
PHYSICAL EDUCATION

9396/13

Paper 1

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MARK SCHEME

Maximum Mark: 90

Published

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This document consists of **10** printed pages.

Question	Answer	Marks
Section A		
1(a)(i)	<p>4 marks for 4 of:</p> <p>(sub-max. 2 marks)</p> <ol style="list-style-type: none"> 1 pivot joint; 2 rotation; <p>(sub-max. 2 marks)</p> <ol style="list-style-type: none"> 3 cartilaginous / semi-moveable joint / slightly movable; 4 flexion / extension / rotation; <p>(sub-max. 2 marks)</p> <ol style="list-style-type: none"> 5 gliding joint; 6 flexion / extension / rotation / circumduction; 	4
1(a)(ii)	<p>4 marks for:</p> <p>(external obliques)</p> <ol style="list-style-type: none"> 1 cause trunk rotation / twisting; 2 an example of an activity using this type of movement; <p>(erector spinae)</p> <ol style="list-style-type: none"> 3 cause extension / hyperextension of the spine; 4 an example of an activity using this type of movement; 	4
1(b)	<p>5 marks for:</p> <ol style="list-style-type: none"> 1 concentric / isotonic; 2 extension; 3 gluteus maximus / biceps femoris / semimembranosus / semitendinosus; 4 (horizontal) adduction / extension; 5 trapezius / latissimus dorsi / deltoid / rotator cuff / infraspinatus / teres minor; 	5
1(c)(i)	<p>2 marks for any 2 of:</p> <ol style="list-style-type: none"> 1 during exercise – increased venous return; 2 increased diastolic filling / preload / increased stretch of cardiac muscle / elastic; 3 increased the force of contraction / stronger / powerful; 4 known as Starling’s law; 5 higher percentage of blood ejected from heart per beat / increased ejection fraction / end systolic volume lower than at rest; 	2

Question	Answer	Marks
1(c)(ii)	<p>4 marks for any 4 of:</p> <ol style="list-style-type: none"> 1 intrinsic / myogenic / heart controls own rate; 2 sinoatrial (SA) node / pacemaker sets (sinus) rhythm / heart rate / nervous impulses; 3 (sinoatrial (SA) node) impulses spread through (cardiac tissue in) atria, causes contraction / systole (of atria); 4 impulses picked up by atrioventricular (AV) node (delays impulse); 5 impulses to ventricle through bundle of His / AV bundle; 6 Purkyne / Purkinje fibres spread out impulses (ventricles contract / systole); 	4
1(d)	<p>4 marks for 4 of:</p> <p><i>First two mechanisms offered marked.</i></p> <p>(sub-max. 2 marks)</p> <ol style="list-style-type: none"> 1 the skeletal pump / muscle pump mechanism; 2 contraction of skeletal muscles compresses vein walls helping to force blood back to the heart; <p>(sub-max. 2 marks)</p> <ol style="list-style-type: none"> 3 the respiratory pump mechanism; 4 changes in pressure in the thoracic / chest cavity put pressure on the (abdominal) veins helping to force blood back to the heart; <p>(sub-max. 2 marks)</p> <ol style="list-style-type: none"> 5 venous tone / smooth muscle; 6 partial contraction of smooth muscle in the vein walls helps to force blood back to the heart; <p>(sub-max. 2 marks)</p> <ol style="list-style-type: none"> 7 gravity; 8 blood in veins above the heart helps force blood back to the heart; <p>(sub-max. 2 marks)</p> <ol style="list-style-type: none"> 9 suction pressure / pumping action of the heart; 10 pressure changes in atria causes reduced pressure in large veins which leads to blood being sucked into heart; 	4

Question	Answer	Marks
1(e)	<p>3 marks for 3 of:</p> <p>(sub-max. 2 marks)</p> <ol style="list-style-type: none"> 1 in blood oxygen combines with haemoglobin / forms oxyhaemoglobin; 2 haemoglobin can carry up to four molecules of oxygen when fully saturated; 3 oxygen diffuses into the muscle cell because of the diffusion gradient / diffusion from high to low concentration / pressure; <p>(sub-max. 2 marks)</p> <ol style="list-style-type: none"> 4 myoglobin has higher affinity for oxygen than haemoglobin / haemoglobin has a lower affinity; 5 myoglobin acts as a temporary store / transporter of oxygen to the mitochondria / site of aerobic respiration; 	3
1(f)	<p>4 marks for any 4 of:</p> <ol style="list-style-type: none"> 1 lots of alveoli – increased surface area for diffusion; 2 layer of moisture in the alveoli – dissolves oxygen and aids diffusion; 3 thin / semi-permeable / one-cell thick walls of alveoli – increasing diffusion rate; 4 capillaries surround the alveoli – large contact area for diffusion of gases into blood stream; 5 surfactant within the alveoli – reduces the tendency of alveoli / lungs to collapse; 6 elastic fibres in alveolar walls – lungs can recoil (to change volume / aid ventilation); 7 small diameter of capillaries – slow transit time / compression of red blood cells; 	4

