**Q1)** **Which of the following is NOT a component of pancreatic juice?**

a) Amylase

b) Lipase

c) Trypsin

Pepsin

Correct Answer: Option (d)   
Explanation: - Pancreatic juice is a fluid secreted by the pancreas into the small intestine, which contains several enzymes that help digest carbohydrates, proteins, and fats. Amylase breaks down starch into smaller sugars; lipase breaks down fats into fatty acids and glycerol; and trypsin breaks down proteins into smaller peptides. Pepsin is a digestive enzyme produced by the stomach, not the pancreas.  
Difficulty Level- Easy  
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**Q2) Which of the following is NOT a function of the villi in the small intestine?**

a) Increasing the surface area for nutrient absorption

b) Secreting digestive enzymes

c) Moving chyme along the digestive tract

Absorbing nutrients into the bloodstream

Correct Answer: Option (b)

Explanation: - The villi are finger-like projections that line the walls of the small intestine and greatly increase its surface area for nutrient absorption. They are covered in microvilli, which are even smaller projections that further increase surface area. The villi are involved in absorbing nutrients from digested food and transporting them into the bloodstream. They do not, however, secrete digestive enzymes, which are produced by the pancreas and small intestine.

Difficulty Level- Easy

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**Q3) Which of the following is NOT a hormone involved in the regulation of digestion and absorption?**

a) Gastrin

b) Secretin

c) Leptin

Cholecystokinin

Correct Answer: Option (c)

Explanation: - Gastrin, secretin, and cholecystokinin are all hormones involved in the regulation of digestion and absorption. Gastrin is produced by the stomach and stimulates the secretion of gastric juice, while secretin and cholecystokinin are produced by the small intestine and stimulate the secretion of pancreatic juice and bile, respectively. Leptin is a hormone produced by adipose tissue that regulates appetite and energy balance, but it is not directly involved in the digestive process.

Difficulty Level- Easy

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**Q4) Which of the following is the main site of nutrient absorption in the digestive system?**

a) Stomach

b) Mouth

c) Small intestine

Large intestine

Correct Answer: Option (c)

Explanation: - The small intestine is the main site of nutrient absorption in the digestive system. It is lined with finger-like projections called villi and microvilli that increase its surface area and aid in the absorption of nutrients.

Difficulty Level- Easy

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**Q5) Which of the following is a fold of tissue that connects the tongue to the floor of the mouth?**

a) Lingual frenulum

b) Labial frenulum

c) Buccal frenulum

Penile frenulum

Correct Answer: Option (a)

Explanation: - The lingual frenulum is a fold of tissue that connects the tongue to the floor of the mouth. It helps anchor and stabilize the tongue

Difficulty Level- Hard

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**Q6) Which of the following is the muscular valve that regulates the flow of food between the stomach and the duodenum?**

a) Pyloric sphincter

b) Ileocecal valve

c) Anal sphincter

Correct Answer: Option (b)

Explanation: - The pyloric sphincter is a muscular valve that regulates the flow of food between the stomach and the small intestine.

Difficulty level- Easy

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**Q7) Which of the following is the layer of the tooth that lies underneath the enamel?**

a) Pulp

b) Dentin

c) Cementum

Alveolar bone

Correct Answer: Option (b)

Explanation: - Dentin is the layer of the tooth that lies underneath the enamel, and it makes up most of the tooth structure.

Difficulty level- Hard

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**Q8) Considerable wasting of muscles along with extreme oedema in infants or children is associated with**

a) Kwashiorkor

b) Marasmus

c) Pellagra

c) Rickets

Correct Answer: Option (a)

Explanation: - Kwashiorkor is one of the two types of severe Protein-energy malnutrition (PEM) and is characterized by severe fluid retention and a swollen, distended abdomen. People across all age groups can get affected by Kwashiorkor, however it is most common in children aged more than a year. At this age most children transition from breastfeeding to a less adequate diet (a high calorie low protein diet)

Difficulty Level- Medium

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**Q9) Which of the following molecules is responsible for the absorption of iron in the small intestine?**

a) Haemoglobin

b) Ferritin

c) Transferrin

Ceruloplasmin

Correct Answer: Option (c)

Explanation: - Transferrin is a protein that binds to iron and transports it across the cell membrane of the small intestine, allowing for its absorption into the bloodstream

Difficulty level- Very Hard

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**Q10) Which of the following nutrients is not absorbed by the lymphatic system?**

a) Lipids

b) Proteins

c) Carbohydrates

Nucleic acids

Correct Answer: Option (c)

Explanation: - Carbohydrates are absorbed by the bloodstream, not the lymphatic system. Lipids and fat-soluble vitamins are absorbed by the lymphatic system in the form of chylomicrons, while proteins and other nutrients are absorbed by the bloodstream.

