



Mark Scheme (Results)

Summer 2016

Pearson Edexcel GCE
in Psychology (6PS02/01) Paper 1

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 visit our website at www.edexcel.com.

Our website subject pages hold useful resources, support material and live feeds from our subject advisors giving you access to a portal of information. 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.

www.edexcel.com/contactus

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 our commitment to high standards and raising achievement through innovation in education. Find out more about how we can help you and your students at:

www.pearson.com/uk

Summer 2016

Publication Code 6PS02_01_1606_MS

All the material in this publication is copyright

© Pearson Education Ltd 2016

General Guidance on Marking– GCE Psychology

All candidates must receive the same treatment.

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.

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 meaning of the phrase or the actual word is **essential** to the answer.
- 5 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 BUT this does not preclude others.

Unit 2: Understanding the Individual

Section A

Question Number	Question	
1	Negative reinforcement is when something	
	Answer	Mark
	a) desired is given after a behaviour. b) undesired is given after a behaviour. c) desired is removed after a behaviour. d) undesired is removed after a behaviour..	(1 AO1)

Question Number	Question	
2	A strength of Bandura, Ross and Ross's (1961) study is that	
	Answer	Mark
	a) the children were familiar with a Bobo doll. b) there was a wide range of ages in the sample. c) only agreed behaviours were included in the results. d) informed consent was gained from the participants.	(1 AO2)

Question Number	Question	
3	According to the Biological Approach brain lateralisation is a factor in gender development. It has been found that on average	
	Answer	Mark
	a) boys use the right side of their brain more than girls for spatial tasks. b) boys use the left side of their brain more than girls for spatial tasks. c) girls use the right side of their brain more than boys for spatial tasks. d) girls use the left side of their brain more than boys for spatial tasks.	(1 AO1)

Question Number	Question	
4	According to the Biological Approach the male gender is determined due to receiving a/an	
	Answer	Mark
	a) X chromosome from the father. b) Y chromosome from the father. c) X chromosome from the mother. d) Y chromosome from the mother.	(1 AO1)

Question Number	Question	
5	Max is 20 years old. His friends describe him as being self-centred, and very ambitious. He also has problems committing to a relationship. According to Freud these behaviours show that Max is fixated in the	
	Answer	Mark
	a) oral stage. b) anal stage. c) phallic stage. d) latent stage.	(1 A01)

Question Number	Question	
6	One criticism of Freud's theory of psychosexual development is that it	
	Answer	Mark
	a) a) objective. b) subjective. c) valid. d) reliable.	(1 A02)

Question Number	Question	
7	A negative correlation is when	
	Answer	Mark
	a) one variable increases and so does the other variable. b) one variable decreases and so does the other variable. c) one variable increases and the other variable decreases. d) one variable decreases and the other variable stays the same.	(1 A03)

Question Number	Question	
8	Simrut carried out a study and got the following scores 5, 3, 9, 3, 7, 4, 8, 3, 4 Simrut's median score is	
	Answer	Mark
	a) 3 b) 4 c) 5 d) 7	(1 A03)

Question Number	Question	
9	Regis is a registered psychologist who carried out an experiment. He did not tell his participants what the experiment was actually about until his debrief, in order to avoid demand characteristics. Regis had an issue with	
	Answer	Mark
	a) informed consent. b) right to withdraw. c) confidentiality. d) competence	(1 A03)

Question Number	Question	
10	Regis carried out a chi squared statistical test on his data. Two reasons he carried out a chi squared test are that it	
	Answer	Mark
	a) uses nominal data. b) uses ordinal data. c) uses an independent measures design. d) uses a repeated measures design.	(2 A03)

