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Model Paper

Total No. of MCQs 45 Marks 45

01 Minute for Each MCQ Time 45 minutes

MCQ.1 Total body water can be measured by using radioactive:

- a) Chloride.
- b) Inulin.
- c) lothalamate.
- d) Sodium.
- e) Water (tritium).
- Key: e

Topic Specification: Kidney and body fluids (fluid compartments).

MCQ.2 Glomerular filtration rate is increased with decreased:

- a) Arterial blood flow.
- b) Arterial blood pressure.
- c) Capillary hydrostatic pressure.
- d) Capillary permeability.
- e) Plasma colloid osmotic pressure.

Key: e

Topic Specification: Kidney GFR regulation.

MCQ.3 The percentage of filtered sodium reabsorbed in the proximal tubule is about:

- a) 10%.
- b) 30%.
- c) 40%.
- d) 65%.
- e) 85%.
- Key: d

Topic Specification: Kidney – reabsorption.

MCQ.4 The endogenous substance in the human body which can be used to measure glomerular filtration rate by renal clearance is:

- a) creatinine.
- b) Glucose.
- c) Sodium.
- d) Uric acid.
- e) Urea.
- Key: a

Topic Specification: Kidney – renal clearance.

Model Paper

MCQ.5 The mechanism for the excretion of concentrated urine does not involve:

- a) Counter current multiplier mechanism.
- b) Counter current exchanger mechanism.
- c) Hyperosmolarity of renal medullary interstitium.
- d) Presence of antidiuretic hormone.
- e) Reabsorption of NaCl from the proximal tubule.
- Key: e

Topic Specification: Kidney – Mechanism of concentration of urine.

MCQ.6 Sodium concentration and osmolarity of the extracellular fluid is controlled mainly by:

- a) Angiotensin II.
- b) Antidiuretic hormone.
- c) Aldosterone.
- d) Cortisol.
- e) Atrial natriuretic peptide.
- Key: b

Topic Specification: Kidney – water and electrolyte balance.

MCQ.7 The pKa of the acid in the phosphate buffer is:

- a) 4.5 b) 6.1
- c) 6.8
- d) 7.4
- e) 9.0
- Key: c

Topic Specification: kidney – Acid Base Balance – Normal.

MCQ.8 In metabolic alkalosis, there is increased:

- a) Ammonia secretion in renal tubules.
- b) Hydrogen ion secretion in renal tubules.
- c) Plasma bicarbonate concentration.
- d) Rate of pulmonary ventilation.
- e) Titrable acidity of the urine.
- Key: c

Topic Specification: kidney – disturbances of Acid Base Balance.

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<u>Model Paper</u>

MCQ.9 In a patient having atonic bladder, the feature not likely to be present is:

- a) Distended atonic bladder wall.
- b) Loss of sensory nerve fibers.
- c) Loss of parasympathetic nerve fibers.
- d) Overflow dribbling.
- e) Tabes dorsalis.
- Key: c

Topic Specification: Kidney – Micturition abnormalities.

MCQ.10 The neurotransmitter that inhibits the postsynaptic neuron is:

- a) Dopamine.
- b) Gamma aminobutyric acid.
- c) Glycine.
- d) Glutamate.
- e) Serotonin.
- Key: c

Topic Specification: nervous system – Neurotransmitters.

MCQ.11 The sensory receptors which undergo slow adaptation are:

- a) Free nerve endings.
- b) Hair follicle receptors.
- c) Krause's end bulb.
- d) Meissner's corpuscles.
- e) Pacinian corpuscles.
- Key: a

Topic Specification: Nervous System – Properties of Sensory Receptors.

MCQ.12 Muscle spindles:

- a) Are non-encapsulated.
- b) Discharge decreases when these are stretched.
- c) Has no involvement in the muscle tone mechanism.
- d) Regulate length of the muscle.
- e) Regulate tension in the muscle.
- Key: d

Topic Specification:Nervous System – Muscle Spindle Function

Model Paper

- MCQ.13 In a patient having right sided hemisection of the spinal cord, on the contralateral side below the hemisection, there is loss of:
 - a) Fine touch.
 - b) Pain.
 - c) Proprioception.
 - d) Two-point tactile discrimination.
 - e) Vibration.
 - Key: b

Topic Specification: Nervous System – Ascending Tracts.

MCQ.14 Minimum separable distance for two-point tactile discrimination is on:

- a) Back of the body.
- b) Fore arm.
- c) Arm.
- d) Hand.
- e) Tips of the fingers.

Key: e

Topic Specification: Nervous System

MCQ.15 Features of the primary motor area do not include:

- a) Brodman's area 4 is present in it.
- b) Contains agranular type of cerebral cortex.
- c) Initiates voluntary movements.
- d) Ipsilateral representation of the body parts.
- e) Upside down representation of the body parts.

Key: d

Topic Specification: Nervous System – Motor areas

MCQ.16 Features of the Pyramidal tract do not include:

- a) 30% of its fibers arise from the primary motor area.
- b) 30% of its fibers arise from the pre motor and supplementary motor area.
- c) It does not contain fibers from the somatic sensory area.
- d) It controls voluntary fine skilled movements especially of distal parts of limb.
- e) Most of its fibers cross over to form medullary motor decussation.

