

ISC Class 12 Physical Education Specimen Paper 2

Written by the Future Topper subject team on the CISCE examination pattern. Not an official CISCE paper.
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Maximum Marks: 70 | Time Allowed: Three hours | Reading Time: 15 minutes

Part I is compulsory. From Part II attempt any five questions. This paper carries 70 marks, the remaining 30 being for the practical work.

General Instructions

Write your answers on the separate answer paper provided. The first 15 minutes are for reading the paper, and you may not write during that time. Part I is compulsory and must be attempted in full. From Part II you must attempt any five of the eight questions, and no credit is given for a sixth. Marks for each question, or part of a question, are shown in brackets. Answers should be in your own words and of a length suited to the marks offered, a one-mark part needing no more than a sentence and a four-mark part needing a short developed answer. Illustrate general statements with examples from games and athletics wherever you can. No printed figures, charts or photographs are supplied with this paper, and where a question asks for a diagram, a court marking or a fixture chart you are expected to draw it yourself in pencil and label it. Questions on nutrition are to be answered in terms of food groups and general principles, and questions on injury are to be answered in terms of general first aid, since neither a diet nor a course of treatment for a named individual can be set out in an examination answer. This paper carries 70 of the 100 marks for the subject, the remaining 30 being for the practical work.

PART I (20 Marks)

Attempt all parts of Question 1 and all parts of Question 2.

Question 1 [12]

Each part carries 1 mark. For the parts that offer four choices, write only the option you choose. For the rest, answer in a single sentence or give the single word, name or term asked for.

- (i) The ability to change the position of the body quickly and under control, as a player does when dodging a defender, is called:
 - (a) agility (b) flexibility
 - (c) muscular endurance (d) power
- (ii) Name the component of fitness that is the product of strength and speed, and which a shot putter chiefly depends upon.
- (iii) The nutrient class that is needed in the largest quantity by weight, and whose loss during a long match must be replaced continuously, is:
 - (a) protein (b) fat
 - (c) water (d) vitamins
- (iv) Name the yogic posture of complete relaxation, lying on the back, with which a session of practice is usually closed.
- (v) In a game of goalball, every player on the court wears an eyeshade so that:
 - (a) the light is kept out of the eyes (b) all players compete on equal terms whatever their degree of sight
 - (c) the referee can identify the teams (d) the rules of the game require a uniform
- (vi) Name the condition in which the body temperature rises dangerously during exertion in heat and the body loses the ability to cool itself.
- (vii) A force applied to a body in such a way that it does not pass through the centre of gravity produces:
 - (a) linear motion alone (b) no motion at all
 - (c) rotatory motion (d) equilibrium

- (viii) State in one sentence what is meant by the mechanical term projectile as it is used in sport.
- (ix) The settled sequence of actions a player goes through before every service or free throw is called a:
(a) tactic (b) pre-performance routine
(c) feint (d) warming up
- (x) Name the principle of training which states that the gains made in training are lost when training is stopped.
- (xi) In a single knock out tournament for sixteen teams, the total number of matches to be played is:
(a) 16 (b) 32
(c) 8 (d) 15
- (xii) Name the official who, in the organisation of an athletics meet, is responsible for checking that the implements and the track markings conform to the rules before the events begin.

Question 2 [8]

Each part carries 2 marks. Answer each part in two or three sentences.

- (i) State two reasons why a cooling down should follow a hard training session. [2]
- (ii) State two general principles that should guide the eating of a player on the day of a match. [2]
- (iii) Distinguish between a bye and a seeding in a knock out tournament. [2]
- (iv) State two ways in which a coach may build confidence in a young player who has just been beaten heavily. [2]

PART II (50 Marks)

Attempt any five questions from this Part. Each question carries 10 marks.

Question 3 [10]

- (a) Explain what is meant by body composition, and state why it matters more to a sportsperson than body weight alone. [3]
- (b) Describe three habits of daily living, other than exercise, that contribute to wellness. [3]
- (c) Explain the difference between health related and performance related fitness. Name the components of each, and explain why a school programme should attend to health related fitness for every pupil while performance related fitness is developed chiefly in the teams. [4]

Question 4 [10]

- (a) Explain what is meant by hydration, and describe the general principles of replacing fluid in training and competition. [3]
- (b) Explain, in terms of food groups and general principles only, why the recovery meal after a hard session matters, and what such a meal should draw on. [3]
- (c) Explain why a coach should not give an individual player advice on what to eat, and state who should do so. Describe three ways in which a coach can support good eating habits across a whole squad without giving such advice. [4]

Question 5 [10]

- (a) Explain what is meant by yoga, and state three of its aims as the classical texts describe them. [3]
- (b) Describe three differences between a yoga session and a session of ordinary physical training. [3]
- (c) Explain what is meant by meditation and what is meant by concentration in the yogic sense. Describe how a short session of meditation may be conducted for a school class, and state why no claim should be made that yoga treats a disease. [4]

Question 6 [10]

- (a) Explain what is meant by an intellectual disability, and state two ways in which the teaching of a motor skill may be adapted for such a child. [3]
- (b) Describe three ways in which a games lesson may be modified so that a child who uses a wheelchair can take part with the rest of the class. [3]
- (c) Explain what the Special Olympics and the Paralympic Games each exist for, and state how they differ in whom they serve and in the way they are organised. State one way in which the existence of such competitions changes attitudes in ordinary schools. [4]

Question 7 [10]

- (a) Explain what is meant by sports medicine, and name three kinds of specialist who make up a sports medicine team. [3]
- (b) Describe three causes of sports injury that lie with the player himself rather than with the ground or the equipment. [3]
- (c) Explain, in general first aid terms, what should be done when a player collapses on the field. State what must not be done, and explain why a player with a suspected head or neck injury must not be moved except by trained hands and must not return to play that day. [4]

Question 8 [10]

- (a) Explain what is meant by force, and distinguish between the force a player produces and the force a player must absorb, with one example of each. [3]
- (b) Explain the path taken by a projectile, and name three factors that decide how far a thrown implement will travel. [3]
- (c) Explain what is meant by the axes and planes of the body, and name them. Describe, with one example from a game or an athletic event for each, a movement that takes place about each axis. [4]

Question 9 [10]

- (a) Explain what is meant by aggression in sport, and distinguish between hostile aggression and instrumental aggression. [3]
- (b) Explain what is meant by team cohesion, and describe two things a coach may do to build it. [3]
- (c) Explain what is meant by goal setting. Describe the qualities a well set goal should have, distinguish between an outcome goal and a performance goal, and explain which of the two serves a young player better. [4]