Section B

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

Question Number	Question	
11a	Tracy works for the local council. The council is thinking about cutting the number of people they employ to pick up litter from the street. Tracy has been asked to carry out an experiment to see if having the litter cleaned at less regular intervals will affect the amount of litter the public will drop. She compares a street to see how much litter is dropped at two different times, once when it has just been cleaned and once after it has not been cleaned for a month. Write a fully operationalised non-directional (two-tailed) hypothesis for Tracy's study	
	Answer	Mark
	<p>No credit for a directional (one tailed) hypothesis.</p> <p>No credit for a null hypothesis.</p> <p>1 mark for a partial non-directional hypothesis, 2 marks for an hypothesis where both the IV and the DV have been operationalised.</p> <ul style="list-style-type: none"> • There will be a difference in the amount of litter dropped on the street on the two times it is studied/eq; (1mark) • More litter will be dropped on the street on one of the two times it is studied/eq; (1 mark) • There will be a significant difference in the amount of litter dropped on the street that has just been cleaned compared to the street that hasn't been cleaned for a month/eq; (2marks) • The street that has just been cleaned will have a different number of pieces of litter dropped on it compared to the street with no cleaning for a month/eq; (2 marks) <p>Look for other reasonable marking points.</p>	(2 A03)

Question Number	Question	

11b	The council said that Tracy's study was not representative of the whole town. Outline one way Tracy could make her study more representative of the town's population.	
	Answer	Mark
	<p>One mark per point/elaboration. If more than one way given then mark all and credit the best.</p> <ul style="list-style-type: none"> • She could carry out the study on more than 1 street/eq; • This would mean that her sample size would increase so the results would be more representative/eq; • Tracy could use a random sampling method to make the results more representative/eq; • This would mean that every street had a chance of being in the study so there would be less bias when deciding which streets to use/eq; • Tracy should make sure she uses streets from a variety of areas across the town/eq; • This would ensure variables of the people who lived in the streets were more balanced so less likely to affect the results/eq; <p>Look for other reasonable marking points.</p>	(2 A03)

Question Number	Question	
12a	In the Psychodynamic Approach you have learned about Freud's study of Little Hans (1909). a) Explain what led Freud to conclude that Hans' fear of horses was really a fear of his father.	
	Answer	Mark
	<p>One mark per point/elaboration.</p> <ul style="list-style-type: none"> • Freud said the black bits around horses' mouth represented Hans' father's moustache/eq; • Hans was scared of horses with blinkers, the blinkers represented his father's glasses/eq; • Freud said seeing a horse collapse in the street reminded Hans of his death wish against his father/eq; • Hans once said 'daddy don't trot away from me' to his father/eq; • Hans was especially afraid of white horses and he once mentioned how white his father was/eq; <p>Look for other reasonable marking points.</p>	(3 A01)

Question Number	Question	
-----------------	----------	--

12b	Evaluate Freud's study of Little Hans (1909) in terms of validity	
	Answer	Mark
	<p>One mark per point/elaboration.</p> <p>No credit if it is not in terms of validity.</p> <ul style="list-style-type: none"> • The data gathered was rich and detailed as it was a case study, so this increases validity/eq; • Freud used different methods, such as dream analysis, observations of Little Hans, so the data could be triangulated/eq; • As Hans' phobia was cured Freud would argue that the analysis was valid/eq; • Hans related his dreams to his father in his own house so it has ecological validity/eq; • It does not have population validity as it is a case study of one unique boy so the results may not apply to other children/eq; • Freud's interpretation of Hans's dreams are subjective, other analysts may interpret them in a different way/eq; • The reason Hans may have been scared of horses is because he saw one collapse in the street so it may not be because of unconscious desires/eq; • Hans' father may have been biased in the information he passed on to Freud, so the analysis may not be accurate affecting validity/eq; • It has task validity as Hans' was going about his normal life and would talk to his father about his phobia/dreams/eq; <p>Look for other reasonable marking points.</p>	(4 AO2)

