

## PHYSIOLOGY – GASTROINTESTINAL SYSTEM

1. Which of the following statement is TRUE?
  - A. Intestinal blood vessel is entirely regulated by enteric nervous system.
  - B. Nitric oxide is the major neurotransmitter for gastrointestinal smooth muscle relaxation.
  - C. Peristalsis is a type of spinal response to stretch
  - D. All of the above
  - E. None of the above
  
2. Gastrin:
  - A. is only made in gastric antral G cells
  - B. is inactivated in liver
  - C. stimulates insulin secretion after protein meal
  - D. secretion reduces with gastric distention
  - E. All of the above
  
3. CCK does NOT:
  - A. stimulates gall bladder contraction
  - B. inhibits gastric emptying
  - C. stimulate secretion of pancreatic juice rich in enzymes
  - D. stimulates insulin secretion
  - E. None of the above
  
4. Volume of Saliva secreted daily is:
  - A. 500ml
  - B. 1000ml
  - C. 1500ml
  - D. 2000ml
  - E. 2500ml
  
5. Which of the following is TRUE?
  - A. Parotid gland provides most of the saliva produced daily.
  - B. pH of saliva at rest is 7.0
  - C. Lingual lipase is produced by salivary gland
  - D. Reflex salivary secretion upon eating is mediated by vagus nerve
  - E. Peristalsis is a gravity dependent process.
  
6. Which of the following pairing is TRUE?
  - A. Parietal cells – secretes HCl & intrinsic factor
  - B. Chief cells – secretes pepsinogen
  - C. Mucous cells – secretes bicarbonate
  - D. G cells – secretes gastrin
  - E. All of the above

7. Volume of daily gastric secretion is:
- A. 500ml
  - B. 1000ml
  - C. 1500ml
  - D. 2000ml
  - E. 2500ml
8. pH of stomach is:
- A. 1-2
  - B. 4-5
  - C. 7.4
  - D. 8-10
  - E. None of the above
9. Which of the following statement is FALSE?
- A. Carbonic anhydrase is found in gastric parietal cells
  - B.  $H^+$  is secreted into stomach by active H/K antiport in the gastric parietal cells
  - C.  $Cl^-$  is actively transported into the stomach by gastric parietal cells
  - D. Gastric venous blood is alkaline after a meal.
  - E. All of the above
10. Which of the following causes increased gastric secretion by stimulating vagus nerve?
- A. Alcohol
  - B. Hypoglycemia
  - C. Caffeine
  - D. All of the above
  - E. None of the above
11. pH of duodenum
- A. 1-2
  - B. 4-5
  - C. 6-7
  - D. 8-9
  - E. None of the above
12. Volume of pancreatic juice produced daily is:
- A. 500 ml
  - B. 1000 ml
  - C. 1500 ml
  - D. 2000 ml
  - E. 2500 ml

13. Which of the following is TRUE?
- A. Trypsin can activate all pancreatic enzymes
  - B. Pancreas normally has trypsin inhibitor to prevent autolysis
  - C. Secretin stimulates pancreatic duct to increase alkaline content of pancreatic juice
  - D. CCK stimulates pancreatic acinar to increase enzyme content of pancreatic juice
  - E. All of the above

14. Amount of bile secreted daily:

- A. 500 ml
- B. 1000 ml
- C. 1500 ml
- D. 2000 ml
- E. 2500 ml

15. Which of the following is TRUE?

- A. 50% of bile salts are reabsorbed in enterohepatic circulation through Na/bile acid cotransport.
- B. Primary bile salts are converted to secondary bile salts in the colon
- C. Conjugation of bilirubin render it more fat soluble
- D. Unconjugated bilirubin is partly excreted in urine
- E. All of the above

16. Which of the following causes conjugated hyperbilirubinemia?

- A. Hemolytic anaemia
- B. Reduced bilirubin uptake into hepatocytes
- C. Reduced intracellular (hepatic) protein binding to bilirubin
- D. Biliary obstruction
- E. All of the above

17. Amount of intestinal secretion daily:

- A. 500ml
- B. 1000ml
- C. 1500ml
- D. 2000ml
- E. 2500ml

18. In small bowel obstruction:

- A. local ischemia may occur in the dilated proximal segment due to elevated intraluminal pressure
- B. Vomiting & hypotension is mediated by visceral afferent in the distended segment
- C. Severe metabolic alkalosis may occur
- D. All of the above
- E. None of the above

19. Which of the following type of intestinal contraction is only seen in the colon?

- A. Peristalsis
- B. Segmental contraction
- C. Massive contraction
- D. Tonic contraction
- E. All of the above

20. Which of the following statement is FALSE?

- A. 90% water of colonic content is reabsorped in the large bowel
- B. Sodium is actively reabsorped in colon
- C. Water intoxication may result from large volume of enema
- D. Longest intestinal transit time occurs in the ascending colon
- E. All of the above

#### ANSWERS

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|-------|-------|
| 1. B  | 11. C |
| 2. C  | 12. C |
| 3. D  | 13. E |
| 4. C  | 14. A |
| 5. B  | 15. B |
| 6. E  | 16. D |
| 7. E  | 17. B |
| 8. A  | 18. D |
| 9. C  | 19. C |
| 10. B | 20. D |