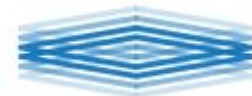


AS Revision - 2

- Based on previous questions, and
- potential answers to those questions



Revision topics – chosen by your teachers

Physiology:

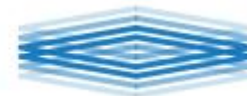
- Cardiac cycle with conduction system
- Oxyhaemoglobin dissociation curve

Skill:

- Open and closed loop control
- Learning Theories

Opportunities for Participation:

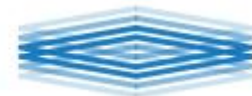
- Factors affecting a pupils experience of school sports
- Inequality in sport



Typical question – cardiac cycle

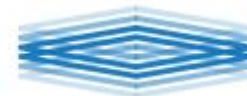
May 11 Qu 2

- (a) (ii) Explain how the heart controls the rate at which it beats. *(4 marks)*

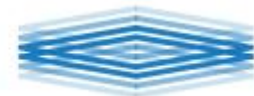
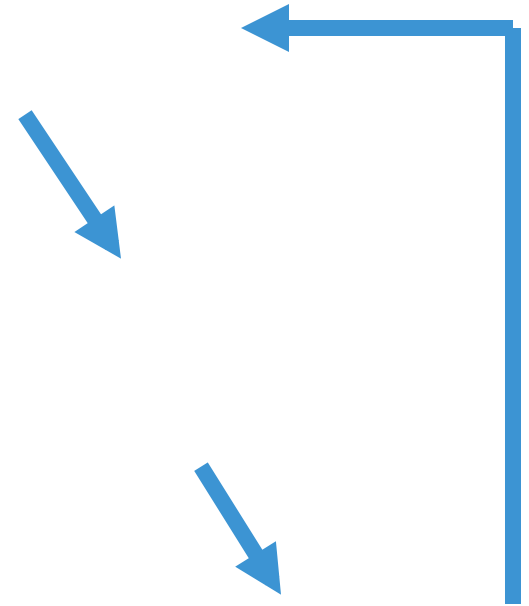
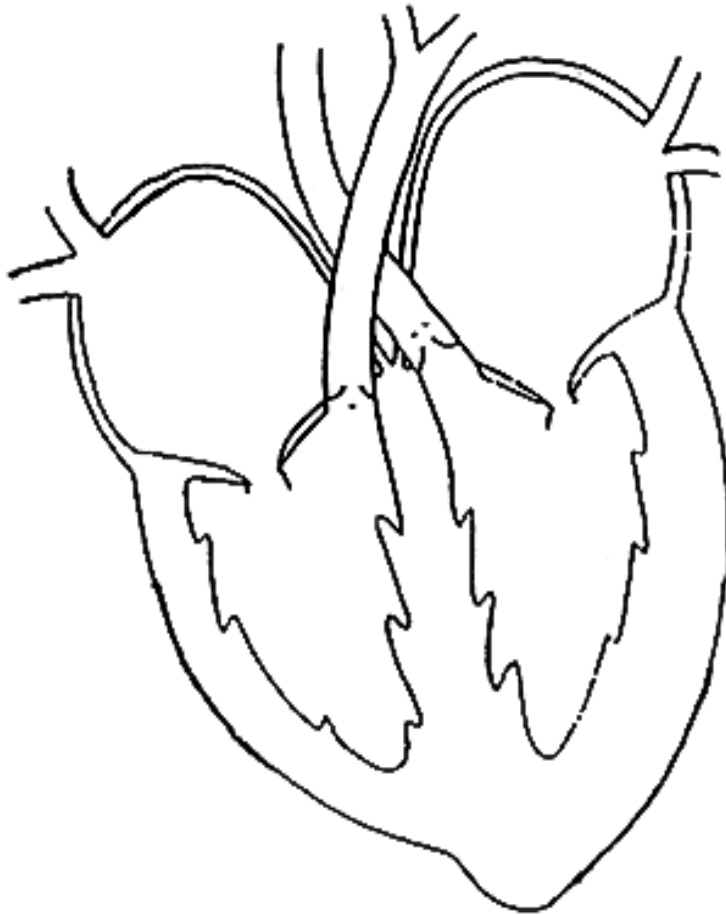


Heart beat

- The chambers of the heart can
- Contraction is called
- Relaxation is called
- The atria and ventricles contract at different times during a single beat –



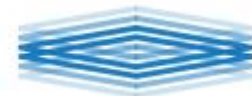
Cardiac cycle - order of contraction



The Heart Beat (cardiac cycle)

- Intrinsic -
- Spreads through atria –
- Picked up by
- Descends to tip of ventricle -

- Purkinje fibres –



Typical Question

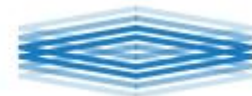
Jun 07 Qu 4

During a demanding practice session, carbon dioxide is transported by the blood.

