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SARDAR PATEL UNIVERSITY  
M.Sc. H.Sc. II Semester (A.T.K.T)  
External Theory Examination

Date: 4/12/2012, Tuesday, Time: 10.30 a.m to 1.30 p.m

PH02CFDN01: Physiology and Clinical Biochemistry

Total Marks: 70

**Q.1 Choose the correct answer from the given options :**

(8)

- (i) Cytotoxic cell is a .....
- (a) Monocyte
  - (b) Lymphocyte
  - (c) Basophil
  - (d) Eosinophil
- (ii) A process by which the leukocytes squeeze through the capillaries...
- a) Chemotaxis
  - b) Diapedesis
  - c) Pagocytosis
  - d) Ameboid movement
- (iii) ADH is secreted by .....
- (a) Adrenal cortex
  - (b) Posterior pituitary
  - (c) Kidney
  - (d) Inferior pituitary
- (iv) The hormone responsible for milk ejection (let down) process...
- (a) Oxytocin
  - (b) Estrogen
  - (c) Prolactin
  - (d) Progesterone
- (v) Kupffer cells are present in...
- a) Heart
  - b) Kidneys
  - c) Liver
  - d) Lungs
- (vi) WBC's that have a role in hypersensitivity reactions...
- a) Eosinophils
  - b) Neutrophils
  - c) Basophils
  - d) Monocytes
- (vii) Normal total protein concentration in blood is...
- a) 7.2gm%

(P.T.O)

- b) 8.5gm%
- c) 9.2gm%
- d) 9.0gm%

(viii) Erythropoietin is secreted from...

- a) Pancreas
- b) Adrenal Cortex
- c) Kidneys
- d) Heart

**Q-II Answer the following (any seven)**

(14)

- (1) What is inflammation?
- (2) How is ESR measured?
- (3) Enlist the functions of plasma protein.
- (4) Write about the active transport of glucose in proximal tubule.
- (5) What is vital capacity?
- (6) What is chemotaxis?
- (7) Write the functions of platelets?
- (8) Give the functions of memory cells?
- (9) What is the extrinsic pathway of clotting of blood?

**Q III Answer in detail (any three)**

(12)

- (1) Explain the process of phagocytosis.
- (2) What are macrophages? Explain their functions in detail.
- (3) Write in detail about antibodies.
- (4) Explain the functions of reticuloendothelial system.
- (5) Explain the genesis of RBC.

**Q IV Explain (any three)**

(12)

- (1) ECG
- (2) The heart valves.
- (3) Different types of blood pressure
- (4) Structure of artery

**Q V Answer in brief (any four)**

(12)

- (1) Write about the factors that determine the GFR.
- (2) Explain the functions of kidneys.
- (3) Explain the functions alveoli and trachea.
- (4) Write in detail about the reabsorption and secretion taking place in loop of henle.

(5) Enumerate the important functions of respiratory passageways.

**Q.VI Write a short note on (any four)**

**(12)**

- (1) Sickle cell anemia
- (2) Functions of blood
- (3) Polycythemia
- (4) Hormones secreted by thyroid gland
- (5) Pulmonary volumes
- (6) Immunity

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