatives and either answer should receive full credit.
- 2 () means that a phrase/word is not essential for the award of the mark, but helps the examiner to get the sense of the expected answer.
- 3 [] words inside square brackets are instructions or guidance for examiners.
- 4 Phrases/words in **bold** indicate that the <u>meaning</u> of the phrase or the actual word is **essential** to the answer.
- TE (Transferred Error) means that a wrong answer given in an earlier part of a question is used correctly in answer to a later part of the same question.

Quality of Written Communication

Questions which involve the writing of continuous prose will expect candidates to:

- show clarity of expression
- construct and present coherent arguments
- demonstrate an effective use of grammar, punctuation and spelling.

Full marks can only be awarded if the candidate has demonstrated the above abilities.

Questions where QWC is likely to be particularly important are indicated "QWC" in the mark scheme

Unit 4: How Psychology Works

Section A – Clinical Psychology

Question	General Instructions
numbers	
Questions	Marking points are indicative, not comprehensive and other points should be
1 – 4	credited. In all cases consider "or words to that effect". Each bullet point is a mark unless otherwise stated and each point made by the candidate must be
	clearly and effectively communicated.

Question	Question	
Number	Question	
1(a)	A neighbour visits and tells you that their friend has recently been diagnosed with a mental illness. Your neighbour needs your help as they cannot remember the name of the disorder but thinks it may be one of the following: unipolar depression bipolar depression phobias obsessive compulsive disorder anorexia nervosa bulimia nervosa. 	
	Describe the symptoms of one disorder from the list to help your neighbour.	
	Answer	Mark
	To be creditworthy a symptom must be described not just listed. A list of 3 symptoms with no elaboration 1 mark, for 5 or more max 2.	(4 AO1)
	Answers must be clear enough for the neighbour to understand, so not using technical jargon that a neighbour may not understand, if jargon is used it needs to be explained, (e.g. dysthymic, amenorrhea), if all response uses is unexplained jargon max 1. No need to refer to neighbour in the answer. Description of symptoms as referred to in DSM/ICD is acceptable so long as couched in terms a lay person could understand.	
	If generic, max 1 mark/mark symptoms to fit the best disorder. If the description and the disorder named do not match ignore identification.	
	The disorder must be from the list otherwise 0 marks. No credit for naming the disorder. If identification and symptoms do not match mark the symptoms and ignore the identification.	
	If symptoms from more than one disorder mark all and credit the best.	
	 Unipolar depression Individual has feelings of intense sadness and/or guilt/eq; There is a lack of enjoyment or pleasure in activities which used to elicit such feelings/eq; Sufferer finds it difficult to get off to sleep and difficult to wake up/eq; Their levels of motivation are very low/eq; 	

Feelings of intense lethargy and apathy tend to dominate/eq;

Bipolar depression

- Phases of depression alternate with periods of mania/eq
- During depressed phases there is a lack of enjoyment in everyday activities/eq;
- There will be a lack of motivation as well as extreme lethargy/eq;
- During periods of mania activity can be intense/eq;
- During periods of mania behaviour is often unreasonable and demanding as the sufferer can find it hard to relate to other people/eq;

Phobias

- There is a deep irrational fear of something/eq;
- The fear is so intense that it will generate panic/sweating/eg;
- The sufferer will go to great lengths to avoid the phobic stimulus/eq;
- The fear is so great that it prevents the individual from leading a normal life/eq;
- Even thought of the target of the phobia can be sufficient to generate palpitations/hyperventilating/eq;

OCD

- The person is obsessed with thoughts/anxieties/eq;
- These can be so severe the individual feels paranoid about e.g. whether something is clean/eg;
- The person feels compelled to undertake actions related to the obsession/eq;
- Failure to undertake an action leads to severe anxiety/eq;
- The person is likely to feel embarrassed/distressed by the obsession/eq;
- Depression is a common side effect of OCD/eq;

Anorexia nervosa

- Individual refuses to eat to maintain body weight/eg;
- Is only 85% of recommended minimum weight or lighter/eg;
- The individual denies there is a problem and still perceive self as fat/eq;
- The body and face become covered in fine downy hair/eq;
- The person will feel constantly cold and wear baggy clothing/eq;
- There is a distorted body image/eq;
- Will be secretive, misleading others regarding their eating behaviour/eq;

Bulimia nervosa

- The sufferer finds it difficult to regulate their food intake/eq;
- Bouts of over-eating are interspersed by under-eating/eq;
- The person will either make themselves sick or purge themselves after eating/eq;
- The sufferer is likely to disappear off to the toilet immediately after eating/eq;
- Likely to be obsessed with exercising/eq;
- The individual may hoard food/snack on unhealthy foods/eq;

Look for other appropriate marking points

Question	Question	
Number		
1(b)	Your neighbour asks you to explain what may have caused their friend's disorder.	
	Describe one explanation for the disorder that you described in (a).	
	Answer	Mark
	If more than 1 approach mark all and credit the best.	(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	TE: If approach does not match the disorder credited in (a) 0 marks. If (a) is blank and the explanation is appropriate full marks can be given. If (a) is schizophrenia or disorder not on the list, but a correct explanation is given max 2 marks.	(4 AO1)
	If you are unsure whether the disorder explained is appropriate please consult your team leader.	
	Accept points that are within an approach, e.g. both Beck & Ellis for cognitive explanations, both biochemical & genetic for biological, SLT, CC and OC for learning. Go with the intention of the candidate.	
	1 mark available for a clear identification of a component of an approach that is correct.	
	Language may be technical (does not need to be lay person language)	
	 Unipolar depression An imbalance of neurotransmitters is thought to cause depression/eq; There is a deficit in the dopamine reward system caused by low serotonin levels/eq; It is thought that the levels of noradrenalin may also be too low/eq; These chemical imbalances may be the result of genetic tendencies as there appears to be a genetic link to depression/eq; There are suggestions that the high levels of cortisol associated with stress may also play a role in the development of depression/eq; 	
	 Faulty thought processes that are learned may cause depression/eq; The individual has a negative self view which affects the way they interpret the world/eq; The more the person interprets things negatively the more depressed they become causing mood to spiral downward/eq; Catastrophising is involved as the individual interprets every situation in the worst possible way, seeing disaster where there is none/eq; Helplessness will develop, driving depression even deeper/eq; Bipolar disorder 	
	 The high incidence of bipolar disorder in close family members suggests a strong genetic component/eq The depression stage is thought to be caused by low levels of serotonin/noradrenalin/dopamine/eq; There is evidence of abnormal activity in the HPA axis associated with stress in bipolar sufferers/eq; Circadian rhythms and melatonin production also change during the different phases of the disorder/eq; 	
	Phobias	

