

BIOLOGY

BOOKS - AAKASH SERIES

DIGESTION AND ABSORPTION

Exercise I Alimentary Canal

1. The condition in which teeth are embedded in the socket of jaw bone is

- A. Heterodont
- B. Acrodont
- C. Polyphyodont
- D. Thecodont

Answer: D



- 2. Dental formula of adult humans is
- A. $\frac{3}{3}$, $\frac{1}{1}$, $\frac{3}{2}$, $\frac{1}{1}$

B.
$$\frac{2}{2}$$
, $\frac{1}{1}$, $\frac{3}{2}$, $\frac{3}{3}$

c.
$$\frac{2}{2}$$
, $\frac{1}{1}$, $\frac{2}{2}$, $\frac{3}{3}$

D.
$$\frac{3}{3}$$
, $\frac{1}{1}$, $\frac{3}{3}$, $\frac{3}{3}$



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3. Hardest substance in human body is

A. Bone

B. Cartilage

C. Ribs

D. Enamel

Answer: D



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4. Freely movable tongue is attached to oral cavity by

A. Chordae tendineae

B. Tendons

- C. Frenulum
- D. Papillae



- 5. Common passage for food and air is
- ----·
 - A. Nasal cavity
 - B. oesophagus

- C. Pharynx
- D. Oral cavity



- 6. Entry of food into trachea is prevented by
 - A. Epiglottis
 - B. Bicuspid valve
 - C. Sphincter of Oddi

D. Epimysium

Answer: A



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7. Oesophagus opens in which part of the stomach?

A. Fundic

B. Pyloric

C. Cardia

D. Duodenum

Answer: C



- **8.** Correct sequence of the following is
 - A. Duodenum, ileum, jejunum
 - B. Jejunum, duodenum, ileum
 - C. Ileum, duodenum, jejunum
 - D. Duodenum, jejunum, ileum

Answer: D



- **9.** Opening of stomach into small intestine is guarded by
 - A. Cardiac sphincter
 - B. Anterior oesophageal sphincter
 - C. Pyloric sphincter
 - D. Sphincter of Oddi



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- 10. Set of coiled structures of the following is
 - A. Oral cavity and pharynx
 - B. Jejunum and ileum
 - C. Stomach and duodenum
 - D. Duodenum and jejunum

Answer: B

11. Vermiform appendix arises from

A. Rectum

B. Colon

C. Anus

D. Caecum

Answer: D



12. Symbiotic bacteria are accommodated in

A. Ileum

B. Colon

C. Rectum

D. Caecum

Answer: D



13. Which of the following is divided into ascending part, transverse part and descending parts?

A. lleum

B. Colon

C. Rectum

D. Caecum

Answer: B



14. Correct sequence of layers from outer to inner in intestine of humans is

A. Serosa, muscularis, mucosa, sub-mucosa

B. Serosa, mucosa, muscularis, sub-mucosa

C. Serosa, muscularis, sub-mucosa, mucosa

D. Serosa, mucosa, sub-mucosa, muscularis

Answer: C



15. Stomach layer that has mesothelium and some connective tissues is

- A. Serosa
- B. Sub-mucosa
- C. Mucosa
- D. Muscularis

Answer: A



16. Correct arrangement of muscles from outer to inner in muscularis of stomach in humans is

- A. Circular, oblique, longitudinal
- B. Oblique, longitudinal, circular
- C. Longitudinal, circular, oblique
- D. Circular, longitudinal, oblique

Answer: C



17. Of the following layers which one forms rugae in stomach and villi in intestine of humans?

A. Serosa

B. Sub-mucosa

C. Mucosa

D. Muscularis

Answer: C



18. Duodenal layer with glands is

- A. Sub-mucosa
- B. Mucosa
- C. Serosa
- D. Muscularis

Answer: A



19. Organ situated between the limbs of duodenum is

- A. Stomach
- **B.** Pancreas
- C. Liver
- D. Spleen

Answer: B



20. Crypts of Lieberkuhn are formed by

A. Mucosa of stomach

B. Mucosa of intestine

C. Sub-mucosa of stomach

D. Sub-mucosa of intestine

Answer: B



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21. Lacteal, a lymph vessel is present in