- (c)(i) State two ways in which carbon dioxide is transported by the blood. (2 marks)

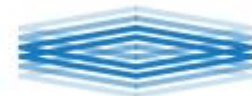
May 10 Qu 2

- (a) (ii) Explain how oxygen is taken up by haemoglobin from the lungs and released at the muscle site. (3 marks)



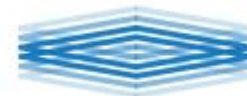
Carbon dioxide in blood

- 5% dissolves in
- 20% combines with
- 75% combines with water forming

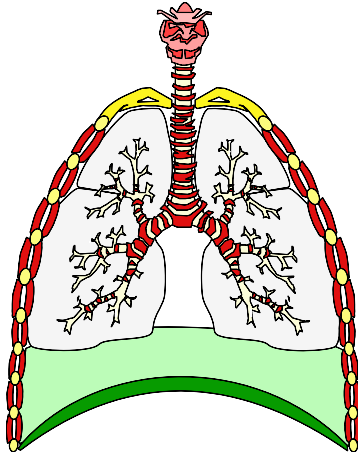


Transport of oxygen in blood

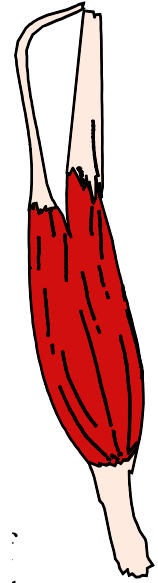
- Oxygen combines with
- Forms
- When lots of oxygen available – all haemoglobin carries oxygen –
- When not much oxygen around – oxyhaemoglobin splits –



Forming oxyhaemoglobin



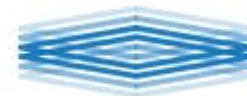
In lungs – lots of
– Hb
becomes fully
saturated with



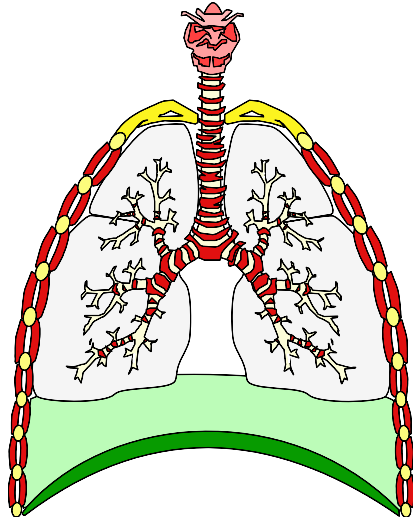
In muscles – less
–
leaves Hb

During exercise

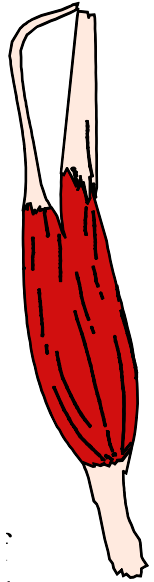
- Temperature in muscle
- More produced
- Both these increase amount of released into muscles



Forming oxyhaemoglobin

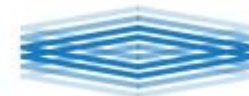


During exercise



In lungs – lots of oxygen – Hb becomes fully saturated with O_2

In working muscles – higher and more – more oxygen leaves Hb



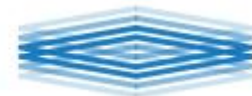
Typical Question – venous return

May 11 Qu 2

- (b) Running helps the ‘venous return’ mechanism.
Explain how the venous return mechanism works.

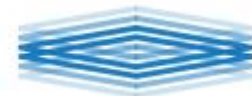
(3

marks)



Venous return – blood back to heart

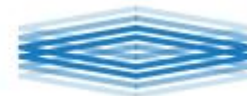
- Valves in
- Blood only flows one way – towards
- Contraction of skeletal muscles during movements –
- Constriction of chest veins during inspiration –
- Suction pressure of



Operant conditioning - Typical Question

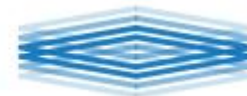
Jan 10 Qu 4.