- Phobias may be developed as a result of classical conditioning (1st mark) where the sufferer learns to associate a new object with a fear response (2nd mark)/eq;
- Once formed a phobia will persist through operant conditioning/eq;
- Avoiding the phobic object is reinforcing as the fear is not experienced/eq;
- The tendency for similar fears to appear in children as appear in their parents can be explained by social leaning theory/eq;
- The parents act as models and therefore the child readily acquires the phobic behaviour/eg;

OCD

- Tendency to run in families, and closely related to degree of relatedness/eg;
- The brains of OCD sufferers have increased grey matter in the lenticular and caudate nuclei/eg;
- There is decreased grey matter in the cingulate gyrus compared to non-sufferers/eq;
- There is also abnormal activity in the striatum/eq;

Anorexia nervosa

- Media images of size 0 models suggest this is a desirable size/shape/eq;
- This is combined with low self esteem and a desire to have control/gain attention/eq;
- By severe dieting attention is gained, individual feels in control and the social ideal is achieved, so reinforcing the behaviour(2 marks)/eq;
- The need/desire for perfection and/or control help maintain the behaviour/eq;
- Denial of adulthood means anorexics diet to avoid developing an adult shape/eq;
- The anorexic may be fearful of sexual maturity as over dependent on parents/eq;
- A lack of identity means control of food intake is seen as way of exerting control and achieving a sense of self/eq;
- An over controlling parent may result in the anorexic seeing food control as a means of countering a dominant parent/eq;
- An individual who has been sexual abused as a child may unconsciously wish to reject and/or destroy their own body/eq;

Bulimia nervosa

- Low self esteem may be a cause/eg;
- The individual is able to exert some control over their lives as a result of their eating behaviour/eq;
- The low self esteem may also be associated with dissatisfaction with their appearance as they believe they are too fat/eq;
- This tends to be linked with perceived pressure from those around the individual to conform to socially desirable appearances/eq;

Look for other appropriate marking points

Question Number	Question	
1(c)	Using research evidence, evaluate the explanation you described in (b).	
. (5)	Answer	Mark
	TE: If the explanation in 1(b) is <u>not</u> for an appropriate mental disorder (e.g. schizophrenia) but it is correctly evaluated here max 2. If (b) is blank but a suitable evaluation of an explanation for a disorder from the list is given and identifiable then full marks can be given.	(5 AO2)
	If the explanation evaluated here is different to the one described in (b) then 0 marks	
	If no mention of research max 2	
	 Unipolar depression The success of SSRIs in helping to relieve symptoms of depression suggests there is some basis for this explanation (Coppen 1967)/eq; However many sufferers do not respond to drug treatment, or only to an extent suggesting other factors may be implicated/eq; Kirsch et al's (2005) meta analysis showed placebos are often as effective as SSRIs, questioning serotonin's role in depression/eq; Most evidence for abnormal levels of chemicals in the brain as a cause of depression is correlational so cause-effect can't be established/eq; The number of different chemicals potentially related to depression is so wide that almost any endocrine imbalance or neurotransmitter deficit is seen as a potential cause (e.g. Monteleone 2001)/eq; 	
	 The success of CBT /REBT in treating depression is evidence that faulty thought processes are linked to depression/eq; Seligman (1975) suggests cognitive aspects of depression in humans is analogous to learned helplessness in laboratory animals where the perception of a lack of control leads to inaction to change things/eq; It is possible that cognitive aspects are a consequence rather than a cause of depression/eq; Peterson & Seligman (1984) used both longitudinal and cross sectional evidence to show a link between faulty attributions and depression when helplessness was present/eq; Cognitive vulnerability has been shown to be a valid measure in predicting adolescent depression (Hankin & Abramson 2002)/eq; 	
	 Bipolar disorder There is evidence that a high percentage of bipolar sufferers have been the victims of either early abuse or PTSD, suggesting stressful life events play a major part in onset/eq; Kato (2007) suggests that evidence for a genetic component is too erratic and therefore not trustworthy/eq; The level and variety of neurotransmitter abnormalities suggests that rather than being causal they may be a symptom of the disorder/eq; Interaction between genetics, environment and psychosocial factors is the most promising explanation suggest Serretti & Mendelli (2008)/eq; There is an increased risk of bipolar developing in people whose fathers were older at conception suggesting a possible degradation in sperm quality (Frans et al 2008)/eq; 	
	 Phobias The successfulness of systematic desensitisation in the removal of phobias supports the view that they are a result of faulty learning/eq; Cook & Mineka (1989) showed that a phobic response can be acquired through observational learning in monkeys/eq; 	

- However the lack of success for general as opposed to specific phobias and for the incidence of certain phobias to develop more readily than others means other explanations are also needed/eq;
- The learning explanation does not explain why the acquisition of phobias varies a great deal in individuals experiencing similar situations, some other factors must influence susceptibility/eq;
- The gradual deterioration in agoraphobics supports the view that avoiding the phobic situation is reinforcing in itself/eq;
- Chambless et al (1984) showed that agoraphobics and social phobics actively seek to avoid phobic situations compared to non phobics supporting the view of reinforcement of the condition/eg;

OCD

- Abromowitz et al (2009) found evidence for a major genetic component in children diagnosed with OCD/eq;
- Abnormalities in the serotonin transport system found in different families prone to OCD supports its role in OCD (Ozaki et al 2003)/eq;
- Rasmussen & Tsuang (1986) reported concordance rates of between 53%-87% for MZ twins compared to 22%-47% for DZ twins/eq;
- However as concordance rates are below 100% other factors must be playing a role, such as stress factors/eg;
- Mice genetically engineered with an abnormality in the striatum similar to that found in OCD sufferers show excessive grooming behaviour according to Welch et al (2007)/eq;

Anorexia nervosa

- There is a significant increase in anorexia when western media are introduced to a previously naive country e.g. Fiji (Becker 2002)/eq;
- However research in mice suggests lesioning of the ventromedial nucleus causes a cessation of eating and possibly similar brain abnormalities could be associated with anorexia in humans/eq;
- Everyone is exposed to size 0 models yet only a minority of individuals develop anorexia so other factors must be involved as well/eg;
- The success of token economy in treating anorexia is seen as evidence in support of it being a learned disorder rather than an organic problem, as the latter would be less likely to response to TE/eq;
- Polivy & Herman (2002) suggest an interaction between socio-cultural, family and personality factors is probably necessary as one factor alone is unlikely to cause anorexia to develop/eq;
- Explanations invoking a denial of sexual maturity do not explain the development of anorexia in males/older females/eq;
- There is evidence that the concept of mothers of anorexic girls being over controlling is untrue (Bonenburger et al 1988)
- There is evidence for anorexia being linked to digestive disorders in childhood not sexual abuse in childhood (Marchi & Cohen 1990)/eq;
- Weinreich et al (1985) found personality profiles supported the view of a conflict between self and parental views of identity in anorexics/eg;
- Bruch (1975) claimed many anorexics had mothers who admitted over anticipating hunger in their young child and over feeding them/eq;

Bulimia nervosa

- Mond et al (2004) found that women believed the primary cause of bulimia was low self esteem with other risk factors being media pressure and problems in childhood/eq;
- Silverstone (1992) suggests chronic low self esteem is the single most consistent factor linked with the development of eating disorders/eq;

 The difference in self esteem levels between adolescent males and females could explain the difference in incidence of eating disorders according to Kling et al (1999)/eq Cowen et al (1996) suggest rather than low self esteem, moderate dieting can alter the effect of prolactin on serotonin in some people leading to the development of bulimia/eq; Pritchard (2009) found a 3 way interaction between levels of self esteem, preoccupation with weight and gender in predicting vulnerability to bulimia/eq; 	
Look for other appropriate marking points	

Question	Question	
Number		
2(a)	Your cousin Hugo is training to become a psychotherapist. In the autumn term he is starting a course on Psychodynamic therapies and will be learning about free association and dream analysis. He has asked you to explain one of these therapies to him so he will be well prepared for the course.	
	Describe either free association or dream analysis.	
	Answer	Mark
	Points that describe the purpose of the therapy can gain credit. If neither free association nor dream analysis, no marks. If both are described, mark all and credit the best.	(4 AO1)
	 Free association The therapist seeks to discover the unconscious motivations of the client by accessing hidden thoughts/eq; The client is asked to talk about whatever comes into their minds and not censor their thoughts/eq; The client will have their back to the therapist during this phase so they are not distracted by the therapist/eq; The therapist will interpret the material gained to understand what is causing the mental health issues for the client/eq; Issues that matter most to the client will tend to crop up more frequently/eq; Projection may occur with the client projecting internal motivations / feelings onto external sources/eq; Dream analysis The client is asked to recount their dreams in as much detail as possible/eq; The therapist listens to this, the manifest content in order to understand the client's problems/eq; The therapist is able to uncover the latent content of the dream and explain this to the client/eq; This enables the therapist and client to understand what is troubling the client and so resolve the issues/eq; Understanding of symbols is vital to the interpretation of the dreams, especially as one object may represent more than one concept/EQ; Look for other appropriate marking points 	

Question	Question	
Number 2(b)	Evaluate the usefulness of the therapy you described in (a) in treating mental disorders.	
	In your answer include one comparison with a treatment/therapy from a different approach.	
	Answer	Mark
	TE: If therapy evaluated is different to therapy described in (a) 0 marks	(5 AO2)
	If the therapy described in (a) is neither free association nor dream analysis but is either a different psychodynamic therapy (e.g. short term psychodynamic therapy) or a therapy from a different approach and it is appropriately evaluated here max 2.	(3 AU2)
	If (a) is blank but an appropriate therapy (free association or dream analysis) is evaluated here full marks may be awarded	
	Max 4 marks if no comparison to another treatment/therapy. A maximum of 2 marks for a well developed comparison. If more than one comparison mark all and credit the best (rubric). If the answer conflates the two therapies, separate out, mark both and credit the best.	
	 The client has to feel completely at ease or the therapy is unlikely to work so the client-therapist relationship is key/eq; This can sometimes be difficult as the client is paying the therapist for the sessions so the therapist is not neutral/eq; The repetition of themes could be because of current issues in the person's life and not anything to do with unconscious thoughts/eq; The client is reliant on the therapist's interpretation, however another therapist may interpret issues differently (1st mark), casting doubt on the reliability of free association as an effective therapy(2nd mark)/eq; Free association is unlikely to be of much help to schizophrenics as they may not be able to talk fluently or reflect on their thoughts/eq; If schizophrenia is caused by a chemical imbalance in the brain, drugs to correct this will be of greater value than talking to someone/eq; Dream analysis The client has to remember and report dreams accurately if dream analysis if to have any value/eq; The client is dependent on the interpretation of the therapist in understanding what the dreams mean/eq; Symbol interpretation can be very person specific so a different 	
	 Symbol interpretation can be very person specific so a different therapist may interpret dream content differently/eq; The view of dreams as a vital way of accessing unconscious feelings is not shared by physiological psychologists (1 mark) who see dreams as a bi-product of the day's activities, so meaningless (2nd mark) /eq; Dream analysis can access root causes of a disorder whereas drug treatments merely mask the problems/eq; Dream analysis is valuable in treating e.g. PTSD whereas drug treatment damps down the anxiety component/eq; 	
	Look for other appropriate marking points.	