A. Haustra	
B. Rugae	
C. Villus	
D. Serosa	



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22. Material that flows through lacteal is

A. Coelomic fluid

- B. Oxygenated blood
- C. Deoxygenated blood
- D. Lymph

Answer: D



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23. Passage of food into the stomach is controlled by

A. Pyloric sphincter

- B. Anterior oesophageal sphincter
- C. Gastro-oesophageal sphincter
- D. Sphincter of Oddi



- 24. Vermiform appendix is formed of
 - A. Haemopoietic tissue
 - B. Digestive tisue

- C. Lymphoid tissue
- D. All of these



- **25.** Select which is not true of intestinal villi among these.
 - A. They possess microvilli
 - B. They increase surface area

C. They are supplied with capillaries and

lacteal vessels

D. They only participate in digestion of fats

Answer: D



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Exercise I Digestive Glands

1. Goblet cells of mucosal epithelium of intestine secrete

B. HCI
C. Mucus
D. Lipase
Answer: C
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2. Crypts of Lieberkuhn secrete
A. Gastric juice

A. Enterokinase

- B. Pancreatic juice
- C. Bile juice
- D. Succus entericus

Answer: D



- 3. Number of salivary glands in humans is
 - A. 4 pairs
 - B. 2 pairs

- C. 3 pairs
- D. 5 pairs



- **4.** Largest gland of the body is
 - A. Pancreas
 - B. Thyroid
 - C. Pituitary

D. Liver

Answer: D



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5. Liver lobule is covered by

- A. Tunica albuginea
- B. Tunica adventitia
- C. Glisson's capsule
- D. Tunica interna



- **6.** The common bile duct in human is formed by the joining of
 - A. Formed by liver and pancreatic ducts
 - B. Guarded by sphincter of Oddi
 - C. Carries bile to gall bladder
 - D. Formed by cystic and hepatic ducts

Answer: D



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7. Sphincter of oddi is associated with opening of

- A. Pancreatic duct
- B. Hepatic duct
- C. Hepato-pancreatic duct
- D. Wolfian duct



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8. Optimum pH for the action of salivary amylase is

A. 2

B. 8.4

C. 6.8

D. 1



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- 9. What is the function of lysozyme?
 - A. Conversion of starch into glucose
 - B. Conversion of starch into maltose
 - C. It acts as antibacterial agent
 - D. It hydrolyses lipids

Answer: C

10. Incorrect one of the following is

- A. Parietal cells HCI
- B. Peptic cells pepsinogen
- C. Neck cells mucus
- D. Chief cels intrinsic factor

Answer: D



11. Mismatch of the following is

- A. Lysozyme prevention of infections
- B. Oxyntic cells HCI
- C. Oxyntic cells intrinsic factor
- D. Parietal cells pepsinogen

Answer: D



12. Substance essential for absorption of vitamin B_{12} is

A. Intrinsic factor

B. Pepsinogen

C. Prorennin

D. Enterokinase

Answer: A



- 13. Not a function associated with liver is
 - A. Metabolism of carbohydrates
 - B. Digestion of fats
 - C. Formation of bile
 - D. Secretion of gastrin hormone

Answer: D



14. Hepato-pancreatic duct opens into the duodenum and carries

- A. Bile
- B. Pancreatic juice
- C. Both (1) and (2)
- D. Saliva

Answer: C



15. Brunner's glands are located in

A. Mucosa of stomach

B. Pancreas

C. Sub-inucosa of intestine

D. Serosa of rectum

Answer: C



16. Hepato-pancreatic duct opens into the duodenum and carries

- A. Bile
- B. Pancreatic juice
- C. Both bile and pancreatic juice
- D. Saliva

Answer: C



17. A gland	not	associated	with	the	alimentary
canal is					

- A. Pancreas
- B. adrenal
- C. Liver
- D. Salivary glands

Answer: B



Exercise I Digestion Of Nutrients

- 1. Food bolus forms in
 - A. Oesophagus
 - B. Stomach
 - C. Buccal cavity
 - D. Nasopharynx

Answer: C



- 2. Saliva helps in the conversion of
 - A. Disaccharides into monosaccharides
 - B. