01. Cell membrane is:
   a. Thick and fibrous.
   b. Thin and non elastic.
   c. Composed of proteins and lipids.
   d. Made up of carbohydrates only.
   e. Is freely permeable to glucose and urea.
   **Key: c**

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   *Guyton & Hall 11th Ed. Page 12*

02. Mitochondria:
   a. Are self replicative.
   b. Contains RNA only.
   c. Work along with ser for protein synthesis.
   d. Do not have a membrane.
   e. Have many secretory vesicles in the inner matrix.
   **Key: a**

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   *Guyton & Hall 11th Ed. Page 17*

03. Ribosomes:
   a. Have two different types of proteins.
   b. Controls biochemical activity of cell.
   c. Have 60% RNA in their structure.
   d. Are entirely synthesized in the cell cytoplasm.
   e. Digest bacteria by secreting bactericidal agents.
   **Key: c**

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   *Guyton & Hall 11th Ed. Page 33*

04. In primary active transport energy is derived from:
   a. ATP breakdown.
   b. Ionic concentration differences across two sides of cell membrane.
   c. Golgi apparatus.
   d. Counter transport of calcium and hydrogen ions.
   e. Co-transport of glucose and amino acids.
   **Key: a**

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   *Guyton & Hall 11th Ed. Page 53*

05. Sodium potassium pump continuously pumps:
   a. Only sodium ions to inside of cells.
   b. Chloride ions along with sodium and potassium ions.
   c. Only potassium ions to outside of cells.
   d. Both sodium and potassium ions to outside.
   e. Sodium ions to outside and potassium ions to inside of the cell.
   **Key: e**

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   *Guyton & Hall 11th Ed. Page 59*
06. In a muscle fiber light bands:
   a. Contain myosin filaments.
   b. Are anisotropic to polarized light.
   c. Are produced due to Z disc.
   d. Have only actin filaments.
   e. Show interaction among actin and myosin filaments.

   Key: e

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   Guyton & Hall 11th Ed. page 72

07. During isometric muscle contraction:
   a. Muscle does not shorten.
   b. Shortening of muscle occurs.
   c. Tension on muscle remains constant.
   d. Muscle get shorter against a fixed load.
   e. Actual body movements occur.

   Key: a

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   Guyton & Hall 11th Ed. Page 8

08. Rigor mortis:
   a. Occurs immediately after death.
   b. Is due to abundance of ATP.
   c. Leads to rigidity of body muscles.
   d. Results in autolysis of muscles.
   e. Occurs 25 hrs after death.

   Key: c

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   Guyton & Hall 11th Ed. Page 83

09. Acetylcholine receptors in muscle fibre membrane are:
   a. Carbohydrate in nature.
   b. Present only in smooth muscles.
   c. Cause destruction of Acetylcholine esterase.
   d. Acetylcholine gated ion channels.
   e. Having strong positive charges upon their surface.

   Key: d

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   Guyton & Hall 11th Ed. Page 86

10. Myasthenia Gravis is:
   a. Due to rapid transmission of nerve signals.
   b. An acute inflammatory disease.
   c. A chronic infection of nerve fibers at motor end plate.
   d. An auto immune disease.
   e. Due to decrease secretion of acetylcholine at neuromuscular junction.

   Key: e

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   Guyton & Hall 11th Ed. Page 89
11. **GFR normally:**
   a. Is 80% of renal plasma flow.
   b. Decreases by increased BP.
   c. Increases by increasing glomerular colloidal osmotic pressure.
   d. Decreased with increased glomerular capillary hydrostatic pressure.
   e. Decreased by increasing Bowman’s capsul hydrostatic pressure.
   **Key: e**

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   *Guyton & Hall 11th Ed. Page 318*

12. **In kidneys, tubular re-absorption:**
   a. Is highly selective process.
   b. Includes only passive transport.
   c. Needs high level of calcium ions.
   d. Is linked to ATP synthesis.
   e. Occurs by pinocytosis especially of sodium ions and potassium ions.
   **Key: a**

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   *Guyton & Hall 11th Ed. Page 327*

13. **The thick segment of ascending loop of Henle is:**
   a. Highly permeable to water.
   b. Impermeable to all solutes.
   c. Impermeable to water.
   d. A part of Juxtaglomerular complex.
   e. Highly convoluted.
   **Key: c**

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   *Guyton & Hall 11th Ed. Page 335*

14. **ADH increases permeability of distal tubule to:**
   a. Amino acids.
   b. Glucose.
   c. Urea.
   d. Water.
   e. Creatinine.
   **Key: d**

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   *Guyton & Hall 11th Ed. Page 343*

15. **In normal men, average count. of Red Blood Cells per cubic millimeter of Blood is:**
   a. 11000.
   b. 35000.
   c. 300,000.
   d. 4000.
   e. 5000,000.
   **Key: e**

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   *Guyton & Hall 11th Ed. Page 419*
16. The first cell that can be identified as belonging to RBC series is:
   a. Basophil erythroblast.
   b. Proerythroblast.
   c. Reticulocyte.
   d. Megaloblast.
   e. CFU-S.
   **Key: b**

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   Guyton & Hall 11th Ed. Page 420*

17. Mast cells and basophils play important role in some types of:
   a. Allergic reactions.
   b. Parasitic infections.
   c. Acute infections.
   d. Chronic inflammatory diseases.
   e. Polycythemia.
   **Key: a**

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   Guyton & Hall 11th Ed. Page 436*

18. Cancerous mutation of myelogenous or Lymphogenous cells is called:
   a. Leucopenia.
   b. Anemia.
   c. Leukemia.
   d. Leukosytosis.
   e. Thrombocytopenia.
   **Key: c**

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   Guyton & Hall 11th Ed. Page 437*

19. Vitamin K is required by liver for normal formation of:
   a. Fibrinogen.
   b. Globulins.
   c. Platelets.
   d. Prothrombin.
   e. Fibrin.
   **Key: d**

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   Guyton & Hall 11th Ed. Page 460*

20. Two antigens – type A and type B- are present:
   a. On surface of RBC’s.
   b. In plasma.
   c. Along with plasma albumin.
   d. Inside the lymphocytes.
   e. As a part of agglutinins.
   **Key: a**

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21. **Extrinsic pathway for initiating clotting begins with:**
   a. Activation of factor XII.
   b. Formation of fibrin threads.
   c. Blood trauma.
   d. Traumatized vascular wall.
   e. Conversion of prothrombin to thrombin.
   **Key: d**

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22. **Vital capacity:**
   a. Equals to inspiratory reserved volume + residual volume.
   b. Is increased in pulmonary tuberculosis.
   c. Is maximum amount of air inspired after tidal inspiration.
   d. Is not affected in obstructive lung diseases.
   e. Normally is 4600ml.
   **Key: e**

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   Guyton & Hall 11th Ed. Page 476

23. **97% of oxygen from lungs to tissues is carried in chemical combination with:**
   a. Carbon dioxide.
   b. Hydrogen ions.
   c. Hemoglobin.
   d. Water.
   e. Plasma proteins.
   **Key: c**

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   Guyton & Hall 11th Ed. Page 505

24. **Reaction between water and carbon dioxide with in Red Blood Cells is catalyzed by the enzymes:**
   a. Peroxidase.
   b. Catalase.
   c. Collagenase.
   d. Carbonic anhydrase.
   e. Esterase.
   **Key: d**

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   Guyton & Hall 11th Ed. Page 510

25. **Dorsal respiratory group of neurones:**
   a. Controls the depth of breathing.
   b. Causes expiration.
   c. Is located in superior portion of pons.
   d. Emits inspiratory ramp signals.
   e. Remains inactive during normal resting breathing.
   **Key: d**

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   Guyton & Hall 11th Ed. Page 515
26. Increased respiratory rate at initiation of exercise results from:
   a. neurogenic signals.
   b. Increased pco2.
   c. Increased hydrogen ion concentration.
   d. Decreased pco2.
   e. Increased body temperature.
   **Key: a**

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   Guyton & Hall 11th Ed. Page 520

27. Paleospinothalamic pathway transmits signals of:
   a. Slow chronic pain.
   b. Fast pain.
   c. Proprioception.
   d. Fine touch.
   e. Type Adelta fibers.
   **Key: a**

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   Guyton & Hall 11th Ed. Page 601

28. In Spinal cord transection on one side:
   a. Sense of pain & temperature is lost on same side.
   b. Vibration sense lost on opposite side.
   c. Brown Seuard Syndrome occurs.
   d. Only motor lose occurs on opposite side.
   e. Parasthesia occurs all over the body.
   **Key: c**

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   Guyton & Hall 11th Ed. Page 606

29. Intension tremors occur in disease of:
   a. Basal ganglia.
   b. Sensory cortex.
   c. Pyramidal tract.
   d. Cerebellum.
   e. Limbic system.
   **Key: d**

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   Guyton & Hall 11th Ed. Page 707

30. Brocaca’s area for speech:
   a. Is sensory speech area.
   b. Controls behaviour and emotions.
   c. Is located in temporal lobe.
   d. Also concerned with recognition of faces.
   e. Provides neural circuit for word formation.
   **Key: e**

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   Guyton & Hall 11th Ed. Page 717
31. **Sympathetic stimulation causes:**
   a. Dilation of all blood vessels of the body.
   b. Activates gastric motility.
   c. Decreased cardiac activity.
   d. Pupillary dilation.
   e. Decreased hepatic metabolism.
   **Key:** d  
   
   **Text book of medical physiology**  
   **Guyton & Hall 11th Ed. Page 755**

32. **REM(rapid eye movement) sleep is associated with:**
   a. Extreme inhibition of peripheral muscles.
   b. Completely relaxed state of brain.
   c. Normal and regular heart rate.
   d. Decreased respiratory rate.
   e. Increased muscle tone.
   **Key:** a  
   
   **Text book of medical physiology**  
   **Guyton & Hall 11th Ed. Page 740**

33. **Optic disc in retina:**
   a. Especially associated with acute and detailed vision.
   b. Entirely composed of cones.
   c. Has large and cylinder rods.
   d. Is the area from which optic nerve leaves the eye ball.
   e. Has no blood vessels.
   **Key:** d  
   
   **Text book of medical physiology**  
   **Guyton & Hall 11th Ed. Page 644**

34. **Inhibitory signals are transmitted to anterior motor neurones of spinal cord from:**
   a. Vestibular nuclei.
   b. Medullary reticular nuclei.
   c. Pontine nuclei.
   d. Cochlea.
   e. Thalamus.
   **Key:** a  
   
   **Text book of medical physiology**  
   **Guyton & Hall 11th Ed.**

35. **Preoptic area of hypothalamus is concerned with regulation of:**
   a. Body water.
   b. Milk ejection.
   c. Uterine contractility.
   d. Body temperature.
   e. Anterior pituitary secretion.
   **Key:** d  
   
   **Text book of medical physiology**  
   **Guyton & Hall 11th Ed. Page 734**
36. Cerebrospinal fluid:
   a. Absorbed by choroids plexus.
   b. Secreted by arachnoidal villi.
   c. Osmotic pressure is higher than plasma.
   d. High pressure causes edema of optic disc (papilledema).
   e. Is secreted in excessive amount in large brain tumous.
   **Key: d**

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   *Guyton & Hall 11th Ed. Page 766*

37. Enterogastric nervous reflexes from duodenum:
   a. Promote antral contractions.
   b. Produce inhibitory effect on gastric contractions.
   c. Are activated by isotonic antral fluid.
   d. Are activated by increased PH of antral mucosae.
   e. Are the cause of hunger contractions.
   **Key: b**

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   *Guyton & Hall 11th Ed. Page 785*

38. Antidiuretic hormone (ADH):
   a. Increases BMR.
   b. Promotes calcium ions deposition in bones.
   c. Plays important role in carbohydrate metabolism.
   d. Increases water reabsorption by the kidneys.
   e. Causes vasodilation.
   **Key: d**

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   *Guyton & Hall 11th Ed. Page 907*

39. Somatomedine:
   a. Loosely attached to carrier proteins in blood.
   b. Is produced in response to GH.
   c. Is released from blood to tissues rapidly.
   d. Decreases growth promoting effect of GH.
   e. Is produced by anterior pituitary gland.
   **Key: b**

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   *Guyton & Hall 11th Ed. Page 924*

40. Cretinism is characterized by:
   a. Hyperglycemic attacks.
   b. Excessive bone growth.
   c. Failure of mental growth.
   d. Exophthalmos.
   e. Lack of sleep.
   **Key: c**

   *Text book of medical physiology*
   *Guyton & Hall 11th Ed. Page 942*
41. One of the most important feature of the progressive shock is:
   a. Initiation of baroreceptor reflex.
   b. Progressive cardiac deterioration.
   c. Return of blood volume back to normal.
   d. Maintenance of arterial pressure and cardiac output.
   e. CNS ischemic response.

   **Key:** b

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42. The most frequent cause of diminished coronary blood flow is:
   a. mitral stenosis.
   b. Exercise.
   c. Atherosclerosis.
   d. Mass sympathetic discharge.
   e. Increased venous return.

   **Key:** c

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43. Cardiac output is equal to:
   a. Stroke volume (SV) X venous return (VR).
   b. End diastolic volume (EDV) _end systolic volume (ESV).
   c. Stroke volume (SV)X heart rate (HR).
   d. 300 ml / min.
   e. Cardiac index.

   **Key:** c

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44. Excitation of baroreceptors in arteries reflexly causes:
   a. Arterial pressure to decrease.
   b. Peripheral vasoconstriction.
   c. Increased cardiac output.
   d. Vasovagal syncope.
   e. Prolonged P-R interval.

   **Key:** a

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45. Decreased oxygen availability to tissues causes:
   a. Vascular muscle contraction.
   b. Decrease release of adenosis.
   c. Local vasodilation.
   d. Increase synthesis of ATP.
   e. Decrease in respiratory rate.

   **Key:** c

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