Question	Question	
3	Chantelle is planning some research into mental illness She has gone to see her supervisor about the project. Her supervisor suggests that there may be some data available from a previous student's research that Chantelle could use. Explain the advantages and disadvantages of using secondary data rather than primary data that Chantelle needs to consider before deciding whether to use the previous student's research. Refer to Chantelle in your answer.	
	Answer	Mark
	 Answer must refer to the scenario at least once or max 3. If only advantages or disadvantages considered max 3 (but not 3+3) If no comparison between primary and secondary data max 3 It would be much quicker for Chantelle to use secondary data as she would not need to design and carry out her own research as data already exists/eq; The use of secondary data is also less expensive as the costs involved in producing a questionnaire do not have to be incurred, the analysis can be done directly/eq; Secondary data may be less satisfactory as Chantelle cannot be sure how the previous student collected the data so it may not be appropriate for her study/eq; Secondary data may have been collected some time ago so responses may have changed as views in society are constantly changing/eq; Chantelle would know exactly how her own, primary data, had been collected so would be less likely to have issues of reliability /eq; It is unlikely that detailed information about the individuals in the sample have been retained so Chantelle would be unable to draw any conclusions relating to the nature of the sample (1st mark), if the information had been retained there may be ethical issues regarding confidentiality (2nd mark)/eq; The use of primary data would ensure that the information that had been collected was specific to the research question being asked (1st mark) whereas secondary data may be only partially appropriate reducing the validity of the study (2nd mark)/eq; Look for other appropriate marking points. 	(6 AO3)

Question	Question	
4	As part of a campaign to raise awareness of mental disorders your school/college magazine has published an article on what makes behaviour abnormal. You know that there are other explanations for abnormality but this article only explains the statistical definition of abnormality. Write a letter to the magazine's editor evaluating the statistical definition of abnormality.	
	Answer	Mark
	 Alternative explanations as evaluation can gain credit if used in comparison. If the response does not contextualise in any way (either by topping and tailing or by the way arguments are addressed) max 4 1 mark available for elaboration of an appropriate point. The statistical definition uses an arbitrary cut off point with no gradation/eq; For example DSM determines the presence or absence of a disorder on the basis of how many tick boxes can be checked/eq; The advantage of an arbitrary cut-off point is that it is objective, so subjective interpretation is not going to colour decisions/eq; One person's opinion is not going to make the difference between whether someone is judged abnormal or not, purely on the basis of their set of attitudes/eq; Statistical abnormality cannot differentiate between positive and negative abnormality, therefore someone who is considered a genius is seen as equally abnormal as someone who has a learning deficit/eq; Statistical abnormality implies that infrequency is a key factor in deciding whether something is abnormal yet some disorders such as depression are not that infrequent (1st mark) showing that a definition such as failure to function adequately may be more useful in defining abnormality (2nd mark)/eq; There may be political or social expediency in where the cut-off point is set as this can manipulate whether something is deemed abnormal just as much as social norms definitions/eq; Look for other appropriate marking points 	(5 AO2)

Question	Question
Number	
*5	Astrid, a community psychiatric nurse (CPN), has contacted the emergency team at the mental health unit as a client has had a serious relapse. Once the client has been admitted the duty psychiatrist decides to use a biological treatment/therapy to treat the client.
	Describe one treatment/therapy from the Biological Approach that the duty psychiatrist may use to treat a mental disorder. Evaluate this treatment/therapy using research evidence.
0)4(0 :	Answer
QWC i, ii, iii	Read through the whole answer then refer to levels. Avoid points based marking. No need to refer to duty psychiatrist/Astrid. Therapy/treatment must be from the biological approach and must be a single therapy/ treatment If more than one disorder or more than one therapy select the best options for the candidate and mark accordingly Indicative content
	 Drugs Description Drug treatments use psychoactive drugs that change the balance of neurotransmitters in the brain e.g. antipsychotics reduce the availability of dopamine as high levels of dopamine are implicated in schizophrenia Psychiatrists will adjust the quantity of a drug so it is tailored to the level needed for that patient Psychoactive drugs for treating mental disorders are available on prescription and patients will be monitored to ensure they are responding to the drugs There are usually several different drugs for treating the same disorder and it may be necessary to try several different ones until the drug that suits a particular patient best is found
	 Evaluation Drug treatments have side effects, some of which are unpleasant leading to poor compliance Drugs act relatively quickly allowing stabilisation of the patient's condition during the acute phase of illness However they are not instantaneous, indeed take longer to act than should be the case if neurotransmitter imbalance is the primary cause of the disorder Drug treatment is often referred to as a chemical straightjacket/chemical cosh as the side effects can often be debilitating Drug treatment allows the patient to return to and function effectively in the community Avery & Winokur (1976) found that depressed patients treated with ECT were significantly more likely to survive over a period of several years than those either not treated at all or only with antidepressant drugs Nulman et al (1997) showed no deleterious effects on cognitive or language functions in children whose mothers had undergone drug treatment for depression during pregnancy

ECT

Description

- The patient is given a muscle relaxant as well as general anaesthetic
- Electrodes are placed on each side of the head for bilateral ECT
- An electric current will be passed through the brain to induce a seizure lasting about 30 seconds (anywhere between 20-50 secs)
- The voltage will be between 70-150 volts and last for between 0.1-0.5 seconds
- A course is likely to be two treatments per week for 3 to 4 weeks
- ECT used to be given for a variety of disorders though it is now only used for depression that has not responded to other treatments

Evaluation

- Many patients suffer memory loss, and though this can be quite mild in a few cases it is severe
- Although there are side effects for those contemplating suicide it may be the only
 effective treatment that can work in time
- There is no real understanding of how the therapy works and controversy about the amount of damage caused by the treatment
- ECT may still be used to treat schizophrenia despite evidence that it does not help this disorder
- In 2005 half the patients treated with ECT in the UK felt that even though they had signed a consent form they had not really given informed consent
- Madsen et al (2000) found ECT stimulated new cell growth in rat brains
- Avery & Winokur (1976) found that depressed patients treated with ECT were significantly more likely to survive over a period of several years than those either not treated at all or only with antidepressant drugs

Look for other appropriate material.