- (c)(i) Explain what you understand by the term *operant conditioning*. (2 marks)
- (ii) How can a coach use operant conditioning to develop a gymnast's skills? (3 marks)



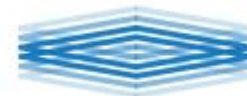
Operant conditioning

- S-R theories – become to produce a particular particular to a particular
- - show performer what is required and allow to try
- - adjust environment to strengthen chance of correct response



Reinforcement

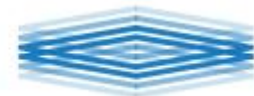
- To increase probability of
- Strengthens
- Positive reinforcement -
- Negative reinforcement also encourages repeat of behaviour - stop negative/unpleasant stimulus when



Punishment

- 'Opposite' of reinforcement
- Used to stop repeat of

- Weakens

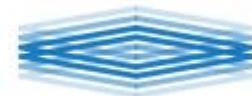


Typical question - motivation

Jan 10 Qu 3.

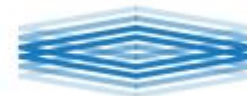
In order to improve their performance, badminton players need to be motivated.

- (b) (i) Explain what do you understand by the term *motivation*? (2 marks)
- (ii) How could a coach motivate a badminton player to improve? (3 marks)



Motivation

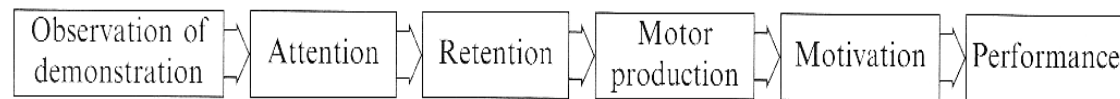
Two main types:



Typical question – observational learning

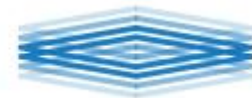
Jan 12 Qu 3

- (c) Performers could learn the swimming start by observational learning. ‘Bandura’s observational model of learning’ is shown below.



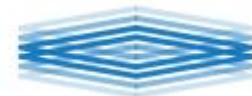
Using the diagram, explain how attention, motor production and motivation are used help the process of learning a skill. *(3 marks)*

- (d) Suggest how a coach might help a performer to retain newly learned skills. *(3 marks)*



Observational Learning

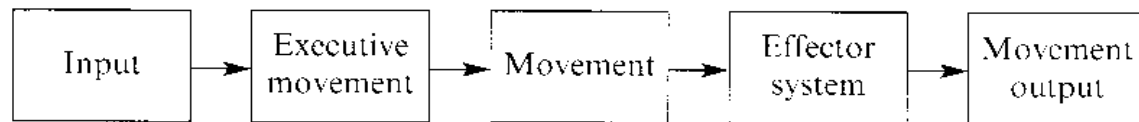
Requires learner to be:



Typical question – open and closed loop theory

Jan 11 Qu 4.

- (b)(i) During activities that involve throwing, performers will use open and closed loop control systems to control the movement. The diagram shows an open loop system.



What are the characteristics of an ‘open loop control system’? *(2 marks)*

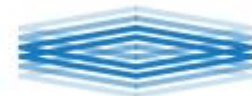
- (ii) Explain why an open loop control system is not applicable to all types of skills. *(3 marks)*



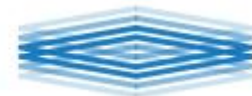
Open loop theory

- No – no
- No control
- movements

- Doesn't explain:
-
- or skills



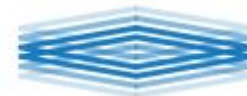
Open Loop theory



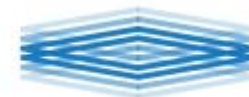
Adam's Closed loop theory

Involves

- Movement initiated by motor programme -
- Action controlled by used as model of correctness - adjusted and strengthened through
- Does not account for actions feedback or



Closed Loop theory

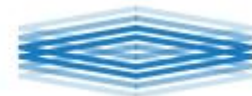


Typical question – schema theory

Jan 10 Qu 3.

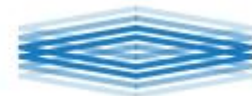
- (c) One form of learning is through schema. *Schmidt's schema theory (1975)* is based on the concept that every time a movement is conducted, information from four sources is gathered.