Question 10 [10]

- (a) Explain what is meant by a training load, and distinguish between the volume and the intensity of training. [3]
- (b) Explain what is meant by overtraining, and describe three signs by which a coach may recognise it in a player. [3]
- (c) Describe the work that has to be done before, during and after a school athletics meet. Draw a fixture chart for a single knock out tournament of eight teams, and state one advantage and one disadvantage of that form of tournament. [4]

ANSWER KEY AND MARKING SCHEME

The answers printed here are models and not the only acceptable wording. Accept any answer that is accurate, relevant and expressed in the candidate's own words, and accept a correct example from any game or event in place of the one given. Marks shown in the marking lines are the step marks an examiner would award. In the questions on nutrition, no credit is to be given for an answer that sets out calorie figures, quantities in grams or a meal by meal plan for a named person, and in the questions on injury no credit is to be given for an answer that reads as a course of treatment to be carried out on an actual casualty, since the syllabus asks for general principles and general first aid only.

Question 1 [12]

- (i) (a) agility. It is the ability to change the position of the whole body quickly and accurately, which requires speed, balance, coordination and the strength to stop and start, and it is what a dodge, a sidestep and a change of direction all call upon.
- (ii) Power, also called explosive strength, which is the ability to apply a large force in a very short time.
- (iii) (c) water. It makes up the greatest part of the body by weight, it is lost continuously in sweat during a match, and unlike the other nutrients its loss has to be made good within the hour rather than within the day.
- (iv) Shavasana, the corpse posture.
- (v) (b) all players compete on equal terms whatever their degree of sight. The eyeshade removes the advantage a player with some residual vision would otherwise have, so that the game turns on hearing, orientation and skill, and players of different degrees of visual impairment can play on the same court.
- (vi) Heat stroke, the most serious of the heat illnesses. Credit may be given for heat stroke described as hyperthermia with failure of the body's cooling.
- (vii) (c) rotatory motion. A force whose line of application misses the centre of gravity has a turning moment about it, so the body rotates, which is how a gymnast begins a somersault and how a spinning ball is produced.
- (viii) A projectile is any body that has been given an initial force and is then left to travel through the air under the action of gravity and air resistance alone, a thrown javelin, a struck ball and the body of a long jumper in flight all being projectiles.
- (ix) (b) pre-performance routine. It is the fixed sequence of preparatory actions and thoughts the player repeats before each attempt, which settles arousal and directs the attention to the task.
- (x) The principle of reversibility, sometimes stated as use it or lose it.
- (xi) (d) 15. Every match eliminates exactly one team, and fifteen of the sixteen teams must be eliminated to leave one winner, so the number of matches is always one less than the number of teams.
- (xii) The technical delegate or technical manager, the official who inspects and certifies the implements, the equipment and the markings before the competition. Credit may also be given for the referee or the chief judge where the answer makes the checking function clear.

1 mark for each correct part. No mark is deducted for a wrong option, and a one-line answer that carries the correct idea gains the mark even if it is loosely worded.

Question 2 [8]

- (i) A cooling down keeps the circulation moving while the heart rate comes down gradually. During hard work the muscles of the leg squeeze the veins and help return blood to the heart, and if a player stops dead that pump stops with him, so blood pools in the legs, the return to the heart falls and the player may feel faint or giddy. Light activity for some minutes prevents this and also clears the waste products of hard work from the muscles more quickly than standing still. It further reduces the stiffness and soreness felt the next day, lets the body temperature and the breathing settle, and gives a few minutes of light stretching while the tissue is still warm, which is when stretching is most useful.

The gradual return of the heart rate and circulation, with the risk of pooling and faintness if a player stops dead 1. Any second reason, such as the clearing of waste products, less soreness the next day, or useful stretching while warm 1.

- (ii) The day of a match is not the day to change anything. The player eats the foods he is used to, prepared in the way he is used to, since a new dish or an unfamiliar restaurant on match day risks a stomach that will not settle, and nothing is gained by experimenting at that point. The main meal is taken some hours before the start, so that it has been digested and is not sitting heavy, and it draws chiefly on the energy foods with a light place for the protein foods and very little fat or fried matter, since fat and a large bulk of food both slow digestion. Fluid is taken steadily through the day and not left to the warm up, and a smaller easily digested food may be taken nearer the start if the player is used to it. What the particular player eats, and when, is a matter he works out with a qualified dietitian in training and then repeats on match day.

Familiar foods, nothing new on match day 1. The main meal taken some hours before, light and drawing on the energy foods, with fluid taken steadily through the day 1.

- (iii) A bye is the right given to a team to pass into the next round without playing a match in the round concerned, and it is used when the number of teams entered is not a power of two, so that byes are given in the first round to bring the number remaining down to the nearest power of two. Byes are allotted according to a settled rule, the last team in the draw receiving the first bye and the first team the second, and they are divided between the upper and the lower half of the chart. A seeding is the deliberate placing of the strongest teams at fixed and widely separated positions in the draw, instead of leaving them to chance, so that they cannot meet one another in the early rounds and the better teams are likely to reach the later stages. A bye therefore concerns how many matches a team plays, while a seeding concerns where in the chart a team is placed.

Bye defined as passing to the next round without playing, with the reason it is needed 1. Seeding defined as the deliberate separation of the strongest teams in the draw 1.

- (iv) The coach should separate the defeat from the player's worth and go straight to what can be worked on. The first conversation should not be about the scoreline but about the two or three things the player did well, named specifically so that the praise is believable, and then about one thing to be worked on at the next practice, so that the player leaves with a task rather than a verdict. The coach should take his share of the responsibility where the match was badly chosen or the preparation was short, and should avoid comparing the player with a teammate or holding the result up before the group. He should then arrange the next few weeks so that the player meets a contest he can handle, since nothing restores confidence like a performance the player is satisfied with, and should set him goals about his own performance rather than about winning, which he can meet whatever the opposition does. Where the player's own reaction is severe or lasting, a word with the parents and, if needed, the school counsellor is better than waiting.

Specific praise for what was done well, with one thing identified to work on 1. Any second measure, such as a contest the player can handle next, performance goals in place of outcome goals, or the avoidance of public comparison 1.