Difficulty level- Hard

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**Q11) Which of the following is a disorder that can occur due to dysfunction of oxyntic cells?**

a) Peptic ulcer disease

b) Inflammatory bowel disease (IBD)

c) Celiac disease

Irritable bowel syndrome (IBS)

Correct Answer: Option (a)

Explanation: - Peptic ulcer disease is a condition in which there are open sores in the lining of the stomach or duodenum. It can occur due to dysfunction of oxyntic cells, which can lead to an overproduction of acid and damage to the stomach lining.

Difficulty level- Medium

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**Q12) What is the role of histamine in the regulation of oxyntic cell secretion?**

a) Histamine stimulates the secretion of hydrochloric acid by oxyntic cells.

b) Histamine inhibits the secretion of hydrochloric acid by oxyntic cells.

Histamine is not involved in the regulation of oxyntic cell secretion.

Histamine activates the release of pancreatic enzymes.

Correct Answer: Option (a)

Explanation: - Histamine is released by enterochromaffin-like cells in the stomach in response to various stimuli, such as gastrin and acetylcholine. It stimulates the secretion of hydrochloric acid by oxyntic cells.

Difficulty level- Very Hard

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**Q13) The small intestine receives secretions from the liver and the pancreas through which of the following ducts?**

a) Bile duct and pancreatic duct

b) Common bile duct and pancreatic duct

c) Bile duct and common hepatic duct

d) Pancreatic duct and common hepatic duct

Correct Answer: Option (b)

Explanation: - The cystic duct (duct of gall bladder) together with the hepatic duct form the common bile duct from the liver. The small intestine receives secretions from the liver and the pancreas through the common bile duct and the pancreatic duct, respectively and is also known as the common hepato-pancreatic duct, which is guarded by the sphincter of Oddi

Difficulty level- Easy

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**Q14) Which of the following teeth are used for cutting and tearing food?**

a) Incisors

b) Premolars

c) Molars

d) Cannine

Correct Answer: Option (a)

Explanation: - Incisors are flat, thin teeth with sharp edges that are designed to cut food. They are located at the front of the mouth, and humans have eight incisors in total.

Difficulty level- Easy

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**Q15) What is the primary site of renin action in the digestive system?**

a) Stomach

b) Small intestine

c) Large intestine

d) Pancreas

Correct Answer: Option (a)

Explanation: - Renin is produced and released in the stomach, where it acts on milk proteins to begin the process of digestion.

Difficulty level- Medium

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**Q16) Which of the following is an adaptation that allows herbivores to more efficiently digest cellulose?**

a) Large, flat teeth for grinding up plant material

b) A long, narrow digestive tract that allows for greater surface area for absorption

c) Specialized stomachs or ceca for microbial fermentation

d) The ability to produce large amounts of saliva, which contains cellulase enzymes

Correct Answer: Option (c)

Explanation: - Herbivores have evolved specialized stomachs or ceca, such as the rumen in ruminants, that provide a favourable environment for microbial fermentation. These compartments contain a complex microbial community that is capable of breaking down cellulose into simpler compounds that can be absorbed and used by the animal.

Difficulty level- Hard

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**Q17) Which of the following is not a component of Succus Entericus?**

a) Electrolytes

b) Mucus

c) Hydrochloric acid

d) Correct Answer: Option (d)

Explanation: - Hydrochloric acid is not a component of Succus Entericus. Instead, Succus Entericus contains bicarbonate ions, electrolytes, and mucus, which help neutralize the acidic chyme that enters the small intestine, regulate the pH of the small intestine, and protect the intestinal wall from damage.

Difficulty level- Medium

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**Q18) Which of the following nerves is responsible for stimulating the secretion of saliva?**

a) Facial nerve

b) Trigeminal nerve

c) Vagus nerve

d) Glossopharyngeal nerve

Correct Answer: Option (d)

Explanation: - The glossopharyngeal nerve is responsible for stimulating the secretion of saliva. It carries signals from the brainstem to the salivary glands and plays a role in taste perception.

Difficulty level- Hard

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**Q19) Which of the following digestive disorders can be caused by consuming contaminated food or water?**

a) Constipation

b) Diarrhoea

c) Vomiting

d) Indigestion

Correct Answer: Option (b)

Explanation: - Diarrhoea can be caused by consuming contaminated food or water, often leading to an infection in the digestive system

Difficulty level- Medium

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**Q20) Which layer of the gut wall contains blood vessels, lymphatic vessels, and nerves that supply the gut wall?**

a) Mucosa

b) Submucosa

c) Muscularis externa

d) Serosa

Correct Answer: Option (b)

Explanation: - The submucosa is a layer of connective tissue found beneath the mucosa. It contains blood vessels, lymphatic vessels, and nerves that supply the gut wall.