Explain how these **four** sources of information are used to produce a movement. (4 marks)



Schema theory

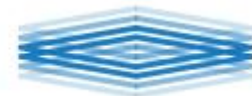
Four relationships (schema) stored for every movement:



Schema theory

— schema provides motor programme

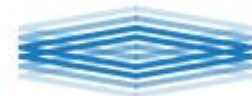
— schema evaluates responses



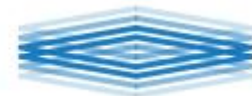
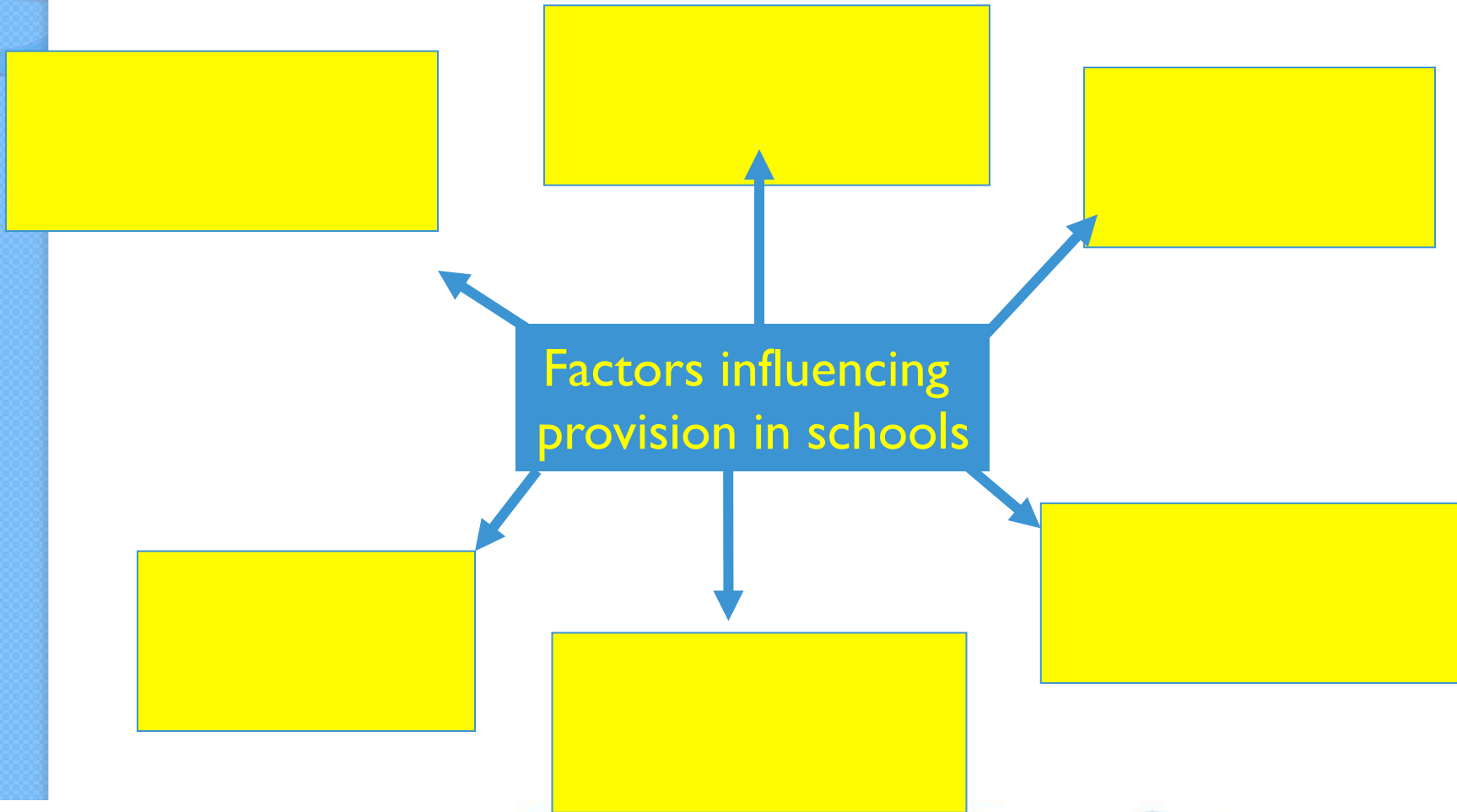
Typical question – school provision

Jan 10 Qu 6.