Level	Mark	Descriptor
Level 0	0	No rewardable material.
Level 1	1-3	Candidates will produce brief answers, making simple statements, showing some relevance to the question.
		 No disorder is identifiable Only brief description of therapy attempted OR Only evaluation of therapy with no description of what the therapy
		involves.
		Little attempt at the analytical/evaluation demands of the question. Lack of relevant evidence. The skills needed to produce effective writing will not normally be present. The writing may have some coherence and will be generally comprehensible, but lack both clarity and organisation. High incidence of syntactical and/or spelling errors.
Level 2	4-6	Candidates will produce statements with some development in the form of analysis/evaluation, with limited success. Both description and evaluation present but limited, OR one in more detail than the other OR very good description with no evaluation (or vice versa)
		 Description of therapy accurate but limited, (e.g. refers to choice of drug and not mode of action Evaluation may be done well though no research cited Limited evaluation, with research evidence
		Limited evidence will be presented. Range of skills needed to produce effective writing is likely to be limited. There are likely to be passages which lack clarity and proper organisation. Frequent syntactical and/or spelling errors are likely to be present.
Level 3	7-9	Candidates' answers will show some good knowledge with understanding of the focus of the question and will include analysis and evaluation. Either both components done well or one done very well and the other attempted.
		 Description of therapy will be done well, though may not be comprehensive but will show evidence of some breadth or depth Evaluation will include a range of issues, though not necessarily well balanced, will include some research. Likely to refer the therapy/treatment to a relevant mental disorder
		Points made may not be fully treated critically though there may be some evidence of judgement and of reaching conclusions where this is relevant. Use of a range of evidence. The candidate will demonstrate most of the skills needed to produce effective extended writing but there will be lapses in organisation. Some syntactical and/or spelling errors are likely to be present.
Level 4	10-12	Candidates will offer a response which is relevant and focused on the question, and addresses the main issues contained in it.
		 Description of therapy will be thorough and detailed. Evaluation will include a range of issues well supported by research evidence and showing balance in the choice of points made Clearly links the therapy/treatment to a relevant mental disorder
		There will be evidence of reasoned argument and of judgement when relevant to the question. The analysis will be supported by accurate factual material, which is relevant to the question. Good use of evidence. The skills needed to produce convincing extended writing in place. Good organisation and clarity. Very few syntactical and/or spelling errors may be found. Excellent organisation and planning

Section B: Issues and Debates

Question	General Instructions
numbers	
Questions	Marking points are indicative, not comprehensive and other points should be credited. In all cases consider "or words to that effect". Each bullet point is a mark unless otherwise stated and each point made by the candidate must be clearly and effectively communicated.

	clearly and effectively communicated.			
Question Number	Question			
6(a)	Zac and Yan have collected data for a cross-cultural research study into how children learn. Zac collected data from his own country Pranzakia. Yan's data is from a different country, Scolana, a country he is visiting for the first time. They wish to combine their data but are concerned about possible bias.			
	Use your knowledge of ethnocentrism to explain potential effects of cultural bias in Zac and Yan's research.			
	Answer	Mark		
	Answer must relate to the scenario at least once or max 3. Either direction can be accepted regarding statements of bias caused by the relationship of the researcher to the culture/country Cultural bias relating to other factors e.g. abnormality or attachment cannot in themselves gain credit	(5 AO2)		
	 1 mark available for a definition of ethnocentrism: e.g. Ethnocentrism is • where a researcher fails to take into account another culture's language, practices and beliefs/eq; • when you see things from your own view and don't understand someone else's background/eq; • where one's own cultural views are used to interpret the actions of people in another country/eq; 			
	 Different cultural experiences may mean Yan interprets the data he collects in a way biased by his own cultural experiences/eq; He is likely to interpret the findings in the light of his own childhood experiences which may be very different/eq; For example Yan's culture may value competitiveness whereas Scolana values co-operation, this would interfere with understanding of learning experiences/eq; Zac may pick up on nuances of behaviour that would not be seen by an outsider meaning the level of interpretation in the two sets of data will be very different/eq; It is possible that the children will be more relaxed in Zac's presence compared with the Scolana children in Yan's study/eq; As Zac shares the same culture as his participants he is likely to share values and concepts so his interpretation of results will be using a common basis of understanding/an emic/eq; Yan is unlikely to share the same culture as his participants, as it is his first visit to Scolana he may apply an enforced etic on participants/eq; This may mean that findings from one culture do not apply to another because understandings are different/eq; Though cognitive functioning is seen to be similar in all societies the ability to assess such functioning may still be culturally specific/eq; 			
	Look for other appropriate marking points			

Question Number	Question			
6(b)	Zac and Yan think there may be issues of nature and nurture in the way that children learn. Describe what is meant by the term 'nurture'.			
	Answer	Mark		
	 Max 1 mark for an example that is clear and elucidates the answer. Max 1 for a point that explains nurture by comparing it with nature Nurture means that the primary influences on the individual are from external sources/eq; It means we are who we are as a result of our experiences/eq; Such influences are likely to include the way we are brought up by our parents/eq; Nurture can include literature, children's stories, nursery rhymes etc/eq; Learning itself is a nurture influence (Plus an appropriate example)/eq; 	(3 AO1)		
	Look for other appropriate marking points.			

