Physiology Viva Questions:

Ganong 23rd Edition

Physiology Unit 1:

Viva Questions

- Describe the body’s fluid compartments and their volumes. (2/96, 1/07) pg 3
- Discuss the electrolyte composition of body fluids. (2/96) pg 3
- Buffers in body fluids (2/05, 1/07) pg 4
- What forces produce movement across cell membranes? (2/95, 2/98) pg 6-7
- How is resting membrane potential created? (1/95, 2/98) pg 8
- The physiology of protein synthesis. (2/01, 2/05) pg 17
- Discuss how fatty acids are metabolised in the cell to produce energy. (1/97) pg 27

Physiology Unit 2:

Viva Questions

- Discuss intercellular communication. (2/01, 2/05)
- Function of cyclic AMP as a 2nd messenger. (1/03)
- Discuss transport across cell membranes. (2/98, 2/01, 1/03, 2/05, 2/08)
- Na-K pump (2/08)

Physiology Unit 3:

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- Explain how a nerve impulse is conducted. (1/03, 1/04, 2/07) pg 83-84
- Draw and discuss a nerve action potential. (1/01, 1/05) pg 84
- Draw and discuss ion flux during an action potential. (1/96, 2/99, 1/00, 2/01) pg 84-85
- Describe the nerve fibre types and their function. (1/96, 1/00, 2/01) pg 88-90

Physiology Unit 4:
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- Contractile responses of muscle (2/07) pg 97-100
- Describe the sequence of events in contraction/relaxation of skeletal muscle. (1/96, 1/97, 2/98, 2/00, 2/01, 2/02, 1/05, 2/08, 2/09) pg 97-100
- Draw and discuss the relationship between muscle fibre length and tension. (2/95, 2/00, 2/01) pg 102
- Draw and discuss a cardiac muscle action potential. (2/00, 1/02, 2/05, 2/06, 2/07, 1/10) pg 108
- Describe the sequence in contraction/relaxation of visceral smooth muscle. (2/98, 1/07) pg 110

Physiology Unit 5:

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- Neuronal inhibition (2/06) pg 121
- Inhibition and facilitation at synapses (1/10) pg 121
- Describe transmission at the neuromuscular junction. (1/97, 1/01, 2/04, 1/05) pg 123-124
- Chemical transmission of synaptic activity (2/07) pg 129-130
- Physiology of acetylcholine (2/06) pg 134
- Describe cholinergic synaptic transmission. (2/99, 2/02, 2/04) pg 135
- The physiology of serotonin in the body. (1/09) pg 136-137
- Describe adrenergic synaptic transmission. (2/02) pg 137
- Catecholamines as neurotransmitters (2/07, 2/08, 1/10) pg 138-138
- Describe noradrenergic synaptic transmission. (2/02, 2/04) pg 139

Physiology Unit 6:

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Physiology Unit 7:

Viva Questions
- Draw and discuss the action potential of the SA node of cardiac muscle. (2/00, 1/01) pg 490
- Draw and discuss the action potential of a pacemaker cell. (1/99, 1/03, 1/04, 1/07, 2/08) pg 491
- Difference in action potential between a cardiac myocyte and the SA node. (2/09) pg 491
- Effect of sympathetic/parasympathetic stimulus on action potential of a cardiac pacemaker cell (2/08) pg 491
- Physiological basis of the ECG (1/06, 2/09) pg 492-494
- Effects of hyper and hypokalaemia on the ECG (2/08) pg 504

**Physiology Unit 8:**

**Viva Questions**

Isovolumetric contraction/relaxation (1/09) pg 508
- The cardiac cycle:
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  - Venous return curve & mean systemic filling pressure (1/07) pg 511
- Regarding the JVP:
  - Discuss the various components of the JVP. (1/98) pg 512
  - Factors affecting the CVP. (2/03) pg 512
- What factors control cardiac output? (2/95, 1/00, 2/01, 2/02, 2/03, 1/04, 1/08) pg 514-515
- Interaction between the components that regulate cardiac output and arterial pressure. (2/98) pg 514
- Draw and discuss the Frank Starling curve. What factors influence myocardial contractility? (2/97, 1/06, 2/09) pg 515-517
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- What factors control oxygen consumption by the heart? (1/08, 1/09) pg 519

**Physiology Unit 9:**

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- Endothelium and the regulation of blood flow. (2/04) pg 535

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**Viva Questions**

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- Arterial pressure regulation (1/07) pg 544
- Capillary fluid exchange. (1/96, 2/98) pg 548

**Physiology Unit 11:**

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- CVS compensation for fluid overload (1/05) Ch 33

**Physiology Unit 12:**

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**Physiology Unit 13:**

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**Physiology Unit 14:**

**Viva Questions**

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• Tell me about alveolar surface tension and surfactant. (1/95, 2/97, 2/99, 2/05, 1/09) pg 596-597
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• Discuss diffusion-limited diffusion across the alveolar capillary membrane. (1/98) pg 601
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**Viva Questions**

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Physiology Unit 18:
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**Viva Questions**

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**Viva Questions**

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**Physiology Unit 24:**

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**Physiology Unit 25:**

**Viva Questions**

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**Viva Questions**

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- Describe the effects of adrenaline on HR, TPR, CO and arterial BP. (1/98) pg 341 Fig 22-5
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Physiology Unit 33:

No Viva Questions