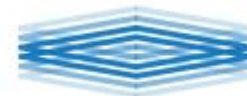
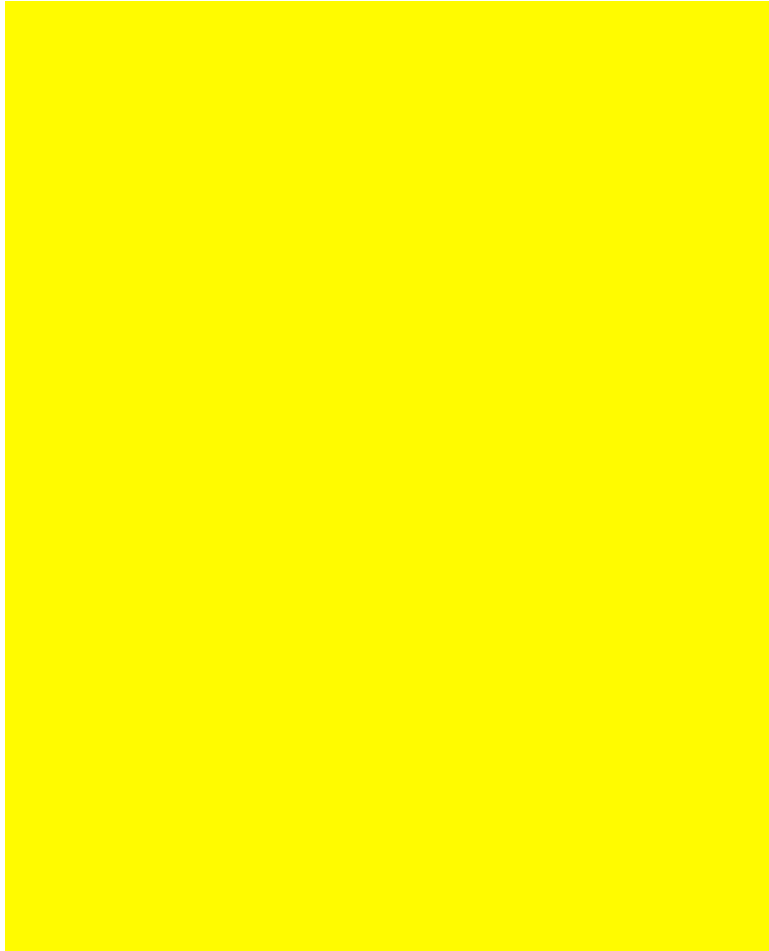
(b)(ii) Describe how schools can provide extra-curricular opportunities to increase participation rates for their pupils *(4 marks)*



Factors influencing provision in schools

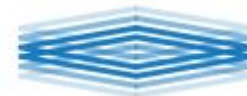


Factors affecting participation



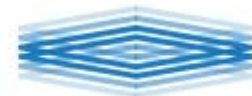
Participation

- Rates - poor (21%) – Active People Survey
- Only 8% for
- Only 18.6% for
- Only 18.3%
- Only 16.3% for
- Only 16% for
- Mainly
- Rates fall on leaving



Barriers

- Attitudes – stereotyping; culture; interests;
- Access – facilities; transport; finance;
- Programme – quality of provision; activity range; ability;

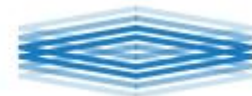


Socio-economic barriers to participation – Typical Question

Jan 08 Qu 3

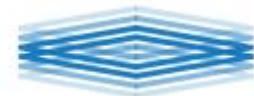
- (b) The 19th century public schools provided the children of the middle and upper social classes with the opportunity to participate in a variety of sports that were not available to the working class.

Suggest reasons why social class can **still** be a determining factor in the number **and** type of sporting activities in which an individual might become involved. *(4 marks)*



Causes

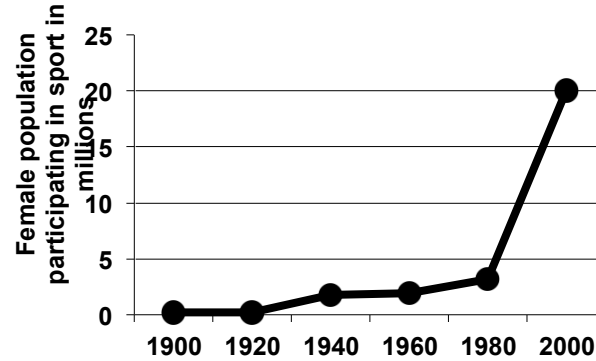
- T.I.M.E.
- Lack of time
- Lack of income
- Lack of mobility – transport
- Lack of education (health benefits)



Typical question – inequality - gender

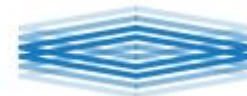
Jan 10 Qu 5.