Key: c

Topic Specification:Nervous System – Pyramidal Tracts

<u>Model Paper</u>

MCQ.17 Chorea is characterized by dancing, flicking movements involving hand, arm or face. It is due to lesion of:

- a) Corpus striatum.
- b) Globus pallidus.
- c) Lentiform nucleus.
- d) Substantia nigra.
- e) Thalamus.
- Key: a

Topic Specification: Nervous System – Basal Ganglia

MCQ.18 A patient with cerebellar disease is not likely to have:

- a) Adiadochokinesia.
- b) Ataxia.
- c) Dysarthria.
- d) Pendular knee jerk.
- e) Static tremors.
- Key: e

Topic Specification: Nervous System – Cerebellar Disease

MCQ.19 Semicircular canals can detect:

- a) Horizontal acceleration.
- b) Linear acceleration.
- c) Static position of the head.
- d) Vertical acceleration.
- e) Velocity of angular acceleration.

Key: e

Topic Specification: Nervous System – Vestibular Apparatus

MCQ.20 A man after a head njury developed a speech disorder. He started feeling difficulty in uttering words. His speech became limited to a few words. He is most likely having damage to:

- a) Arcuate fasciculus.
- b) Broca's area.
- c) Secondary visual area.
- d) Temporal lobe.
- e) Wernicke's area.
- Key: b

Topic Specification: Nervous System – Speech Disorder

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Model Paper

MCQ.21 Functions of the thalamus do not include:

a) Acts as the main sensory relay station.

- b) Has a role in the control of motor activity.
- c) Part of the reticular activating system.
- d) Part of the limbic system.
- e) Takes part in temperature regulation of the body.Key: e

Topic Specification: Nervous System – Thalamus

- MCO.22 REM (rapid eye movement) sleep is not characterized by:
 - a) Beta waves in the EEG.
 - b) Dreams which can be recalled.
 - c) Irregular respiration.
 - d) Rapid movements of the eye.
 - e) Secretion of the growth hormone.

Key: e

Topic Specification: Nervous System – Types of sleep

- **MCQ.23** The effect of sympathetic stimulation mediated through beta adrenergic receptors is:
 - a) Dilatation of the pupil.
 - b) Contraction of GIT shincters.
 - c) Cardioacceleration.
 - d) Contraction of internal urinary sphincter.
 - e) Vasoconstriction.
 - Key: c

Topic Specification: Nervous System – ANS

MCQ.24 The total refractive power of the eye (in diopters) is about:

- a) 20
- b) 14
- c) 30
- d) 59
- e) 79

Key: d

Topic Specification: Special Senses – Eye – Refractive Power

- **MCO.25** The light rays coming from distant objects are focused in front of the retina in:
 - a) Astigmatism.
 - b) Hyperopia.
 - c) Myopia.
 - d) Nystagmus.
 - e) Presbyopia.
 - Key: c

Topic Specification: Special Senses – Refractive errors of the eye.

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Model Paper

- **MCO.26** The retinal cells which generate action potential along the optic nerve fibers are:
 - a) Amacrine.
 - b) Bipolar.
 - c) Ganglion.
 - d) Horizontal.
 - e) Muller's
 - Key: c

Topic Specification: Special Senses – Eye – Retinal Cells

MCO.27 A patient with right homonymous hemianopia is likely to have lesion in:

- a) Center of the optic chiasma.
- b) Left optic nerve.
- c) Left optic tract.
- d) Right optic tract.
- e) Sides of the optic chiasma.

Key: c

Topic Specification: Special Senses – Eye – Lesions of the Visual Pathway.

MCQ.28 The attenuation reflex:

- a) Has a latent period of 30 seconds.
- b) Increases one's sensitivity to own voice.
- c) Involves relaxation of tensor tympani muscle.
- d) Makes the ossicular chain relaxed.
- e) Protects the inner ear from the damage by very loud sounds.

Key: e

Topic Specification: Special Senses – Middle Ear

MCQ.29 In nerve deafness of the right ear:

- a) Rinne's test is negative on the affected side.
- b) Weber's test is lateralized on the right side.
- c) Weber's test is lateralized on the left side.
- d) Weber's test is centralized.
- e) Schwaback test shows prolonged bone conduction on the affected side.

Key: c

Topic Specification: Special Senses – Ear – Deafness.

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Model Paper

- **MCQ.30** The food containing L-glutamate gives the taste:
 - a) Bitter.
 - b) Salty.
 - c) Sour.
 - d) Sweet.
 - e) Umami.
 - Key: e

Topic Specification:Special Senses – Taste

MCQ.31 The hormone not derived from the amino acid tyrosine is:

- a) Calcitonin.
- b) Dopamine.
- c) Epinephrine.
- d) Norepinephrine.
- e) Thyroxine.
- Key: a

Topic Specification: Endocrines – Chemical Nature of Hormones.