Question Number	Question	
13a	In the Learning Approach you carried out an observational practical. Outline the results from your observational practical from the Learning Approach.	
	Answer	Mark
	<p>No credit if the practical is not from the Learning Approach</p> <p>One mark for a weak answer.</p> <p>Two marks for an elaborated answer that includes some figures e.g. mean.</p> <p>Three marks for a detailed answer that includes the statistical test and whether the results were or were not significant.</p> <p>Possible practicals include: observing what toys children play with; what types of car different genders drive; observing which gender is the most polite; which gender wears a specific colour more. There are others if not sure check with team leader.</p> <p>0 marks</p> <p>Either no answer or a muddled answer where the examiner cannot tell what results were found. No focus on the observation from the Learning Approach. Or no answer at all.</p> <p>1 mark</p> <p>The examiner is given a brief idea of the results with a reference to what was found may not include any analysis of central tendency.</p> <p>E.g. more women drove smaller cars, such as Fiat 500's, compared to men.</p> <p>2 marks</p> <p>The examiner knows what results were found, will make an explanation of what the central tendency shows, or use figures to explain their results. May say there was a significant difference (or not) but not explain how they know this.</p> <p>E.g. More women drove bigger cars compared to men, as 28/30 women drove big cars and only 16/30 men drove big cars.</p> <p>3 marks</p> <p>The examiner knows exactly what results were found, will make a reference to whether there was a significant difference or not with some explanation about why they are saying this. May also include figures from central tendency to further explain their results.</p> <ul style="list-style-type: none"> The results were significantly different and women did drive smaller cars than men as the observed value was bigger than the critical value. <p>Look for other reasonable marking points.</p>	(3 A03)

Question Number	Question	
13bi	State one issue with the reliability of your observational practical from the Learning Approach	
	Answer	Mark
	<p>One mark per point/elaboration. No credit if it is not the practical observation from the Learning Approach. No credit if it is not a reliability issue.</p> <ul style="list-style-type: none"> We did not have good definitions about what type of play was aggressive affecting our reliability/eq; We only observed cars at midday, so results may be different if it was during rush hour/eq; Our extraneous variables weren't controlled so they may have affected our results/eq; It was raining when we observed the children in the playground so this may have affected how they acted/eq; We did not have good inter-rater reliability as when we compared results we did not have the same totals for healthy eating in males and females/eq; <p>Look for other reasonable marking points.</p>	(1 A03)

Question Number	Question	
13bii	Outline how you could deal with the issue stated in 13(b)(i) to improve the reliability of your observational practical from the Learning Approach.	
	Answer	Mark
	<p>One mark per point/elaboration. TE. If the issue being improved does not match the issue in bi) then 0 marks. If the issue being improved does match the issue in bi) but is not from the Learning Approach then 0 mark.</p> <p>Definitions.</p> <ul style="list-style-type: none"> Before we carried out the observation we should have sat down and discussed how we were going to define aggressive behaviour/eq; We could have carried out a pilot study to check we had inter rater reliability and had all observed the same behaviour/eq; (1st mark) If we found we did not have inter rater reliability we should have looked at our definitions again and seen where we differed/eq; (2nd mark) We could have had pictures of big and small cars so everyone in our groups knew what they were looking for/eq; <p>Extraneous variables.</p> <ul style="list-style-type: none"> We could have carried out a structured observation to control the setting/eq; (1st mark) this would mean that the setting would be the same for all participants increasing our reliability/eq; (2nd mark) We could carry out the observation over several days/times so the weather/time of day did not affect our results/eq; We could make sure we controlled variables such as noise, toys available so they were the same for everyone/eq; <p>Look for other reasonable marking points.</p>	(2 A03)

Question Number	Question	
14	<p>In the Learning Approach you will have studied Social Learning Theory. Social Learning Theory can be used to explain many different kinds of behaviour.</p> <p>Use terms from Social Learning Theory to fill in the blanks in the paragraph below.</p> <p>You must not use the same term more than once.</p>	
	<p>Answer</p> <p>If same term is used correctly more than once no marks for the second reference.</p> <p>Faye observes her mother mending the car and imitates her mother's behaviour. This is because her mother is a _role model/female_____</p> <p>A characteristic of Faye's mother that means she is more likely to be imitated by her daughter is that she is that she is same gender/powerful/ warm/ has authority/similar.</p> <p>Faye sees her father reward her mother for fixing the car as he takes her out to dinner. This is an example of vicarious reinforcement/learning</p> <p>When Faye helps fix the car she is given praise which increases her motivation so she is more likely to repeat the behaviour again.</p> <p>Look for other reasonable marking points.</p>	<p>Mark</p> <p>(4 A01)</p>