Question	Question	
Number 7(a)	Outline two contributions to society from the Learning Approach.	
, (a)	Answer	Mark
	If more than two, mark all and credit the best. 2+2 No credit for contributions to psychology. A contribution to society is likely to be where psychological knowledge/understanding/theory can be seen to explain something that people are likely to want to understand and/or provide a possible solution to a problem, a way of helping people	(4 AO1)
	 Levels marking O marks: not a contribution from the learning approach (may be from another approach or a straight reiteration of theory with no identification of why it is a contribution 1 mark: basic description of a contribution identifying the nature of the contribution and some indication of the underpinning source/theory 2 marks: a good description showing some breadth and/or depth with a clear link between the contribution and the theory 	
	 Indicative content: e.g. Understanding how we may develop phobias Classical conditioning explains development of phobias through association (1 mark) Classical conditioning explains the development of phobias through the association of a new stimulus with something which already elicits fear such as a loud noise (2 marks) 	
	 e.g. Understanding how rewards/punishments may change behaviour Operant conditioning explains how the consequences of an action alter the probability of it occurring again (1 mark) Drinking alcohol is positively reinforcing because of the rapid, pleasant effect it has on our brains while the unpleasant effects of a hangover are too delayed to put us off (2 marks) 	
	 e.g. Why prison does/doesn't work Punishment is the least effective strategy in operant conditioning as it only seeks to remove a behaviour (1 mark) Prisoners taught alternative ways of thinking/behaving while in prison, such as anger management, are less likely to re-offend as the bad behaviour has been replaced by a more positive behaviour (2 marks) 	
	 e.g. Understanding the role of media in promoting violence in society SLT explains how observation and imitation can lead to the copying of violence observed in the media (1 mark) SLT explains why children are more vulnerable to media images then adults and has led to the adoption of the 9 o'clock watershed on British TV to protect young children from violence (2 marks) 	
	 e.g. TEPs to improve behaviour in prisons/cure anorexia Token economies can be implemented to train anorectic patients to eat so they gain weight (1 mark) Using TEPs to make rewards such as visits home dependent on appropriate eating behaviour leads, in time, to the anorexic patient associating eating with positive outcomes and means they become motivated to eat (2 marks) 	
	Look for other appropriate material.	

Question	Question	
Number	Evaluate contributions from the Leavis Augusta Augusta Laire	
7(b)	Evaluate contributions from the Learning Approach using psychological research	
	Answer	Mark
	If only one contribution evaluated max 3	
	No mention of research max 3	(5 AO2)
	 If only one contribution evaluated max 3 No mention of research max 3 Bandura, Ross & Ross (1961) showed that young children will imitate an adult role model behaving aggressively which has led to the introduction of the 9 o'clock watershed/eq; Eron & Huesmann (1986) showed a link to the amount of violent television watched at 10 years old and adult offending, however there may be a factor causing both the behaviour at 10 and in adulthood/eq; Markey (2010) showed that violent computer games only have a negative effect on certain personality types, so not all learn in the same way/eq; Langlois & Downs (1980) showed parents reinforce gender appropriate roles in their children, particularly in the opposite sex child, so society can challenge gender stereotyping by the way children are treated in education/eq; Idle et al (1993) showed children will accept toys that are masculine, feminine or neutral equally happily, however parents express opinions veering towards gender appropriate toys suggesting gender preferences are learned through selective exposure at an early age/eq; Leitenberg et al (1969) showed that systematic desensitisation is effective in removing a phobia of snakes, though it is more effective with specific phobias than agoraphobia/eq; Wald & Taylor (2001) showed that virtual reality exposure treatment is effective in treating a phobia of car driving and results are sustained over a period of many months/eq; One of the most successful programmes of systematic desensitisation is a commercial enterprise to cure people of a fear of flying culminating in a short return flight to Paris from the UK/eq; Token economy has been shown to be effective in improving 	
	behaviour of institutionalised young offenders (Hobbs & Holt 1976)/eq;	
	 Day (1988) showed token economy was effective in improving offending against the person in mentally handicapped offenders however the treatment was less effective with property crimes such as arson and burglary/eq; Whitby & Miller (2009) reported the successful use of TEPs with children previously unable to control their behaviour in the classroom leading to more effective learning/eq; 	
	Look for other appropriate material	

Question	Question	
Number		
*8(a)	Sometimes companies use tests to assess applicants for a job as part of the interview day.	
	Professor Trestle is doing a research project and has asked two of her students to investigate how people feel about the way companies choose new employees.	
	The students decide to conduct a survey.	
	Explain how the students may design and carry out their survey.	
	Answer	Mark
QWC	Read through the whole answer then go to the levels. Survey could be interview/questionnaire/a combination of the two Ignore comments unrelated to surveys eg IV and DV. Possible elements that the candidate may use include information on: sample (type/size/structure/source etc) design decisions (questionnaire/interview/postal etc) data collection (open/closed, qual/quant) controls ethical considerations there are others	(6 AO3)
	 Indicative content Design closed questions asking participants about experiences/views on the use of assessment tests Could use a Likert scale/forced choice to assess views Open questions would allow them to explore feelings in more depth May ask if not these type of assessment tests what employees think would be an appropriate method of assessment Participants would be best if recruited from some companies in the area that use assessment tests Would need to be confidential as otherwise people may be afraid of being honest if their company uses the tests Get the agreement of the companies, issue every employee with a questionnaire and provide sealed collecting boxes at work (like ballot boxes) to ensure anonymity May use a semi-structured interview so that detailed information can be collected The students would need to be aware of potential themes that may emerge Need to find out whether the person has ever been through a recruitment process using such tests or not as may influence views Ideally several hundred people to get a good overview 	

Level	Mark	Descriptor
Level 0	0	No rewardable material.
Level 1	1-2	Candidates will produce brief answers, making simple statements, showing some relevance to the question. Knowledge will be basic . • One element done well OR • Superficial comments on several elements
		 Critical decisions either missing or inappropriate Replication would be impossible or not appropriate Little use of relevant material. Poor use of terminology. The writing may have
		some coherence and will be generally comprehensible, but lacking both clarity and organisation. High incidence of syntactical and/or spelling errors.
Level 2	3-4	Candidates' answers will indicate some knowledge and understanding of the focus of the question. Suggestions may be poorly focused or ineffective • Two elements done well with good detail (depth) OR • At least three elements with moderate detail (breadth) • Some elements good while others weak • Insufficient detail would make it difficult to replicate the study Factual material may be poorly used. Terminology may have some errors. There may be passages which lack clarity and proper organisation. The standard of grammar and spelling should be reasonably good though there may be lapses.
Level 3	5-6	 Candidates answers will show good knowledge with understanding of the focus of the question. A range of elements addressed showing both breadth and depth, though not all elements need to be in depth Appropriate methodological issues considered, though not necessarily done well It should be possible to replicate most aspects of the study given the time constraints of the paper. Factual material will be largely correct. Mainly accurate use of terminology. Good organisation and clarity. Standard of grammar and spelling should be good