- (b) The graph shows the increase in the number of women participating in sport and physical activity in the UK over the last 100 years.

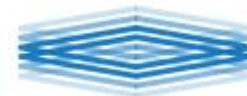
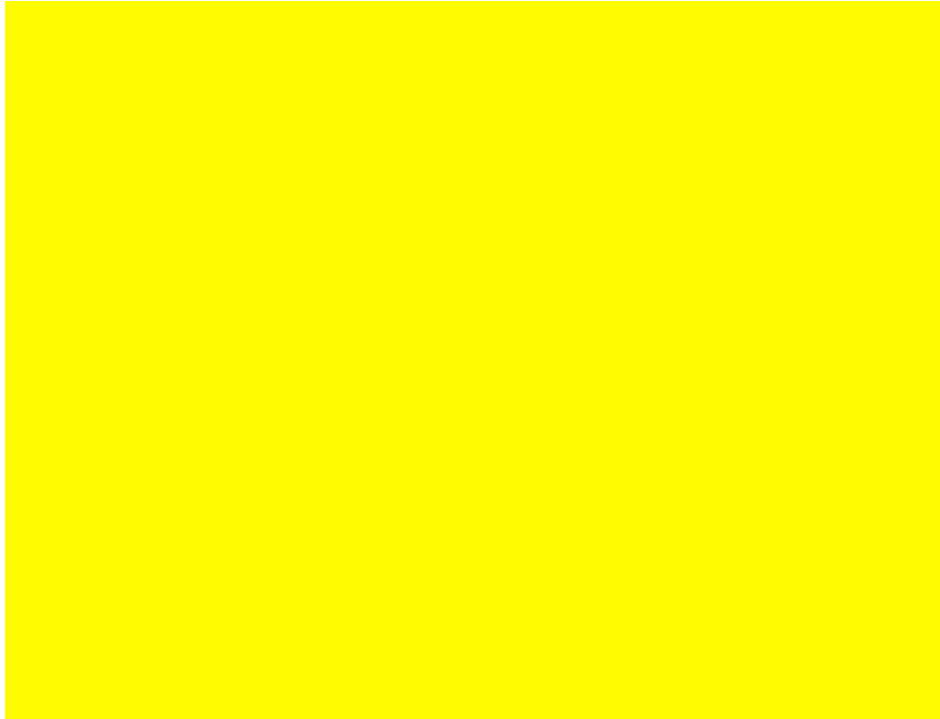


The participation of women in physical activities is often dependent upon the opportunities available to them.

- (i) Explain the term *discrimination*. (2 marks)
- (ii) Discuss whether the opportunities for women to take part in sport and physical activity are the same as for men. (4 marks)