Question Number	Question	
15a	You will have studied a key issue in the Biological Approach. a) Describe the key issue you studied in the Biological Approach	
	Answer	Mark
	<p>One mark per point/elaboration. No credit if the issue is from another approach or if it is biological theory/studies with no identifiable issue. 1 mark for ID that is clearly expressed as an issue. Issues can include Is autism an extreme male brain condition? Are transgender operations ethical? Are mental disorders biological in nature? There are others. Please check with your team leader if you are not sure.</p> <p>E.g. Is autism an extreme male brain condition?/eq; <ul style="list-style-type: none"> • Autism affects a child’s ability to interact and build relationships with others/eq; • Symptoms can include lower language abilities than others their age and problems with communicating/eq; • Almost ¾ of people with autism are male/eq; • It is thought that an autistic brain structure is an exaggeration of normal male brain structures/eq; </p> <p>E.g. Are transgender operations ethical?/eq; <ul style="list-style-type: none"> • A transgender operation involves changing the physical sex of a person, e.g. changing a male into a female physically/eq; • This can be done with adults because they feel they are in the wrong sex body/eq; • It can also be done on children if they appear to be of an indeterminate sex/eq; • However in the case of children there are ethical issues as it is the parents not the child who decides what sex they become/eq; • Some argue it isn’t ethical to spend public money on what could be seen as a non essential operation/eq; </p> <p>E.g. Do anti depressants work?/eq; <ul style="list-style-type: none"> • Millions of pounds are spent by the NHS on anti depressants every year/eq; • They work by changing the neurotransmitters/increasing levels of serotonin in the brain/eq; • It is said that drugs are used because they are quicker/cheaper than other forms of therapy/eq; • However some argue that psychotherapy would be more effective/eq </p> <p>Look for other reasonable marking points.</p>	(3 A01)

Question Number	Question	
15b	Explain your key issue in 15a) using psychological terms, concepts, theories and/or research from the Biological Approach.	
	Answer	Mark
	<p>One mark per point/elaboration.</p> <p>TE: If 15a is blank but 15b explains a clearly identifiable key issue from the biological approach then all marks can be given.</p> <p>If the key issue is not from the biological approach but is the one described in 15a) 0 marks.</p> <p>No credit if the issue is not the same as the issue in 15a.</p> <p>No ID mark.</p> <p>Max 1 mark for non-biological alternative theories.</p> <p>E.g. Is Autism a male brain condition?</p> <ul style="list-style-type: none"> • Male brains are heavier than female brains, and people with autism have heavier brains/eq; • In early development male brains grow faster than female brains and the brains of people with autism grow even faster/eq; • Males are better at spatial tasks than females, and people with autism tend to be even better at them showing it could be due to brain function/eq; • People with autism are slower than males who don't have autism at developing language, with females developing language the fastest/eq; • However hormones could play a part as it could be due to exposure to male hormones which explains why some females also have autism/eq; • It may also be genetic as about 60% of MZ twins will have it if their twin already has it/eq. <ul style="list-style-type: none"> • There are other explanations such as the theory of mind which says people with autism cannot see another's perspective <p>E.g. Are transgender operations ethical?</p> <ul style="list-style-type: none"> • In the case of Money's study at first it seemed that a male could successfully become a female/eq; • However in David Reimer's later testimony it was clear it didn't work as he changed back to a male/eq; • The case of Daphne Went would suggest it does work as she is biologically male but happy as a female/eq; • If gender is partly due to brain lateralisation then such operations won't work as the child will still have the original sex brain/eq; • However social learning theorists would argue that with appropriate role models children can learn to be a specific sex/eq; • A study of 14 males who were raised as girls after surgery found that most of them still felt male showing it often doesn't work/eq; <p>E.g. Do anti depressants work?</p> <ul style="list-style-type: none"> • Studies have found they work in around 65% of cases compared to 30% improvement with a placebo/eq; • However in 30% of patients they have no effect/eq; • They do have side effects that include dry mouth/eq; • Prozac has been known to increase suicide/suicidal thoughts in some patients/eq; • Psychoanalysts would say that as the root cause of the problem has not been addressed then antidepressants just get rid of the symptoms/eq; • Antidepressants may not cure but the patient may need to take them in order to access other therapies/eq; <p>Look for other reasonable marking points.</p>	(5 A01)