Question	Answer	Marks
Section B		
2(a)	<p>4 marks for:</p> <p><i>Accept alternate classifications if justified.</i></p> <ol style="list-style-type: none"> 1 closed, e.g. – unchanging / stable environment / few decisions; 2 internally-paced – performer decides when to start / how fast to perform; 3 discrete – clear beginning and end; 4 high organisation – difficult to separate sub-routines / practice as whole skill / lots of information to process / many decisions to be made; 	4
2(b)	<p>4 marks for any 4 of:</p> <p><i>Max. 3 marks if no example.</i></p> <ol style="list-style-type: none"> 1 motor ability named, e.g. strength / speed / OR stated that abilities are innate / genetic; 2 needed as foundation / basis to build skill learning / building block, e.g. you need co-ordination before learning a catch in cricket; 3 fundamental motor skill named, e.g. running / catching / throwing / kicking; 4 an example of the skill being developed from the fundamental form, e.g. the push to the flick in hockey / kicking ball to passing in football / simple catch to complex skill; 5 needs practice / repetition / reinforcement of movement to help learning; 6 this gets refined / adapted / more complex through teaching / coaching; 	4
2(c)	<p>5 marks for 5 of:</p> <p>(sub-max. 4 marks)</p> <ol style="list-style-type: none"> 1 Gestaltist approach / insight learning; 2 skill is treated holistically / wholeness; 3 learner develops an understanding / requirements of skill; 4 learner takes into consideration aspects of the environment / display / perception before deciding appropriate response; <p><i>benefits:</i></p> <ol style="list-style-type: none"> 5 adaptable / able to be modified; 6 encourages problem solving / discovery / finding out / independent learners; 7 increases motivation; 8 learn at own pace; 	5

Question	Answer	Marks
2(d)	<p>5 marks for any 5 of:</p> <ol style="list-style-type: none"> 1 (involves) short-term sensory store / STSS, short-term memory / STM and long-term memory / LTM – all three parts named for credit; 2 STSS receives information from the display / environment; 3 STSS – selective attention happens / important information is filtered in / irrelevant information is filtered out / information to STM; 4 STM – ‘working memory’ / organises or chunks information / limited capacity; 5 STM – encodes / sends information to LTM; 6 STM runs motor programmes; 7 LTM – stores or remembers information or patterns of movement / motor programmes indefinitely / unlimited capacity; 8 LTM decodes / sends information (to STM); 9 LTM involved in DCR process; 10 memory process affects or influences perception / helps judge or interpret what needs to be done (to perform or learn the movement); <p><i>Accept annotated diagrams.</i></p>	5
2(e)	<p>3 marks for any 3 of:</p> <ol style="list-style-type: none"> 1 positive reinforcement is praise / encouragement / rewards / self-satisfaction; 2 use of suitable specific example of positive reinforcement, e.g. encouragement from a coach; 3 negative is the removal of criticism / unpleasant stimulus; 4 use of suitable specific example of negative reinforcement, e.g. coach stops shouting; 	3
2(f)	<p>3 marks for any 3 of:</p> <ol style="list-style-type: none"> 1 information overload / too much to take in; 2 poor selective attention; 3 focus on inappropriate stimuli / signal / cue; 4 unable to focus on correct / appropriate cue / signal; 5 unable to look at both defender and support player; 6 loss of concentration; 	3

Question	Answer	Marks
2(g)	6 marks for 6 of: 1 performers have drive / need / motivation / desire to achieve / solve a problem / to win / learn; 2 practice / rehearsal / performance takes place (to satisfy this need or drive); 3 if skill is performed successfully then learning is reinforced; 4 drive is reduced when success (perceived) is experienced / goals are met; 5 therefore motivation to do more decreases; 6 too much practice leads to drive reduction / reactive inhibition; 7 new tasks / goals / motivation may be needed to remove this reduction in drive; 8 therefore need for more motivation; 9 therefore need to rest / take breaks / use distributed practice;	6