Question 3 [10]

- (a) Body composition is the make up of the body in terms of the tissues it consists of, usually expressed as the proportion of the body's mass that is fat and the proportion that is everything else, that is the lean mass of muscle, bone, organs and water. It is one of the five components of health related fitness, and it is assessed by such means as skinfold measurement, bioelectrical impedance and more exact laboratory methods, each of which gives an estimate rather than an exact figure. It matters more to a sportsperson than body weight alone because weight is a single number that says nothing about what the body is made of. Two players of the same height and the same weight may differ entirely, one carrying a good deal of muscle and little fat, the other the reverse, and their capacity for work will differ accordingly. Weight that is lean mass contributes to performance, since muscle produces force and bone carries load, while weight that is excess fat has to be carried without contributing anything, so it costs energy in every stride and tells against endurance, speed and jumping. A player who trains hard may also find his weight unchanged for months while his composition has altered considerably, fat having been lost and muscle gained, and a player judged by the scale alone would conclude that his training had failed. For the same reason body weight is a poor guide to whether a player is in condition, and judgements of that kind for an individual belong to a doctor or a qualified dietitian who can assess composition properly.

Body composition defined as the proportion of fat to lean mass 1. Weight alone says nothing about what the body is made of, with two players of equal weight differing 1. Lean mass contributing to performance while

excess fat is carried without return, or the point that composition may change while weight does not 1.

- (b) First, sleep. Adequate sleep of a regular pattern is the condition on which the rest depends, since it is during sleep that the body repairs tissue, consolidates what has been learnt and restores the appetite, the mood and the attention, and a person short of sleep eats worse, trains worse, judges worse and falls ill more easily. A settled hour for going to bed, a dark and quiet room and the putting away of screens before bed do more for wellness than most of what is sold for it. Second, the avoidance of tobacco, alcohol and other substances, and of the habit of using them to deal with feelings. Tobacco in any form damages the lungs and the circulation and tells on endurance within weeks of starting, alcohol disturbs sleep, judgement and recovery, and both carry a long term risk out of proportion to anything they offer. Third, the management of stress and the keeping of relationships in repair. A person who has someone to talk to, who has an interest outside work or study, who can recognise when the strain is mounting and who has a means of settling himself, whether that is breathing practice, a walk or a conversation, is better in health than a person of the same physical fitness who has none of these. Other habits worth crediting are regular and varied meals eaten at settled hours rather than snatched, adequate fluid through the day, personal and dental hygiene, the use of a seat belt and a helmet and other ordinary safety precautions, regular medical and dental check ups, and the keeping of a reasonable balance between work, study, activity and rest.

First habit named with its contribution 1. Second habit named with its contribution 1. Third habit named with its contribution 1.

- (c) Health related fitness is the fitness every person needs in order to be healthy, to carry out the ordinary work of the day without undue fatigue and to reduce the risk of the diseases that inactivity brings on. Performance related fitness, also called skill related fitness, is the additional fitness a person needs in order to perform well in a particular sport, and it is specific to the demands of that sport. The components of health related fitness are cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition. The components of performance related fitness are speed, agility, power, balance, coordination and reaction time. A school programme should attend to health related fitness for every pupil, because every pupil, whatever his ability at games, needs a heart and lungs that work, muscles strong enough to hold him upright and carry him through the day, joints that move freely and a body composition that does not load him with weight he cannot use. These are the things that decide his health for the next fifty years, they can be developed in any pupil whether or not he is talented, and the pupil who is poor at games is precisely the one who needs them most and who is most often left out. They also cost little, needing no expensive facility and no selection. Performance related fitness, by contrast, is developed chiefly in the teams, because it is specific to a sport and is only worth developing in the person who is going to compete in that sport. The agility a hockey player needs is not the agility a gymnast needs, the work required to develop power or reaction time to a competitive standard takes a great deal of time and individual attention, and it is of no benefit to a pupil who will never play at that level. There is also a question of safety, since the heavy specific loading that develops power belongs to players who have been conditioned for it. A school therefore gives everyone the general base in its lessons and develops the specific qualities in those who have chosen a sport, remembering that the two are not opposed and that performance related fitness is built on a health related base.

Health related fitness defined, with its components named 1. Performance related fitness defined as specific to a sport, with its components named 1. Why health related fitness is for every pupil, with the point that it decides long term health and can be developed in anyone 1. Why performance related fitness belongs chiefly to the teams, with its specificity to a sport or the time and conditioning it requires 1.

Question 4 [10]

- (a) Hydration is the state of the body's water balance, and a player is well hydrated when the water taken in matches what is lost in sweat, in the breath and in urine. The body has no useful store of water, loses it continuously and loses it fastest in exactly the conditions in which sport is played, so hydration has to be managed rather than left to thirst, which is a late and unreliable signal that appears only after an appreciable loss has already occurred. The general principles are these. A player should begin the session or the match already well hydrated, having taken fluid through the preceding day and some in the hours before, rather than attempting to make up a shortfall at the start. During activity fluid should be taken in small amounts at frequent intervals, at every available break, rather than in one large quantity, since small amounts are absorbed better

and sit more comfortably. Fluid should be cool and palatable, because a player drinks more of what he likes, and it should be placed where he can reach it, since availability decides consumption more than instruction does. After activity the losses should be replaced steadily over the following hours and not all at once. Where sweating is heavy and prolonged, salts are lost as well as water and have to be replaced along with it, and plain water in very large quantity without any salt can itself be harmful. A player should learn his own pattern of sweating in training rather than follow a figure given for somebody else, and any individual plan of fluid and electrolyte replacement, particularly for an endurance event or for competition in heat, should be worked out with a qualified sports dietitian or the team doctor.

Hydration defined as the balance of water taken in against water lost, with the point that thirst is a late signal 1. Beginning well hydrated and taking small amounts frequently during activity 1. Replacing losses steadily afterwards, with the point about salts in prolonged sweating or the individual plan left to a dietitian 1.

- (b) The recovery meal matters because a hard session leaves the body in deficit in three ways at once. The fuel stored in the muscles has been drawn down and has to be replaced before the next session, and the body replaces it fastest in the hours immediately after exercise, so a player who delays eating until late in the evening begins the next day's work with less fuel than he should have. The working of the muscles has broken tissue down, and the repair and the adaptation that the training was done for are made from the material the next meal supplies, so a session without a recovery meal produces soreness without the gain. And fluid and salts have been lost in sweat and have to be made good. Recovery is part of the training and not an afterthought, and it is where a well trained player and a chronically tired one differ. Such a meal should draw chiefly on the energy foods, that is the cereals, millets, roots, fruits and their products, which replace the fuel the muscles have used. It should include a food from the protein group, which in an Indian household most often means milk and milk products or a pulse, and in other households may be an egg, fish or meat, since the repair is made from protein and it is better taken with the carbohydrate than separately. It should include fruit and vegetables, which carry the vitamins and minerals the recovery processes need and help replace what was lost in sweat, and it should be accompanied by fluid. The food should be of a kind the player can face and digest soon after exertion, when appetite is often poor, which argues for something light and familiar rather than heavy and fried. The amounts, and anything further for a player in heavy competition, are for a qualified sports dietitian to settle with him.