Difficulty level- Medium

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**Q21)** **What is the role of Glisson's capsule in liver transplantation?**

a) It provides a protective covering for the transplanted liver

b) It prevents the immune system from rejecting the transplanted liver

c) It connects the transplanted liver to the blood vessels and bile ducts of the recipient

d) It regulates the production of bile in the transplanted liver

Correct Answer: Option (a)

Explanation: - In liver transplantation, Glisson's capsule plays an important role in protecting the transplanted liver from damage during the surgery and in the early postoperative period. The capsule is preserved during the surgery and used to cover the surface of the transplanted liver. This helps to prevent injury to the liver and reduces the risk of bleeding and infection. Additionally, the capsule also provides a scaffold for the regrowth of liver tissue and helps to promote the healing process.

Difficulty level- Hard

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**Q22)** **What is the mechanism that controls the opening and closing of the gastro-oesophageal sphincter?**

a) The presence of acidic chyme in the stomach

b) The secretion of hormones by the small intestine

c) The contraction and relaxation of the surrounding muscles

d) The feedback from the brainstem based on the level of hunger

Correct Answer: Option (c)

Explanation: - The opening and closing of the gastro-oesophageal sphincter are controlled by the contraction and relaxation of the surrounding muscles. The muscles of the sphincter contract to prevent the backflow of stomach contents into the oesophagus and relax to allow the passage of food into the stomach. The contraction and relaxation of the muscles are regulated by the autonomic nervous system.

Difficulty level- Medium

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**Q23)** **Which of the following ions is necessary for the activity of pancreatic nucleases?**

a) Calcium

b) Sodium

c) Potassium

d) Chloride

Correct Answer: Option (a)

Explanation: - Calcium ions are necessary for the activity of pancreatic nucleases. They activate the enzyme and help to stabilize its structure.

Difficulty level- Hard

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**Q24)** **Which of the following nutrients is most likely to be deficient in a vegetarian diet?**

a) Vitamin B12

b) Iron

c) Calcium

d) Vitamin D

Correct Answer: Option (a)

Explanation: - Vitamin B12 is primarily found in animal products and is therefore more likely to be deficient in a vegetarian diet.

Difficulty level- Medium

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**Q25)** **Which of the following is an inhibitor of chymotrypsin?**

a) Trypsin

b) Pepsin

c) Chymostatin

d) Carboxypeptidase

Correct Answer: Option (c)

Explanation: - Chymostatin is a specific inhibitor of chymotrypsin that binds to the active site of the enzyme and prevents substrate binding.

Difficulty level- Medium

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**Q26)** **Which of the following diseases is associated with inflammation of Peyer's patches?**

a) Inflammatory bowel disease

b) Diabetes mellitus

c) Rheumatoid arthritis

d) Coronary artery disease

Correct Answer: Option (a)

Explanation: - Inflammatory bowel disease, such as Crohn's disease, is associated with inflammation of Peyer's patches, which can lead to chronic inflammation of the intestines

Difficulty level- Medium

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**Q27) Which of the following structures is not part of the conducting zone of the respiratory system?**

a) Bronchioles

b) Alveoli

c) Trachea

d) Bronchi

Correct Answer: Option (b)

Explanation: - The alveoli are part of the respiratory zone, not the conducting zone, of the respiratory system.

Difficulty level- Easy

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**Q28) Which of the following respiratory disorders is characterized by the narrowing of the airways due to inflammation and bronchoconstriction?**

a) Asthma

b) Emphysema

c) Chronic bronchitis

d) Lung cancer

Correct Answer: Option (a)

Explanation: - Asthma is a respiratory disorder characterized by the narrowing of the airways due to inflammation and bronchoconstriction.

Difficulty level- Easy

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**Q29) Which of the following is a measure of the total amount of air that the lungs can hold?**

a) Tidal volume

b) Inspiratory reserve volume

c) Expiratory reserve volume

d) Vital capacity

Correct Answer: Option (d)

Explanation: - Vital capacity is a measure of the total amount of air that the lungs can hold, including both inspiratory and expiratory reserve volumes.

Difficulty level- Easy

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**Q30) What is the normal respiratory rate in adults?**

a) 12-20 breaths per minute.

b) 20-30 breaths per minute.

c) 30-40 breaths per minute.

d) 40-50 breaths per minute.

Correct Answer: Option (a)

Explanation: - The normal respiratory rate in adults is 12-20 breaths per minute. This can vary depending on age, physical activity, and medical conditions.

Difficulty level- Easy

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