Question Number	Question	
16a	In the Biological Approach you will have learned about Money's (1975) study. a) Describe the procedure of Money's original (1975) study.	
	Answer	Mark
	One mark per point/elaboration No credit for the aims, results or conclusion. No credit for any procedural point that relates specifically to the follow up study including allegations about what happened. Max one mark for points about the accident <ul style="list-style-type: none"> • There was an accident during Bruce's circumcision and his penis was burnt off/eq; • After seeing Money on television the parents contacted him and agreed to bring Bruce up as a girl/eq; • Bruce was castrated and his name changed to Brenda/eq; • He was renamed Brenda, dressed in girls clothes and given girls' toys to play with/eq; • The parents emphasised the mother role doing housework and father role doing DIY/eq; • Brenda was castrated when she was two/eq; • At puberty/12 years old Brenda was given oestrogen to allow female development/eq; • Both Brenda and her twin brother Brian had yearly interviews with Dr Money where he emphasised the difference between male and female/eq; Look for other reasonable marking points.	(4 A01)

Question Number	Question	
16b	Evaluate Money's original (1975) study.	
	Answer	Mark
	<p>One mark per point/elaboration</p> <p>No credit for evaluation points of any study other than Money's.</p> <ul style="list-style-type: none"> • The study was only carried out on one pair of male twins so the results may not be true of other children/eq; • The study lack validity as the follow up study found that Brenda had not been happy as a girl and had changed back to a male/David/eq; • Brenda's/Bruce's/David's case was different as s/he had been exposed to testosterone until he was two so the result may not be true for true intersex children/eq; • The study had ecological validity as Brenda lived her normal life at home and helped around the house as she would have had to do/eq; • It could be argued that the yearly interviews were not valid as children don't usually have interviews where the focus is on the different genders/eq; • There were no demand characteristics as neither Brenda nor Brian knew that Brenda had originally been male/eq; • They study was ethical as Money had the consent from Brenda's parents/eq • However it has been alleged that the study caused the twins mental harm so Money did not protect them from harm/eq; • Brian acted as a control to compare Brenda's development to so this increases the reliability/eq; • The results from this study were applied to real life cases of indeterminate sex where it was thought to be best to bring the children up as females/eq; • The case of Daphne Went supports Money's study as she was happy as a female even though she was biologically male/eq; • However several other studies have found that gender reassignments don't work so reducing the reliability of Money's study/eq; <p>Look for other reasonable marking points.</p>	(8 A02)

Section C

Question Numbers	General Instructions
	<p>Marking points are indicative, not comprehensive and other points should be credited. In each case consider 'or words to that effect'. Each bullet point is a marking point unless otherwise stated, and each point made by the candidate must be clearly and effectively communicated.</p>