- **MCQ.32** The hormone acting on the target cells through the activation of phospholipase C is:
 - a) Growth hormone.
 - b) Gonadotropin releasing hormone.
 - c) Follicle stimulating hormone.
 - d) Luteinizing hormone.
 - e) Thyroid stimulating hormone.
 - Key: b

Topic Specification: Endocrines – Mechanism of action of hormones.

- MCQ.33 Growth hormone decreases:
 - a) Blood glucose level.
 - b) Blood free fatty acid level.
 - c) Mobilization of fatty acids from the adipose tissue.
 - d) Red blood cells formation.
 - e) Protein catabolism.
 - Key: e

Topic Specification: Endocrines - Anterior Pituitary – Growth Hormone

- MCQ.34 Antidiuretic hormone:
 - a) is synthesized in the posterior pituitary.
 - b) Is a peptide having 91 amino acids.
 - c) Is transported with neurophysin in the blood.
 - d) Secretion is stimulated by increased osmolarity of body fluids.
 - e) Secretion is stimulated by increased volume of ECF.

Key: d

Topic Specification: Endocrines – Posterior Pituitary.

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Model Paper

- MCQ.35 In patients of thyrotoxicosis (Grave's Disease) there is decreased plasma level of:
 - a) Free fatty acids.
 - b) Glucose.
 - c) Thyroglobulin.
 - d) Thyroid stimulating hormone (TSH).
 - e) Thyroid stimulating immunoglobulins (TSI).

Key: d

Topic Specification: Endocrines – Thyroid Gland – Hypersecretion

- MCQ.36 Parathyroid hormone increases:
 - a) Bone formation.
 - b) Intestinal absorption of vitamin D.
 - c) Renal tubular reabsorption of the phosphate.
 - d) Renal tubular reabsorption of the calcium.
 - e) Plasma phosphate level.

Key: d

- **Topic Specification:** Endrocrines Parathyroid Gland
- MCQ.37 Cortisol decreases:
 - a) Blood glucose level.
 - b) Blood amino acids level.
 - c) Blood lymphocyte count.
 - d) Plasma free fatty acid concentration.
 - e) Plasma protein synthesis in the liver.
 - Key: c

Topic Specification: Endocrines – Adrenal Cortex.

- **MCQ.38** The aldosterone secretion is greatly stimulated by:
 - a) Adrenocorticotrophic hormone (ACTH).
 - b) Decreased Na⁺ concentration in the extracellular fluid.
 - c) Fall in the arterial blood pressure.
 - d) Increased K^+ concentration in the extracellular fluid.
 - e) Increased renin secretion from the juxtaglomerular cells.
 - Key: d

Topic Specification:Endocrines – Aldosterone

- MCQ.39 Insulin is not likely to increase:
 - a) Glycolysis.
 - b) Glycogenesis.
 - c) Gluconeogenesis.
 - d) Protein synthesis.
 - e) Storage of fat.
 - Key: c

Model Paper

- MCQ.40 In a male child born with undescended testes, descent of testes occurs by giving him injection of:
 - a) Adrenal androgens.
 - b) Growth hormone.
 - c) Melatonin.
 - d) Testosterone.
 - e) Thyroxine.
 - Key: d

Topic Specification: Reproduction – Function of Testosterone.

- MCQ.41 About 60% of the semen is formed by:
 - a) Mucous from the bulbourethral glands.
 - b) Spermatozoa.
 - c) Secretion of the prostate gland.
 - d) Secretion of the seminal vesicles.
 - e) Secretion of the vas deferens.

Key: d

Topic Specification:Reproduction – Semen

MCO.42 In a woman, if ovum is not fertilized menstruation occurs. This is due to:

- a) Involution of the corpus luteum.
- b) Release of prostaglandins from the endometrium.
- c) Reduction in estrogens and progesterone.
- d) Secretion of LH from the anterior pituitary.
- e) Secretion of FSH from the anterior pituitary.

Key: c

Topic Specification: Reproduction – Menstrual Cycle

MCQ.43 The secretory changes in the uterine endometrium and inhibition of the uterine contraction is the function of:

- a) Estrogens.
- b) Dehydroepiandrosterone.
- c) Oxytocin.
- d) Progesterone.
- e) Prolactin.

Key: d

Topic Specification: Reproduction – Progesterone

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Model Paper

- **MCQ.44** In pregnant women, there is inhibition of secretion of:
 - a) Anterior pituitary gonadotropins.
 - b) Calcitonin from parafollicular cells of the thyroid.
 - c) Catecholamines from the adrenal medulla.
 - d) Androgens from the adrenal cortex.
 - e) Growth hormone from the anterior pituitary.

Key: a

Topic Specification:Reproduction – Pregnancy

- **MCQ.45** Prolactin from the anterior pituitary causes:
 - a) Development and growth of duct system of the breast.
 - b) Development and growth of alveoli and lobules of the breast.
 - c) Milk secretion in the breast.
 - d) Milk ejection from the breast.
 - e) Secretory changes in the breast.
 - Key: c

Topic Specification: Reproduction – Lactation