The replacing of the fuel used, with the point that it is replaced fastest in the hours after exercise 1. Repair of tissue and the adaptation the training was for, with the replacement of fluid and salts 1. The meal drawing on the energy foods together with a protein food, fruit and vegetables and fluid, in a form the player can digest 1.

- (c) A coach should not advise an individual player on what to eat because what any one player needs depends on age and growth, on health and medical history, on the training load carried and on circumstances at home, none of which a coach is qualified to weigh up. Advice that suits one player may harm another, and a player still growing is the likeliest to be harmed. The responsibility is a clinical one and does not belong to the coach. Any individual plan should be drawn up by a qualified sports dietitian, working with the team doctor, and for a player under eighteen with the parents informed and involved. What a coach can properly do is work on the conditions in which the whole squad eats. First, by seeing that the food provided at training camps, at matches and on travel days includes the energy foods, a protein food, fruit and vegetables and enough fluid, so that the sensible choice is also the easy one. Second, by building the timetable so that there is a proper break for a meal and training does not run across it, and so that fluid is available at every session. Third, by arranging general teaching for the squad as a group, on hydration and on the place of the recovery meal, and by bringing in a dietitian to speak to them rather than doing it himself. A coach should also set an example in his own habits and should not comment on any player's body or weight. If a coach becomes concerned about a player's health, the proper course is to raise it privately with the player, inform the parents and refer the matter to the team doctor, not to act on it himself.

Why a coach is not placed to advise an individual, with the point that needs differ and a growing player is most at risk 1. The dietitian with the team doctor, and the parents for a player under eighteen 1. Three ways of supporting the squad as a whole 1.5. Referring a concern through the parents and the team doctor 0.5.

Question 5 [10]

- (a) Yoga is a discipline of Indian origin by which a person works on the body, the breath and the mind together in order to bring them under control and to still the movements of the mind. The classical definition, given by Patanjali in the opening of the Yoga Sutras, is that yoga is the stilling of the modifications of the mind, and the eight limbs set out there are the means to it. It is therefore wider than the postures by which it is now generally known, taking in conduct, observance, posture, breath, the withdrawal of the senses and the stages of concentration and absorption. Three of its aims as the texts describe them are, first, the control of the mind, the quieting of its restlessness so that attention can be held steadily on one thing and the person is no longer carried about by every impulse. Second, the health, steadiness and purification of the body, which is treated not as an end in itself but as the instrument the inner work requires, since a body that cannot sit still or is distracted by illness cannot be used for it. Third, self knowledge and the freedom that is held to follow from it, the discrimination of the self from what is not the self, which the texts set out as the end of the whole path. A fourth aim worth crediting is ethical discipline, the ordering of conduct through the yamas and niyamas as the foundation on which the rest stands, and a fifth is the balance and evenness of mind with which a person meets success and failure.

Yoga defined as a discipline of body, breath and mind, with the classical definition as the stilling of the mind 1. Two aims named 1. A third aim named 1.

- (b) First, the aim differs. Ordinary physical training aims at a measurable improvement in the body's capacity, in strength, speed or endurance, and progress is judged by a score or a time. A yoga session aims at the steadiness of the body and the quieting of the mind, so that what counts is the quality of attention and of the breath within the practice, and there is nothing to measure and nobody to beat. Second, the manner of working differs. Physical training works through repetition against a load, with the breath left to look after itself, with effort deliberately taken to the point of fatigue and often with movements done fast. In yoga a posture is entered slowly, held steadily without strain and released slowly, the breath is kept quiet and is itself part of the practice, the practitioner works within his own range rather than at his limit, and bouncing, jerking and forcing are specifically avoided. Third, the place of the mind differs. In physical training the attention is on the external task or may wander freely, and music, counting and encouragement are used to carry the body through. In yoga the attention is turned inwards and held on the breath or the sensation of the posture, the session usually closes with relaxation in shavasana, and the practice is conducted in quiet. Other differences worth crediting are that yoga needs no apparatus, no partner and little space; that it is not competitive and has no winner; that it carries a body of observances about conduct, diet and the hours of practice that physical training does not; and that a yoga session typically works the whole body in sequence rather than a chosen group of muscles.

First difference, the aim of the session 1. Second difference, the manner of working, with steadiness and the breath against repetition against a load 1. Third difference, the place of the mind and the attention, or any other sound difference 1.

- (c) Concentration in the yogic sense is dharana, the sixth limb, the deliberate holding of the attention on a single object, whether that object is the breath, a point on the body, a sound or an image. The mind is brought back to it each time it wanders, and the practice consists in that bringing back. Meditation is dhyana, the seventh limb, which follows from it: when the attention can stay on the object without having to be returned to it, so that the holding becomes continuous and effortless and the sense of effort and of the one making it begins to drop away, that unbroken flow is meditation. The two are therefore stages of one process, dharana being the effort and dhyana the state that the effort leads to, and both are preceded by pratyahara, the withdrawal of the senses from their objects. A short session for a school class may be conducted in this way. The class is settled in a quiet, airy room, sitting on mats in a comfortable cross legged posture with the spine upright, or on chairs with the feet flat if the floor is difficult, the hands resting on the knees and the eyes closed or lowered. Two or three minutes of light loosening movement and a few slow, even breaths come first, so that the body is not fidgety. The teacher then gives one simple object of attention, the easiest being the breath itself, and asks the class to notice the breath going in and out at the nostrils without altering it, or to count the breaths up to ten and begin again. The teacher says beforehand, in plain words, that the mind will wander and that this is not a failure, and that the practice is simply to notice it and come back. The session is kept short, five minutes being ample to begin with, and is closed with a minute of rest in shavasana or sitting quietly before the class is

asked to open its eyes slowly. Nothing is made compulsory for a child who does not wish to take part, no religious observance is attached to it, the room is kept quiet and the practice is conducted at the same hour so that it becomes a habit. No claim should be made that yoga treats a disease. Yoga is a discipline of health, and there is reason to think that regular practice helps with flexibility, posture, sleep, stress and general wellbeing, but the evidence that it cures or treats any particular disease is limited and is nothing like the evidence required of a medicine. To tell a pupil or a parent that a practice will cure asthma, diabetes, a heart condition or a mental illness is to make a claim that cannot be supported, and the real danger is that somebody will delay or abandon a treatment that works in favour of one that does not, which is how a harmless practice becomes harmful. A teacher should therefore present yoga as what it is, say that a person with a medical condition should practise only with his doctor's clearance and under a qualified teacher, and treat it as something that may go alongside medical treatment and never in place of it.