Question Number	Question	
8(b)	As part of the research project Professor Trestle wishes to try out some of the tests used by one company. She wants to use a sample of participants who can then be asked about their experiences. Professor Trestle recruits her sample by putting an advertisement on the students' notice board in their common room.	
	Explain strengths and weaknesses of recruiting a sample in this way. Answer	Mark
	Accept answers that focus on volunteer or self-selected sampling where the focus of recruitment matches the stimulus material. The sample type does not need to be named so long as the points credited are all for the same type of sampling. If a different sample name is used but the points clearly apply to volunteer/self-selecting credit can be gained. Explain means assertions must be qualified or expanded, not just stated to gain credit Elaborated strengths/weaknesses can gain up to one elaboration mark in total for the question (note rubric) If only strengths or weaknesses max 3. Volunteer/self-selecting • The participants are unlikely to drop out as they have chosen to do the study/eq; • It is usually quite quick to recruit a sample this way compared to selecting and finding people for e.g. a random sample/eq; • People who volunteer are probably highly committed to the research so likely to try harder to give useful feedback/eq; • The sample may be biased by age or gender as the researcher has no control over the structure of the sample/eq; • Participants may be atypical of the population as a whole by the nature of being volunteers/eq; • There is a higher likelihood of demand characteristics as the participants want to help the researcher/eq;	(4 AO3)
	Look for other appropriate material	

Question	Question
Number	Quostion
*9(a)	Psychology A Level is officially a science. However, imagine you are applying for a university course which means you need to explain that your Psychology A Level is counted as a science.
	Using research evidence from at least two different areas of psychology, assess whether psychology can be called a science.
	Include in your answer at least one argument you might use to convince an admissions tutor to show that psychology is a science.
	Answer
	Read through the whole answer before attempting to award any marks.
	Go to the content levels and award a mark appropriate to the content and quality of the answer. 'Quality' here does not include qwc but reflects the depth and breadth of psychological knowledge displayed.
	Owc: Once the content mark has been awarded refer to the structure levels and award those marks separately.
	Areas can be interpreted as either applications or approaches
	Indicative content
	 Description A subject is considered a science if it uses scientific methods such as experiments Objectivity is considered to make something more scientific whereas subjectivity makes it less scientific According to Popper to be a science there should be an overarching paradigm A science produces empirical data A science should use the hypothesis testing cycle to move knowledge on A science is able to produce hypotheses that are falsifiable To be scientific psychology should have a high degree of control thus removing bias as far as is possible Methodology such as laboratory experiments is seen as fulfilling scientific criteria
	 Evaluation Approaches such as Learning/Behaviourism and cognitive psychology adopt methods which can be seen as objective and therefore scientific Such experiments collect empirical data that can therefore be tested using statistical tests and hypotheses refuted or not Unfortunately even when collecting objective empirical data an approach such as the cognitive approach has difficulties as it is attempting to measure brain functioning, something which is somewhat subjective Though biological psychology can be more scientific as it seeks to measure genetic relatedness or brainwave patterns even here the link between these objective measures and the behavioural interface is influenced by subjective interpretation Despite the view put forward that 'real' sciences have overarching paradigms these are not quite so lacking in controversy in other disciplines as the ideal suggests The psychodynamic approach is often seen as the least scientific approach within psychology as so much of it is difficult to test, as well as subjective Concepts such as the id/ego/superego, though they may seem intuitively reasonable cannot be proven to exist While experiments are seen as scientific other research methods such as surveys or case studies are less rigorous and therefore less scientific

Admissions tutor arguments

- I consider the material I have studied in my psychology course which attempts to control variables and show clear cause-effect relationships aspires to be as scientific as biology
- I would argue that work on the biological basis of behaviour is falsifiable as there are clear criteria that can be tested

Look for other appropriate material

Level	Mark	Descriptor
Level 0	0	No rewardable material.
Level 1	1-3	Candidates will produce brief answers, making simple statements, showing some relevance to the question. The answer may include any of the following elements. • A general and basic definition of what it means to be scientific • Little or no reference to psychology • Evaluation fails to link comments to any areas of psychology, comments being general to psychology as a whole
Level 2	4-6	Candidates will produce statements with some development in the form of analysis/evaluation, with limited success.
		At least one area of psychology (either approach or application) considered and another at least mentioned
		 May be very unbalanced with either description or evaluation done well, the other being both general and basic or one area done well and the other(s) mentioned very briefly OR
		Both description and evaluation attempted though arguments lack development
Level 3	7-9	Candidates' answers will show some good knowledge with understanding of the focus of the question and will include analysis and evaluation.
		 Arguments applied to at least two areas of psychology (either approaches or applications) though some may lack detail Shows good understanding of the criteria associated with the concept of science Evaluation will cite relevant evidence though the arguments may not always be developed Link to admission tutor will be present but may be implicit
Level 4	10-12	Candidates will offer a response which is relevant and focused on the question, and addresses the main issues contained in it.
		 Arguments applied to at least two areas of psychology (either approaches or applications) in good detail Shows good understanding of the nature of what is meant by a science Evaluation will be balanced, with evidence cited to support and refute both sides of the argument Synthesis points are likely to be present Some indication of what could be cited to an admission tutor to support the science argument. Look for OWTTE

Structure levels

Guidance – 6AO2 marks rewarding structure and focus of description and evaluation. These marks are awarded independently of the content mark and should reflect the overall impression gained from the essay in terms of ability to express and develop arguments.

