

PiXL Independence

BTEC Sport

Unit 1: Anatomy and Physiology

Student Booklet

KS5

Contents:

- I. Multiple Choice Questions - 20 credits per quiz
- II. Short Exam Questions - 5 credits with additional 10 credits available
- III. Wider Reading - 20 credits per summary
- IV. Academic Reading - 50 credits per summary
- V. Extended Exam Style Questions - 80 credits per essay

I Multiple choice questions:

1) What type of bone is incorrect? (1)

- Long
- Irregular
- Wide
- Short

2) What is not used in the process of bone growth? (1)

- Osteoclasts
- Epiphyseal plate
- Cartilage
- Osteoblasts

3) What is not a classification of a joint (1)

- Fibrous
- Cartilaginous (slightly moveable)
- Bursa
- Synovial (freely moveable)

4) What types of synovial joint are incorrect? (2)

- Glider
- Condylloid
- Ball and socket
- Hinged
- Saddle
- Pivot

5) What part of a synovial joint is missing from the following list?

Bursa, articular cartilage, synovial membrane, synovial fluid, ligaments (1)?

- Tendons
- Joint capsule
- Muscles
- Bones

6) What is a range of movement that occurs in a ball and socket joint? (1)

- Flexion
- Dorsiflexion
- Circumduction
- Extension

7) Tick the wrong type of muscle listed below: (1)

- Cardiac
- Smooth
- Fibre
- Skeletal

8) Tick the following box that is not associated with movement of muscles in antagonistic pairs (1)

- Synergist
- Agonist
- Isometric
- Antagonist

9) What is not a type of muscle contraction? (1)

- Concentric
- Isometric
- Isotonic
- Eccentric

10) What is not part of the structure of the respiratory system? (1)

- Epiglottis
- Bronchioles
- Pharynx
- Heart

II Short Answer questions

1. What is the response of the skeletal system to a single sport or exercise session? (4)
2. Discuss the responses of the muscular system to a single sport or exercise session (5)
- 3) What are the functions of the respiratory system in response to exercise and sports performance? (2)
- 4) What are the adaptations of the respiratory system to exercise? (2)
- 5) What are the functions of the cardiovascular system in response to exercise and sports performance? (2)
- 6) What are the responses of the cardiovascular system to an exercise session? (6)
- 7) As part of training, a footballer may take part in lactate threshold training. Discuss how a tolerance to lactate can be beneficial. (4)

III Wider reading

Adams Metal, (2010) BTEC Level 3 National Sport (Development, Coaching and Fitness) Student Book. Pearson, 2010. (ISBN 9781846906503)

Rea, S, Stanford-Brown, J and Manley, C (2010). BTEC National Sport: Level 3: Development, Coaching and Fitness. Hodder Education; London.

Howley, E.T and Franks, B.D (2003) Health Fitness Instructor's Handbook. Human Kinetics Europe. (ISBN 9780736042109)

Palastanga, N (2006). Anatomy and Human Movement. Butterworth-Heineman. (ISBN 9780750688147)

IV Academic Reading

Sharkey, B.J and Gaskill, S.E (2006). Fitness and Health. Human Kinetics. (ISBN 9780736056144).

Weinberg, R.S and Gould, D (2011). Foundations of Sports and Exercise Psychology (5th ed.). Human Kinetics; New York.

Journals

American College of Sport Medicine's Health and Fitness

British Journal of Sports Medicine Exercise and Sport Sciences Reviews

International Journal of Sports Science and Coaching

Medicine and Science in Sports and Exercise

Research Quarterly for Exercise and Sport

Websites

British Association of Sport and Exercise Sciences www.bases.org.uk

Sports Coach UK www.sportscoachuk.org

Top End Sports www.topendsports.com

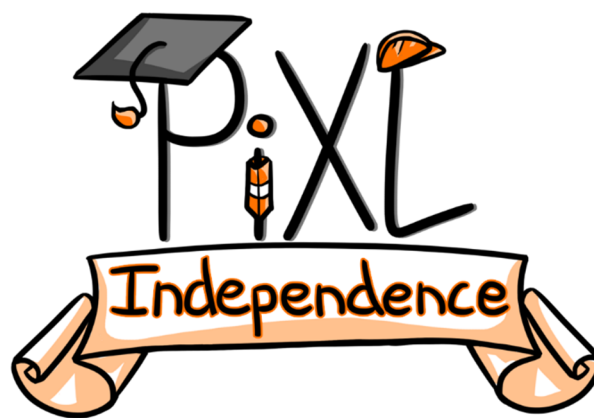
Sports and Exercise Testing www.brianmac.co.uk

Quizlet.com

Teachpe.com

V Exam style questions

- 1) What are the functions of the skeleton when performing sporting techniques and actions? (8)
- 2) What are the main functions of different bone types when performing sporting techniques and actions? (8)
- 3) Discuss what the responses and adaptations of the muscular system are to exercise. (7)
- 4) Describe the nervous control of the cardiac cycle. (5)
- 5) Jack spent 6 weeks training for a 5km run. This training will produce cardiac hypertrophy. Analyse how cardiac hypertrophy will help to improve his long-distance running performance. (6)



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