Concentration explained as dharana, the holding of attention on one object 1. Meditation explained as dhyana, the unbroken flow that follows, with the relation between the two 1. A short session described for a class, with the posture, a single object of attention such as the breath, a short duration and a close in rest 1. Why no claim should be made that yoga treats a disease, with the danger of a treatment being delayed or abandoned 1.

Question 6 [10]

- (a) An intellectual disability is a condition, present from childhood, in which a person's intellectual functioning and his adaptive behaviour are both significantly below what is usual for his age, so that he needs support in learning, in communication, in self care and in managing the ordinary demands of daily life. It varies greatly in degree, it is not an illness and it is not the same as a learning difficulty confined to one area such as reading, and a child with an intellectual disability learns as other children do but more slowly, in smaller steps and with more repetition. Two ways in which the teaching of a motor skill may be adapted are, first, to break the skill into its smallest parts and teach one part at a time, in a fixed order, moving on only when the part is secure, and then chaining the parts together, since a skill presented whole and explained at speed is lost on the child. Second, to replace verbal explanation with demonstration and with physical guidance. The teacher shows the movement rather than describing it, uses very few words and the same words every time, and where necessary moves the child's limbs through the action so that the child feels it, fading that help as the child takes it over. Other adaptations worth crediting are a great deal more repetition and practice than a typical class needs, with the same routine, the same place and the same equipment each time so that the setting itself cues the action; immediate, specific and generous praise for the part done correctly; the reduction of distraction, noise and waiting in the lesson; simplified rules and fewer choices within the game; and the use of a peer partner.

Intellectual disability defined as significantly below age expectation in intellectual functioning and adaptive behaviour, with support needed 1. First adaptation, breaking the skill into parts and teaching one at a time 1. Second adaptation, demonstration and physical guidance in place of verbal explanation 1.

- (b) First, change the equipment and the dimensions so that the game is playable from a seated position. A lighter or larger ball, a lower net or basket, a shorter court, a larger goal and a smaller playing area all bring the game within reach, and a target placed at seated height rather than standing height lets the child score as others do. Second, change the rules so that the child's means of moving is allowed for. The child may be given an extra touch, an extra bounce, a longer time in possession or two hands where others use one, may push the ball on the lap while travelling instead of bouncing it, may be exempt from a rule that assumes running, and may be given a protected zone that others may not enter so that the chair is not crowded or tipped. Third, choose or redesign the activity so that the chair is not a disadvantage in it. Sitting volleyball, a passing and target game, boccia, table tennis, a throwing event or a relay in which each member covers the distance by whatever means he has, all put the child on the same footing, and the whole class can be asked to play a seated game for part of the lesson, which is excellent for the others as well. Other modifications worth crediting are attention to the surface and the space, since a rough or soft ground and a crowded hall make a chair unusable, and the clearing of a route into and around the playing area; the use of a partner or pusher where the child's arms tire; the assigning of a role within the team such as setter or goalkeeper that suits the child's reach and reaction; and asking the class, including the child, how the game should be adapted, which produces better answers than the teacher alone and commits the group to them.

First modification, the equipment and the dimensions 1. Second modification, the rules of play 1. Third modification, the choice of an activity in which the chair is not a disadvantage 1.

- (c) The Special Olympics exists to provide year round sports training and competition for people with intellectual disabilities, so that they gain fitness, skill, courage and the experience of being part of a team, and so that their families and their communities see what they are able to do. Its purpose is participation and development rather than the identification of the best, and it is built around the idea that every athlete who takes part has achieved something by taking part. The Paralympic Games exists to provide elite international competition for athletes with physical, visual and intellectual impairments, at the highest standard of performance, alongside and after the Olympic Games, so that such athletes have a pinnacle to aim at as other sportspeople do. They differ in whom they serve: the Special Olympics is for people with intellectual disabilities, of every level of ability, and anyone may take part, while the Paralympic Games is for athletes with a range of eligible impairments, chiefly physical and sensory, and entry depends on qualifying standards, so that only a small number of highly trained competitors appear. They differ also in organisation. In the Special Olympics athletes are grouped by ability after preliminary trials so that each competes against others of similar ability, every athlete receives recognition, and there is no elimination, the emphasis falling on taking part and on personal best; the oath is that the athlete will win or, failing that, be brave in the attempt. In the Paralympic Games athletes are placed in classes according to the functional effect of their impairment, compete for medals under rules closely modelled on those of the Olympic sports, and must meet qualifying marks to be entered at all. One way in which the existence of these competitions changes attitudes in ordinary schools is that it supplies a visible answer to the assumption that a child with a disability cannot play. When pupils and teachers have seen a Paralympic sprinter or a Special Olympics team, the question in the staff room shifts from whether such a child can be included in games to how it is to be done, the child's own ambition becomes legitimate, parents ask for provision instead of accepting exemption, and the school is more willing to buy the equipment and find the time, because the activity now has a recognised competitive structure to lead into rather than being a kindness.

The purpose of the Special Olympics, participation and development for people with intellectual disabilities 1. The purpose of the Paralympic Games, elite competition for athletes with eligible impairments 1. How they differ in whom they serve and in organisation, with grouping by ability and recognition for all against classification and qualifying standards 1. One way in which they change attitudes in ordinary schools 1.

Question 7 [10]

- (a) Sports medicine is the branch of medicine concerned with the health of people who take part in physical activity and sport, covering the prevention of injury and illness, the diagnosis and treatment of injury, rehabilitation and return to play, the medical supervision of training and competition, and the promotion of health through activity. It is not confined to elite athletes and includes the recreational player, the school child and the person taking up exercise for health. It is by its nature a team subject, since no one discipline covers the whole of it. Three kinds of specialist who make up such a team are the sports physician, a doctor with further training in the field, who examines, diagnoses, treats illness and injury, decides on investigations and gives the clearance to return to play; the physiotherapist, who assesses and treats the injury by physical means, restores range of movement, strength and function, carries out the rehabilitation programme and advises on prevention; and the orthopaedic surgeon, who deals with the injuries of bone and joint that require operative treatment. Others who may be credited are the sports dietitian, who advises on eating and fluid; the sports psychologist, who works on motivation, anxiety, concentration and the mental side of rehabilitation; the athletic trainer or first aider who is present at training and competition; the biomechanist, who analyses technique; the exercise physiologist; the podiatrist; and the coach, who although not a clinician has to be part of the team if its advice is to be carried out.

