PHYSIOLOGY DEPARTMENT
2ND YEAR MBBS 2018-2019

MBBS-I/I-020

Total Marks 20,
Time =20mins
Select Single best answer, all questions carry equal marks.

UNIT TEST: Retest Kidney I
Date: 11-3-19

Roll No:_____ Name:_____

INSTRUCTIONS

1-All objective questions are to be attempted on the paper and returned to the invigilator within 20 mins
2-Any cutting and overwriting in objective part will not be accepted.

Q1The most abundant cation in the ICF is

A. Na ions
B. Ca ions
C. K ions
D. H ions
E. Mg ions

Q2. The transport of Glucose in the renal tubular cells of proximal tubules occurs via;

A. Facilitated diffusion
B. Secondary active transport with sodium
C. Active transport
D. Concentration gradient
E. When plasma glucose level falls

Q3. Which of the following will cause an increase in both Glomerular filteration rate (GFR) and renal plasma flow(RPF)?

A. Hyperproteinemia
B. A stone in the ureter
C. Dilatation of afferent arterioles
D. Dilatation of efferent arterioles
E. Constriction of afferent arterioles

Q4. What is true regarding Renin secretion?

A. Increase k+ in Proximalconvolutedtubules,increases renin secretion
B. Decrease Na+ in Distal convoluted tubules ,increase in Renin secretion
C. Inversely proportional to K+ levels
D. Directly proportional to ADH levels
E. Directly proportional to glucose concentration.

Q5. If the Glomerular capillary colloidal osmotic pressure is increased, net effect will be

A. GFR will be increased
B. GFR will remain normal
C. GFR will be decreased
D. Net filteration pressure will be increased
E. Net filteration pressure will be normal (2018)

Q6. The site of action of ADH is:

A. Glomerulus of Nephron
B. Proximal convoluted tubules
C. Distal convoluted tubules
D. Boman capsule
E. Loop of Henle

Q7. Which of the following pressure changes lead to an increased GFR?

A. Increase glomerular capillary oncotic pressure
B. Increase glomerular capillary hydrostatic pressure
C. Increase hydrostatic pressure in Bowman's capsule
D. Decrease net filteration pressure
E. None of the above

Q8.Salma whounderwent surgery and unfortunately sensory fibers of pelvic nerve were cut, now she complain ofdribbling of urine ,do you think which type of abnormality she is having?

A. Automatic bladder
B. Atonic bladder.
C. Uninhibited neurogenic bladder
D. Normal micturition reflex
E. Neurogenic bladder (2018)

Q9.Micturition Reflex Centre is located in?

A. Brain stem
B. Sacral segment of Spinal cord(S2, 3,4)
C. Lumbar segment of spinal cord
D. Cerebral cortex
E. Lumbar sympathetic ganglia

Q10.Which of the following hormone increase GFR.

A. Nor-epinephrine
B. Epinephrine
C. Endothelin
D. Prostaglandins
E. Catecholamine

Q11. In 70 kg man the GFR will be:

A. 250 L/day
B. 180 L/day
C. 380 L/day
D. 400 L/day
E. 600 l/day

Q12.Which statement about filtration fraction is Incorrect:

A. Averages about 0.2
B. Indicates 20 per cent of the plasma is filtered
C. Decreases with increased colloidal osmotic pressure
D. Increases with increased colloidal osmotic pressure
E. Is equal to GFR/Renal plasma flow

Q13. Which one has biphasic effect on GFR?

A. Arterial pressure
B. Renal blood flow
C. Efferent arteriolar constriction
D. Afferent arteriolar constriction
E. None of the above

Q14. Transport maximum for Glucose is?

A. 200 mg/min
B. 375 mg/min
C. 300 mg/min
D. 150 mg/min
E. 100 mg/min

Q15. A person had severe haemorrhage due to an accident .which one is most likely explanation for decreased GFR?

A. Release of Erythropoitin
B. Activation of parasympathetic stimulation
C. Activation of sympathetic stimulation which causes constriction of renal arteries
D. Release of prostagladins
E. Release of Nitric oxide

Q16.If GFR Is 120ml / min and renal plasma flow is 650ml/min than calculate the filtration fraction.

A. 0.05
B. 0.25
C. 0.35
D. 0.19
E. 0.45

$$FF = \frac{GFR}{RBF} = \frac{120}{650}$$

Q17. Urinary excretion rate is equal to:

A. Filtration rate + reabsorption rate -- secretion rate
B. Filtration rate + reabsorption rate + secretion rate
C. Filtration rate -- reabsorption rate + secretion rate
D. Filtration rate × reabsorption rate + secretion rate
E. None of the above

Q18. Transport maximum for glucose means:

A. Maximum plasma glucose levels
B. Maximum urine glucose levels
C. Saturation of all glucose transporters in tubular epithelial cells
D. Maximum Secretion of glucose by tubular cells
E. None of above

Q19.The renal blood flow can be estimated by

A. Creatinin
B. Inulin
C. Urea
D. PAH clearance
E. Ammonia

Q20. By which of the following substance total body water is measured?

A. Radioactive water (tritrium ^3H_2O)
B. Radioactive ^{22}Na
C. ^{5}Cr labeled RBCs
D. Evans' blue dye
E. ^{131}I - iothalamate