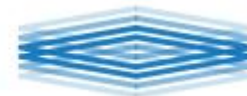


Factors affecting women's participation in sport



Female sport in schools

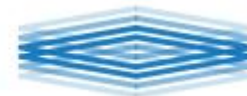
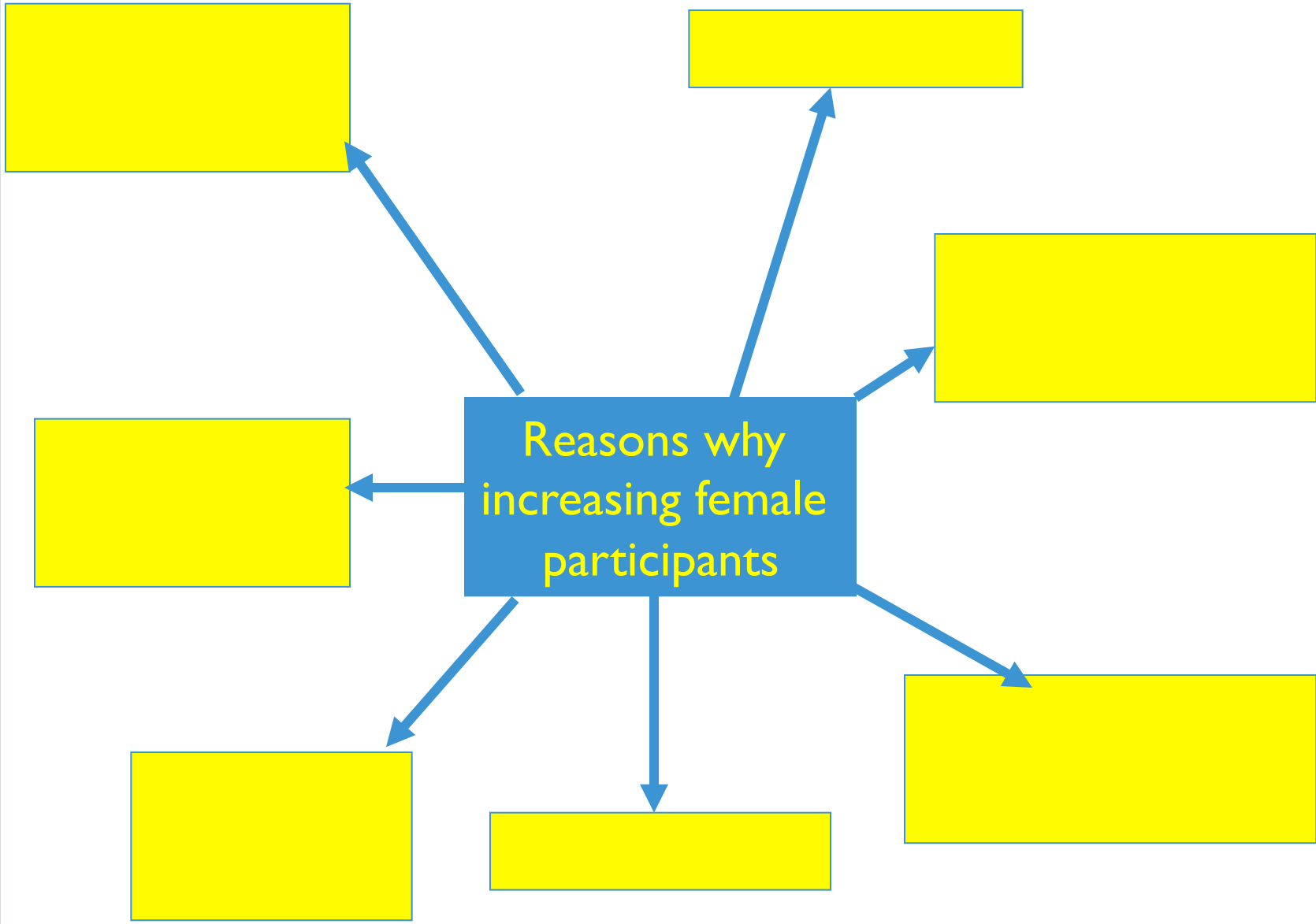
- Supposed to be 'equal opportunities'
- Resistance to compulsory nature of PE –
- More success where activities geared towards accepted
- Lack of preparation for



Counteracting gender effects

- Provide
- Ensure good quality
- Promote
- Adopt women as a





Typical question – inequalities - ethnicity

May 10 Qu 5

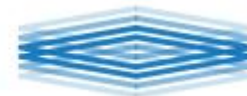
The Sport England Active People Survey of 2006 showed that approximately 9% of people with a disability participate regularly in sport compare to 23% of the rest of the population.

- (c) (i) Suggest reasons for this lower participation rate for people with a disability. (4 marks)

Jan 11 Qu 6.

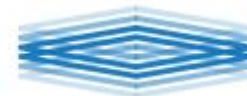
Some groups in society are less involved in sport and physical activity than other groups.

- (c) Give **three** reasons for the lower participation rates among some ethnic minority groups. (3 marks)



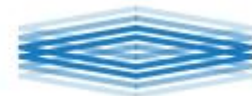
Ethnicity and physical activity

- Lower participation than general population
- Linked to socio-economic status -
 - – overt or implied
- Low
- Cultural differences
-
- Lack of



Disability and physical activity

- Lower
- Lack of self-esteem – cycle of despair
- Lack of specialised / suitable
-
- Lack of



Equality

- Policies for specific
- More minority sport development officers and
- Concentrate resources where needed - areas;
- Make activities more available
- Classes for specific groups
- Lower admission/membership
- Change attitudes – anti-discrimination
- Raise awareness/ role models;