Sports medicine defined, covering prevention, treatment, rehabilitation and the supervision of activity 1. Two specialists named with what each does 1. A third specialist named with what he does 1.

- (b) First, inadequate preparation and conditioning. A player who has not warmed up, who is not fit enough for the demands of the game, who is weak in a muscle group that the sport loads heavily or who returns after a layoff and trains at the level he left off at, is asking tissue to do what it is not ready for, and most school injuries happen in the first weeks of a season for this reason. Second, faulty technique and poor skill. A movement

performed wrongly loads the body in a way it was not built for, so a bowler with a mixed action, a thrower who opens his shoulder too soon, a lifter who rounds his back and a player who lands stiff legged from a jump are each repeatedly stressing a structure that will eventually give way, and a player whose skill is below the level of the game is also forced into awkward positions and late tackles. Third, fatigue, overtraining and the neglect of recovery. A tired player's coordination, timing and judgement all fall off, his muscles absorb force less well, and the tissue has not had time to repair the damage of the last session, so the risk rises sharply in the closing minutes of a match and in a congested fixture list. A fourth cause is the player's own attitude and conduct, that is playing through pain, concealing an injury in order to be selected, playing dangerously or in temper, ignoring the rules and refusing to wear the protective kit. A fifth is a previous injury inadequately rehabilitated, which is the single strongest predictor of the next one, and a sixth is poor eating, poor hydration and inadequate sleep.

First cause, inadequate preparation and conditioning 1. Second cause, faulty technique or skill below the level of the game 1. Third cause, fatigue and neglect of recovery, or any other sound cause lying with the player such as playing through pain or an unrehabilitated previous injury 1.

- (c) When a player collapses on the field the general first aid approach is followed, and the first thing is to get help moving. Play is stopped and the other players are kept back; the scene is checked for anything that could cause further harm; the trained first aider or the doctor on the ground is called and an ambulance is summoned at once rather than after a period of waiting to see. The casualty is approached and spoken to, and if there is no response help is shouted for immediately. The responsiveness and the breathing are then checked, and if the casualty is unresponsive and not breathing normally the first aider begins resuscitation and sends for the automated defibrillator if one is on the premises, since in a sudden collapse of cardiac origin the minutes decide the outcome. If the casualty is unresponsive but breathing normally, and there is no reason to suspect a neck injury, the airway is kept clear and the casualty is placed on his side and watched continuously until help arrives. If he is responsive, he is kept still, kept warm, loosened at the collar, shaded from the sun and questioned about what happened, while the breathing and the responsiveness are watched for any change. Any sign of head or neck involvement, bleeding, fracture or difficulty in breathing is treated as serious. What must not be done is this. The casualty should not be surrounded by a crowd, slapped, shaken, splashed with water, made to sit or stand up, given anything by mouth while he is drowsy or may need an anaesthetic, or allowed to walk off the field on his own. He should not be left alone, and a collapse should never be dismissed as ordinary exhaustion so that the player is told to lie down and rest while the game goes on. No untrained person should attempt treatment beyond the first aid he has been taught. A player with a suspected head or neck injury must not be moved except by trained hands, because an injury to the cervical spine may have left the vertebrae unstable while the spinal cord is still undamaged, and a careless movement of the head or the trunk at that moment can convert a recoverable injury into a permanent paralysis. The casualty's head and neck should therefore be supported in the position found, the helmet left in place, and the player moved only by people trained to do it with a board and a collar. He must not return to play that day, even if he gets up and says he is well, because the symptoms of a concussion commonly appear some minutes or hours after the blow, because judgement and balance are impaired before the player himself is aware of it, and because a second blow sustained while the brain is still recovering can be catastrophic out of all proportion to its force. The player is therefore removed for the day, must not be left alone that night, must be seen by a doctor, and returns only through a graded medical protocol under medical clearance.

Stopping play, calling the trained first aider and summoning an ambulance at once 1. Checking response and breathing, with resuscitation if the casualty is unresponsive and not breathing normally, or the recovery position if breathing 1. What must not be done, moving or sitting the casualty up, giving anything by mouth, crowding him or treating a collapse as mere exhaustion 1. Why a head or neck injury must not be moved except by trained hands and why the player cannot return that day, with the delayed appearance of symptoms or the danger of a second blow 1.

Question 8 [10]

- (a) Force is any push or pull that acts on a body and that tends to change the body's state of rest or of motion, or to deform it. It has magnitude and direction, and its effect depends also on where it is applied and for how long, so that in sport the same quantity of force produces quite different results according to the point at which it is applied and whether it is delivered in an instant or over a period. The force a player produces is force he

generates himself, chiefly by his muscles acting on his bones and transmitted through a point of contact to the ground, to an implement or to an opponent, and the purpose of producing it is to start, to stop, to change direction, to lift or to propel. The drive of a sprinter's legs into the blocks and the pull of a swimmer's arm through the water are examples, as is the force a batsman transmits to the ball through the bat. The force a player must absorb is force applied to him from outside, by the ground, by an implement, by a ball or by an opponent, which he has to receive without damage to himself. The landing of a long jumper in the pit, the catching of a fast cricket ball and the receiving of a tackle are examples. The techniques for the two are opposite in principle. To produce force the player uses as many joints as he can in sequence, works over the longest range and the greatest time available, and applies the force through the centre of gravity where straight line motion is wanted. To absorb force he does the reverse: he spreads the impact over as long a time and as large an area as he can, giving with the ball, bending at the knees and hips on landing, rolling with a fall and pulling the hands back as the ball arrives, because the longer the time over which the same momentum is taken out, the smaller the force that any tissue has to withstand.

Force defined as a push or pull tending to change the state of rest or motion of a body 1. Force produced by the player, with an example 1. Force absorbed by the player, with an example, and the point that absorption is achieved by extending the time of impact 1.