Question Number	Question	
17	<p>Oliver wants to train his dog, Spike, to compete in agility trials and has set up an agility course for his dog in his garden. Explain how Oliver could train Spike to compete on an agility course using operant conditioning.</p>	
	Answer	Mark
	<p>1 mark per point elaboration. Max 2 marks if no reference to Oliver/dog/Spike/agility course.</p> <ul style="list-style-type: none"> • Oliver could use behaviour shaping and train his dog in stages, rewarding the dog as it completes each stage/eq; • He could start by teaching the dog how to weave between poles and then the dog has to weave and climb a plank before getting a reward/eq; • Eventually Spike would need to complete the whole course before he got a reward/eq; • Oliver could use positive reinforcement and give Spike a dog treat when it has completed an obstacle/eq; • Oliver could use punishment and blow a high pitch whistle every time Spike does not complete the course/eq; • Therefore Spike does the course to avoid the whistle, this is negative reinforcement/eq; • Oliver could use negative reinforcement so Spike completes the course to stop Oliver shouting at him/eq; <p>Look for other reasonable marking points.</p>	(5 AO2)

Question Number	Question	
18a	<p>Seif is an educational psychologist who is interested in researching whether students perform better if they have an examination at the end of a two year course or if students perform better if they have examinations throughout the two years of the course.</p> <p>Seif has decided to carry out a longitudinal study to compare the two approaches to student examinations.</p> <p>Describe how Seif may carry out his longitudinal study.</p> <p>You may wish to include some of the following:</p> <p>:</p> <ul style="list-style-type: none"> • Method • Variables • Apparatus • Sampling • Ethics. 	
	Answer	Mark
	<p>Mark according to the levels below.</p> <ul style="list-style-type: none"> • Elements include time scale, method, variables, design, location, apparatus, sampling, controls, data collection, ethics. <p>Levels.</p> <p>0 marks.</p> <p>No rewardable material. Either no answer or a muddled answer where the examiner cannot determine how the study would be carried out, or the study is unethical.</p> <p>Level 1.</p> <p>1-2 marks</p> <p>Basic and brief information about how the study could be carried out. Includes an attempt at one or more of the above.</p> <p>Level 2</p> <p>3-5 marks</p> <p>Basic detail about how the study could be carried out. Includes at least one well explained element and another element attempted from above. Partial replication possible.</p> <p>Level 3</p> <p>6-7 marks</p> <p>Good detail about how the study could be carried out. Includes some mention of the longitudinal time scale. Two elements from above are done at least well (may or may not include the longitudinal time scale) and one other attempted. Replication possible given time constraints of exam situation.</p> <p>When marking be aware of the time constraints. Some detail may be missing even from level 3</p>	(7 A03)

Question Number	Question	
18b	Evaluate the longitudinal research method, as it is used in psychology.	
	Answer	Mark
	<p>1 mark per point/elaboration.</p> <ul style="list-style-type: none"> • Participant variables do not affect the results as the same participants are used throughout the study/eq; • They are useful when studying children to see how they develop over time/eq; • They often use several different research methods which can be cross checked with each other to get valid/reliable results/eq; • As it is over a long period of time participants may drop out so the sample may become biased/eq; • The researchers may become attached to the participants so affecting their objectivity/eq; • The results could be specific to that generation of participants and may not be true for older or younger generations/eq; (1st mark) e.g. longitudinal research into the effects of media violence will be different across different generations due to the different media/eq; (2nd mark) <p>Look for other reasonable marking points.</p>	(4 A03)

	Guidance	
	Use the levels below to allocate marks according to how detailed the answer is and how thorough the information. Giving marks for elaboration where appropriate is particularly important where questions such as this are suitable to stretch and challenge candidates, so that the full range of marks is available. Please read the whole response before crediting.	