Question	Answer	Marks
Section C		
3(a)	<p>4 marks for any 4 of:</p> <ol style="list-style-type: none"> 1 develops health / fitness; 2 physical education programmes offer a variety / range of sporting activities in programme / create teams; 3 teaches basic (sports) skills to give confidence; 4 encourages a positive attitude to activity; 5 programme is fun / enjoyable to encourage participation; 6 develops ethics / value of activities / sportsmanship / fair play / respect; 7 has after school / extra-curricular activities; 8 publicised participation opportunities / school-club links; 9 compulsory; 10 employs specialist well-qualified teachers / staff / specialist facilities / coaches; 	4
3(b)	<p>4 marks for any 4 of:</p> <p><i>real risk:</i></p> <ol style="list-style-type: none"> 1 risk / danger from activity / injury, e.g. fall from the rock face / capsize; 2 risk / danger from environment, e.g. rock fall / flooding / weather / tides / currents / rapids; 3 planned for, e.g. weather forecast / route planning / observation; <p><i>perceived risk:</i></p> <ol style="list-style-type: none"> 4 think of the risk – e.g. may fall / scared of heights / weak swimmer; 5 risk can be controlled / limited, e.g. harness for rock climbing / wearing life jacket; 6 causes excitement / adrenaline / used as a learning experience through planning; 	4
3(c)(i)	<p>4 marks for:</p> <p><i>Needs correct name and explanation of each level for each mark.</i></p> <ol style="list-style-type: none"> 1 foundation: introduction to sport / learning basic movement skills / experiencing a variety of activities / grass-roots level / school PE programme; 2 participation: choosing certain activities / recreational level / extra-curricular involvement; 3 performance – commitment to training / improving performance / performing as well as possible; 4 elite: excellent performance / representative / national / international level / professional; 	4

Question	Answer	Marks
3(c)(ii)	4 marks for any 4 of: 1 provision for funding / grants / sponsorship / scholarships; 2 provision of facilities – local / regional / national / equipment / technology; 3 provision / education of coaches; 4 provision of centres of excellence / sports schools / universities / academies; 5 provision of support – medical / sport science; 6 description of government policies / initiatives / schemes / relating to talent ID and talent development; 7 description of pathways / progression in place to maintain excellence / organisation of sport; 8 description of policies showing attitudes for excellence;	4
3(d)(i)	4 marks for any 4 of: 1 physical health and fitness; 2 mental health / personal challenge / satisfaction of success / strive to achieve high standards / improve self-esteem; 3 enjoyment / intrinsic rewards; 4 become skilful / knowledgeable; 5 social health / socialising / part of a team / life skills, e.g. leadership; 6 possibility of employment / professional performer / coach; 7 fame / praise / medals / status; 8 keep out of trouble / hobby; 9 learning cultural values, e.g. ethics / losing / winning;	4
3(d)(ii)	4 marks for any 4 of: 1 lack of motivation / lazy; 2 lack of opportunity / few facilities / poor infrastructure; 3 lack of time / money / transport / resources / other commitments; 4 illness / disability / injury / fear of not being good enough / lack of confidence; 5 lack of initial training / family support / peer pressure; 6 fear of discrimination / prejudice / stereotyping; 7 sport having a low status within social group / cultural limitations; 8 lack of ability / fitness / obesity; 9 lack of education / knowledge about benefits of involvement;	4

Question	Answer	Marks
3(e)	<p>6 marks for 6 of:</p> <p>(sub-max. of 4 marks per section)</p> <p><i>positives:</i></p> <ol style="list-style-type: none"> 1 increased access to watch sport / live coverage; 2 higher standards of performance; 3 high-quality stadia / facilities; 4 enhanced viewing experience / interactive technology; 5 greater awareness / knowledge of the sport / creates role models; 6 rules changed to become more exciting spectacle; 7 influenced elimination of negative aspects of sport, e.g. hooliganism / responsible reporting; <p><i>negatives:</i></p> <ol style="list-style-type: none"> 8 events moved and scheduled depending on prime time / highest viewing figures; 9 reduced attendance / crowds due to media output / lack of atmosphere; 10 event interrupted to accommodate adverts / commercial breaks; 11 traditional nature of the game may have to alter / rule changes / time-outs / clothing; 12 increased cost / ticket prices / pay-to-view / satellite TV; 13 merchandise expensive / replica kit frequently changed; 14 irresponsible reporting can lead to spectator violence / deviant behaviour; 	6