- (b) A projectile, once it has left the hand or the foot and is no longer being driven, travels under the action of gravity and air resistance alone. If air resistance is neglected its path is a parabola, that is a symmetrical curve which rises to a highest point and falls again in a mirror image of its rise, because the horizontal component of the velocity is unchanged throughout the flight while the vertical component is steadily reduced by gravity, becomes zero at the top and is then reversed and increased at the same rate on the way down. Where the point of release and the point of landing are at the same height the path is fully symmetrical; where the implement is released from above the ground, as a shot is from the shoulder, the second half of the curve is longer and flatter than the first. Air resistance in practice flattens the later part of the path and shortens the flight, and in an implement such as the javelin or the discus the air acts on it as an aerofoil and lift becomes a factor. Three factors that decide how far a thrown implement travels are the speed of release, which is the most important of the three, since the distance varies with the square of that speed, so that a small gain in speed produces a large gain in distance; the angle of release, since too flat an angle gives the flight too little time and too steep an angle wastes speed on height instead of distance, the best angle being somewhat below forty five degrees where the implement is released from above ground level; and the height of release, since an implement let go from a greater height has further to fall and so stays in the air longer and travels further, which is why a tall thrower with a long arm has an advantage. Further factors worth crediting are air resistance, the attitude or angle at which an aerodynamic implement is presented to the air, the spin given to it, and the wind.

The path described as a parabola, with the horizontal velocity constant while the vertical is changed by gravity 1. Two factors named with their effect, such as the speed and the angle of release 1. The third factor named with its effect, such as the height of release, with any note on air resistance 1.

- (c) An axis is an imaginary straight line about which a body rotates, and a plane is an imaginary flat surface along which a movement takes place, the axis always standing at right angles to the plane of the movement it governs. The body is described with three of each. The frontal or coronal plane divides the body into front and back halves, and movement in it, such as the raising of the arm sideways, takes place about the sagittal or anteroposterior axis, which runs from front to back. The sagittal plane divides the body into left and right halves, and movement in it, such as the bending and straightening of the elbow, takes place about the frontal or transverse axis, which runs from side to side. The transverse or horizontal plane divides the body into upper and lower halves, and movement in it, such as the turning of the trunk, takes place about the vertical or longitudinal axis, which runs from head to foot. Movement about the frontal axis may be illustrated by a gymnast's forward somersault, in which the whole body rotates head over heels in the sagittal plane, and equally by the flexion and extension of the hip and knee in a running stride. Movement about the sagittal axis may be illustrated by a gymnast's cartwheel, in which the body rotates sideways in the frontal plane, and equally by the sideways lean and the abduction of the arm in a side arm throw. Movement about the vertical axis may be illustrated by a figure skater's or a diver's spin and by the twist of the trunk and hips in a discus

throw or a golf swing, where the body rotates about a line running down its length.

Axis defined as the line about which rotation takes place and plane as the surface in which movement occurs, at right angles to each other 1. The three planes and the three axes named and correctly paired 1. An example of movement about two of the axes 1. An example of movement about the third axis 1.

Question 9 [10]

- (a) Aggression in sport is behaviour directed at another person with the intention of causing him physical or psychological harm, where that behaviour is outside the rules and the accepted conventions of the game. The definition turns on intention and on the breach of the rules, which is why hard, forceful and perfectly legal play within the rules, however fierce, is properly called assertive behaviour and not aggression, and why an injury caused accidentally in a fair tackle is not aggression at all. Hostile aggression is aggression whose purpose is the harm itself. It is driven by anger, it is a reaction to provocation or frustration, the satisfaction sought is in seeing the other player hurt or humiliated, and it takes no account of whether it helps the player's side, which it generally does not, since it concedes penalties and loses players to the referee. A punch thrown after a foul is an example. Instrumental aggression is aggression used as a means to an end, without anger. The player calculates that hurting or intimidating the opponent will serve the result, so that a bowler bowls at the body to unsettle a batsman or a defender hits a dangerous forward early to slow him, and the harm is incidental to the advantage sought. It is the commoner of the two in organised sport and the harder to deal with, because it is deliberate, cold and often rewarded by success.

Aggression defined as behaviour intended to harm, outside the rules, with the distinction from assertive play within the rules 1. Hostile aggression defined, driven by anger with harm as the end 1. Instrumental aggression defined, harm used as a means to an advantage 1.

- (b) Team cohesion is the tendency of a group to stick together and to remain united in pursuing its objectives and in satisfying the needs of its members. It has two sides, task cohesion, which is the group's commitment to the common objective and its ability to work together towards it, and social cohesion, which is the liking and the attachment among the members, and a side may be high in one and low in the other. Two things a coach may do to build it are, first, to make the common task clear and to make each player's part in it clear. Cohesion grows out of a shared goal that the group has had a hand in setting, out of each member knowing what his role is and believing that it matters, and out of his seeing that it is noticed and valued, so a coach who sets the side's goals with the players, defines the roles explicitly, recognises the unglamorous contributions publicly and insists that the result belongs to the whole group is building task cohesion directly. Second, to give the group shared experience and the ordinary machinery of a group, that is time together off the field, travel, a routine and a few customs of its own, responsibilities held by the players rather than the coach, and the practice of settling disagreements within the group instead of letting them go underground. Other means worth crediting are keeping the squad reasonably stable, since cohesion needs time; setting the group a task that requires cooperation rather than one that can be done alone; dealing with cliques, with a dominant player who undermines others and with public criticism of a teammate; being seen to treat the players fairly, since favouritism destroys cohesion faster than defeat does; and avoiding so complete a social cohesion that the group becomes comfortable and stops demanding anything of itself.

Team cohesion defined, with the distinction between task and social cohesion 1. First means, a clear shared goal with defined and valued roles 1. Second means, shared experience and the machinery of a group, or any other sound means such as fairness and the handling of cliques 1.

- (c) Goal setting is the deliberate fixing of a definite target that a player undertakes to reach within a stated time, used as a means of directing his effort, maintaining it and letting him measure his own progress. It works because a goal tells the player exactly what to attend to, gives him a reason to persist when the work is dull, and supplies the feedback from which satisfaction and confidence are built, and a player with a specific target consistently outworks a player who has merely been told to do his best. A well set goal is specific rather than general, so that it states what is to be achieved and not simply that the player will improve; it is measurable, so that it can be known whether it has been reached; it is difficult enough to require real effort yet within the player's reach, since a goal that is certain is not worth pursuing and one that is impossible is abandoned; it is accepted by the player himself and not merely imposed on him; it carries a date by which it is to be reached; it is written down and reviewed, and adjusted when circumstances change; and it is accompanied by short term

goals that lead up to the long term one, so that the player has something to achieve this week as well as this season. An outcome goal is a goal about the result of a competition, such as to win the final, to finish in the first three or to beat a particular opponent. A performance goal is a goal about the player's own standard of performance, such as to return a stated proportion of first services, to improve his own best time, to complete his passes or to execute a particular tactic correctly. The essential difference is that an outcome goal depends on other people, since a player may produce the best performance of his life and still lose to a better opponent, while a performance goal depends on the player himself. For a young player the performance goal serves much the better. It is within his control, so his effort is rewarded whatever the opposition does and he can succeed in a match his side loses; it directs his attention to what he has to do rather than to the scoreboard, which is where attention has to be if the task is to be performed at all; it reduces the anxiety that comes of a target he cannot command; and it goes on being useful when he is beaten, since a defeat can still contain a performance he set out to produce. Outcome goals have their place in the longer term and in competition, but a young player whose goals are all outcome goals is being set up for discouragement, since the greater part of what decides a result is not his to decide.