Level	Mark	Descriptor
Level 0	0	No rewardable material e.g. no terminology appropriate to the question
Level 1	1-2	Response <i>lacks</i> focus and structure. Points are disparately made with little cohesion and flow. There will be some appropriate use of terminology. High incidence of syntactical and/or spelling errors.
Level 2	3-4	Response is <i>generally</i> focused and cohesive. Structure of the essay may be reasonable but is likely to have some poorly placed material/repetition or some points that are irrelevant to the overall structure. • Likely to cite research evidence but this is not essential if the writing implies reasonable knowledge of a range of arguments. The response is presented in a legible style using appropriate terminology. Some syntactical and/or spelling errors are likely to be present.
Level 3	5-6	Response is coherent, well structured and focused.
Level 3	5-0	The injunctions in the question will be addressed appropriately and there will be only minor digressions from the substantive content of the essay. This level can be achieved even if no mention of the admissions tutor argument is included in what is otherwise an appropriate essay as this omission is dealt with under the content levels. • There will be use of research evidence to support arguments. • Most research used will be appropriate and accurate. Very few syntactical and/or spelling errors may be found.
		Bear in mind time constraints in terms of both the range and detail given in the answer

uestion
team of psychologists has applied for research funds to carry out a study into the fects of both biological and learning factors on gender development. The team has ecided to use laboratory bred rhesus monkeys as they wish to artificially manipulate ormone levels in some animals as well as controlling the conditions in which the nimals are raised.
escribe and evaluate the ethical issues this team of psychologists should take into excount when carrying out this study described in the box above.
our answer must be focused on this study.
nswer
ead through the whole answer before attempting to award any marks.
to the content levels and award a mark appropriate to the content and quality of the answer. 'Quality' here does not include qwc but reflects the depth and breadth of sychological knowledge displayed
wc: Once the content mark has been awarded refer to the structure levels and vard those marks separately
dicative content
The researchers need to ensure that the animals are kept in adequate conditions in terms of space, food and water Rhesus monkeys need to have social contact as they are a social species Any procedures undertaken should keep discomfort to a minimum As few animals as possible should be used given the nature of the research The team will require a Home Office Licence and be able to demonstrate their competence in undertaking the research project The team perhaps ought to look at whether it would be possible to use a species such as rats in preference to monkeys Researchers should always consider the cost-benefit balance using the Bateson cube or a similar strategy
As the monkeys being used are laboratory bred, that is better than using wild caught monkeys who would find lab conditions more distressing There may be problems ensuring sufficient social contact for the needs of the animals and manipulating the nature of the contact to discover the role in gender development. Harlow showed how inadequate social contact can have a very negative effect on future skills If any medical procedures such as removal of glands is being undertaken the animals should be properly anaesthetised and given adequate time to recover The researchers need to decide whether results from macaques are going to be applicable to humans as otherwise the research is futile The Home Office Licence should ensure that there are sufficient safeguards in place to ensure the welfare of the animals as otherwise the lab could be closed down Both the funding body and the university ethics committee should be carefully scrutinising the research to ensure it maintains high standards Every effort should be made to ensure the monkeys maintain a high standard of life after the study or if this is difficult for them that they are euthanased book for other appropriate material
scru Ever life a

Level	Mark	Descriptor
Level 0	0	No rewardable material.
Level 1	1-3	Candidates will produce brief answers, making simple statements, showing some relevance to the question. • Description of animal ethics issues either very brief or inaccurate OR • Description of human ethical issues applied to the scenario
		Description of number ethical issues applied to the section
Level 2	4-6	Candidates will produce statements with some development in the form of analysis/evaluation, with limited success. • Description of ethical issues may be brief and/or poorly focused • Evaluation may be general rather than related to the scenario
		Either description or evaluation done very well and the other missing or a minimal attempt
Level 3	7-9	Candidates' answers will show some good knowledge with understanding of the focus of the question and will include analysis and evaluation.
		 Description of ethical considerations will either fail to expand on points made or leave out some important aspects. There will be either breadth or depth. Evaluation may be biased in one direction. The answer must refer to the context of the question at least once. There may be errors/misconceptions/omissions that slightly alter the meaning of the arguments made.
Level 4	10-12	Candidates will offer a response which is relevant and focused on the question, and addresses the main issues contained in it.
		 There will be very good knowledge of the ethical issues involved though the issues covered may not be exhaustive Evaluation will consider both positives and negatives of animal research The response will be fully contextualised

Structure levels

Guidance – 6AO2 marks rewarding structure and focus of description and evaluation. These marks are awarded independently of the content mark and should reflect the overall impression gained from the essay in terms of ability to express and develop arguments

Level	Mark	Descriptor
Level 0	0	No rewardable material e.g. no terminology appropriate to the question
Level 1	1-2	Response lacks focus and structure.
		Points are disparately made with little cohesion and flow.
		There will be some appropriate use of terminology.
		High incidence of syntactical and/or spelling errors.
Level 2	3-4	Response is <i>generally</i> focused and cohesive.
		There may be some points that are irrelevant to the overall structure.
		Will cite relevant ethical guidelines but may produce in a format that reflects a 'list of ethical issues' rather than being fully integrated into the essay
		May cite research evidence but this is not essential if the writing implies reasonable knowledge of a range of arguments.
		The response is presented in a legible style using appropriate terminology.
		Some syntactical and/or spelling errors are likely to be present.
Level 3	5-6	Response is coherent, well structured and focused.
		The injunctions in the question will be addressed appropriately and there will be only minor digressions from the substantive content of the essay.
		There may be use of research evidence to support arguments.
		Any research used will be appropriate and accurate.
		Very few syntactical and/or spelling errors may be found.
		Bear in mind time constraints in terms of both the range and detail given in the answer

Further copies of this publication are available from Edexcel Publications, Adamsway, Mansfield, Notts, NG18 4FN

Telephone 01623 467467 Fax 01623 450481 Email <u>publication.orders@edexcel.com</u> Order Code UA036702 Summer 2013

For more information on Edexcel qualifications, please visit our website www.edexcel.com

Pearson Education Limited. Registered company number 872828 with its registered office at Edinburgh Gate, Harlow, Essex CM20 2JE