	Question	
19	Describe and evaluate the biological explanation of gender. In your evaluation you must include at least one comparison with another explanation of gender.	
	Answer	Mark
	<p>Refer to the levels at the end of the indicative content.</p> <p>Appropriate answers might include the following descriptive points but the list is not exhaustive.</p> <ul style="list-style-type: none"> • Genetic sex is determined by the chromosomes in the egg and those in the sperm • The egg includes the X chromosome, the sperm contains either the X or the Y chromosome • If the sperm contains the X chromosome it will be a girl, if it's the y chromosome it will be a boy • The Y chromosome will cause the male foetus to develop testes at around 7 weeks • Testosterone makes males more aggressive/tough and oestrogen makes females more emotional • If the testes develop male sex hormones will be released when the foetus is 3 months leading to male sex organs • If no male hormones are released then the female sex organs develop • In puberty the hormone testosterone lead males to develop facial hair and causes sperm to be produced • In females oestrogen released at puberty causes breasts to grow and fatty tissue to be deposited on the hips • In a female other genes cause the foetus to develop ovaries • Hormones are released that stop the male foetus developing a uterus/fallopian tubes • Brain lateralisation is different between the genders with males being more lateralised than females. • Male speech and comprehension is controlled by the left hemisphere, whilst females tend to be across both hemispheres <p>Appropriate evaluation may include the following points, but the list is not exhaustive.</p> <ul style="list-style-type: none"> • The Batista family had boys who were thought to be girls until they reached puberty, and the boys had no problem becoming males, so supporting the biological approach • However, this may be because their community allowed them to become male as it had happened before • Dorner (1972/76) destroyed sex centres in the brains of newborn male rats, and they behaved like female rats • However, we may not be able to generalise the findings of this study to humans as our brains are different from rats 	<p>(6 AO1 6 AO2)</p>

- A meta analysis on human brains failed to show gender differences in the corpus callosum
- David Reimer was not happy when he was brought up as a girl, and had surgery to turn back to a male supporting the approach
- Female rats who were injected with testosterone behaved like male rats
- Female babies are more sensitive to noise from birth, so there must be biological differences

Comparison points

- The learning approach would argue that gender development is due to your upbringing not your genes/hormones
- Operant conditioning would argue that we are positively reinforced for gender appropriate behaviour whilst the biological approach does not look at reinforcement
- SLT says we learn our behaviour from observing same sex role model whilst the biological says it is all down to our nature
- The psychodynamic approach says we learn our gender appropriate behaviour by identifying with the same sex parent/eq;
- Both the psychodynamic and biological explanations say it is due to nature, but the psychodynamic also says nurture plays a part

Look for other appropriate/suitable material

Level	Mark	Descriptor
		<p>AO1 Knowledge and understanding of science and how science works.</p> <p>AO2 Evaluation of knowledge and understanding of science and how science works.</p>
	0	No rewardable material
Level 1	1-3 marks	<p>Candidates will produce brief answers, making simple statements showing some relevance to the question.</p> <ul style="list-style-type: none"> • Description includes brief elements of genes, hormones or brain lateralisation • Little or no attempt at the evaluative or comparative demands of the question. <p>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.</p>
Level 2	4-6 marks	<p>Description OR evaluation only OR limited attempt at each OR one is in less detail than the other.</p> <ul style="list-style-type: none"> • Description will include basic elements of the biological explanation of gender. • Evaluation is basic and may not include a comparison <p>Candidates will produce statements with some development in the form of mostly accurate and relevant factual material. There are likely to be passages which lack clarity and proper organisation. Frequent syntactical and /or spelling errors are likely to be present.</p>
Level 3	7-9 marks	<p>Candidate has attempted and answered both the injunctions in the question well.</p> <ul style="list-style-type: none"> • Good description which focuses on the biological explanation of gender • And good evaluation with an attempt at the comparison. <p>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.</p>
Level 4	10-12 marks	<p>Candidate has attempted and answered both the injunctions in the question very well.</p> <ul style="list-style-type: none"> • Description will have breadth and depth and will be focused on the biological explanation of gender • Evaluation is thorough and broad and is focused on the biological explanation of gender. It may be all comparison, but will be more than one comparison point. • There is at least one explicit comparison between the biological explanation of gender and one other explanation. <p>The skills needed to produce convincing extended writing are in place. Very few syntactical and /or spelling errors may be found. Very good organisation and planning. Given time constraints and limited number of marks, full marks must be given when the answer is reasonably detailed even if not all the information is present.</p>