Goal setting defined, with why it works 1. The qualities of a well set goal, specific, measurable, challenging yet attainable, accepted, timed and reviewed, with short term goals leading to long term 1. Outcome and performance goals distinguished, with the point that one depends on others and one on the player 1. Why the performance goal serves a young player better, with the reason that it is within his control 1.

Question 10 [10]

- (a) A training load is the total demand that training places on a player, taken as the product of how much work is done and how hard it is, together with how often it is repeated and how much recovery is allowed between the repetitions. It is the quantity the coach manipulates, since adaptation is the body's response to a load and both too little and too much produce no gain. The volume of training is the quantity of work done, that is how much, and it is measured in such terms as the distance run, the number of repetitions and sets, the weight lifted in total, or the hours spent. The intensity of training is the quality or the difficulty of that work, that is how hard, and it is measured as a proportion of the player's maximum, by the speed at which the work is done, the weight relative to his best single lift, the heart rate it produces or the rating of perceived effort. The two stand in inverse relation in practice: work done at a high intensity cannot be sustained in a large volume, so as intensity rises through a training year the volume is reduced, and a coach who raises both together in the same period produces injury or overtraining rather than improvement.

Training load defined as the total demand of training, in terms of work, difficulty, frequency and recovery 1. Volume defined as the quantity of work, with how it is measured 1. Intensity defined as the difficulty of the work, with how it is measured, and the inverse relation between the two 1.

- (b) Overtraining is the state a player falls into when the load imposed over a period exceeds his capacity to recover from it, so that instead of improving he declines, and the decline does not lift with a day or two of rest. It is not the ordinary tiredness of a hard week, which recovery removes, but a condition built up over weeks or months, in which the body and the mind are both affected, and from which recovery may take many weeks. It is caused as much by inadequate recovery, sleep, food and the stress of examinations or of travel as by the training itself. Three signs by which a coach may recognise it are, first, a performance that falls or stops improving although the player is training as hard or harder, with the player's times, weights or skill level going backwards and his heart rate taking longer than usual to return after an effort. Second, changes in the player's state and behaviour away from the activity, that is unusual irritability, low mood, loss of the enjoyment he used to take in the sport, loss of appetite, disturbed sleep in spite of being tired, poor concentration and withdrawal from the group. Third, physical signs, that is a muscle soreness and heaviness that does not clear between sessions, repeated minor illness and infection, nagging niggles and small injuries one after another, a resting heart rate that has risen from the player's usual figure, and loss of weight. A fourth sign worth crediting is the player's own report that the same session feels much harder than it used to, which is why the rating of perceived effort and a simple training diary are among the most useful things a coach can keep.

Overtraining defined as load exceeding the capacity to recover, distinguished from ordinary fatigue by not lifting with short rest 1. First sign, performance falling in spite of equal or greater training 1. Second and third signs, the changes in mood, sleep and appetite and the physical signs such as persistent soreness, repeated illness or a

raised resting heart rate 1.

- (c) Before the meet the work falls under organisation, publicity and preparation of the ground. A committee is formed and the work divided, with subcommittees for the programme, entries, ground and equipment, officials, publicity, refreshment, first aid and prizes. The date is fixed clear of examinations and other fixtures, permission is obtained, the budget is drawn up and sanctioned, and the programme of events is settled with the order and the time of each. Entries are invited on a form and by a closing date, checked for eligibility and age group, and heats are drawn and lane allotments made and displayed. Officials are appointed and briefed, and a meeting is held with them so that the rules to be applied are agreed in advance. The ground is prepared, with the track measured and marked, the runways and pits dug and levelled, the circles and the throwing sectors marked, the equipment checked and certified, the public address, the scoreboard, the seating, the water, the lavatories and the shade arranged, and a first aid post set up with a trained person, a kit and a plan for reaching a hospital. Invitations, publicity and the printed programme are completed. During the meet the work is the conduct of the competition and the safety of everybody present. Events are started on time and in the order published, the officials carry out their duties and the rules are applied uniformly, results are recorded immediately, checked and announced, and points are entered as they are earned. Competitors are called in good time and marshalled, the throwing areas are kept clear and no event is allowed to cross another, the crowd is kept off the track and behind the barriers, protests are dealt with as the rules provide, and the first aid post and the water are kept available. A written record is kept of every result as it happens rather than at the end. After the meet the work is the closing and the accounting. The results are totalled and the winners of the events and of the championship determined, the prizes are given and the meet is formally closed, the ground is cleared and restored and the equipment collected, checked and returned to store. The accounts are completed and audited, the officials, the helpers and the visitors are thanked, the full results are published and recorded in the school's register with any records established, the committee meets to review what went wrong and what should be done differently, and the report and the file are preserved for the next year's committee. A fixture chart for a single knock out tournament of eight teams should be drawn as a bracket. Draw eight horizontal lines in a column on the left, one for each team, and write the teams against them. Join the lines in pairs with a vertical stroke to give four first round matches, and carry a line to the right from the middle of each join. Join those four lines in pairs to give two semi finals, and carry a line to the right from each. Join those two to give the final, and carry a single line to the right for the winner. Mark the rounds along the top as first round, semi final and final, number the matches, and mark the seeded teams at the top and the bottom of the chart. Seven matches are played in all. One advantage of this form of tournament is that it is quick and economical: it decides a winner in the smallest number of matches, which for eight teams is seven, and so needs the least ground, time and money, which is why it suits a school with a short season. One disadvantage is that a single defeat eliminates a team, so that half the entry has played only one match and goes home, the chance of the draw may put two of the best teams together in the first round, and the winner is not necessarily the best team but the one that did not meet a strong side early.

The work before the meet, the committee and budget, the programme and entries, the officials and the preparation of the ground and the first aid arrangements 1. The work during the meet, the conduct of events to time, the recording and announcing of results and the safety of competitors and crowd 1. The work after the meet, the results and prizes, the clearing of the ground, the accounts and the review and report 1. The knock out chart correctly described as a bracket of eight with seven matches, with one advantage and one disadvantage 1.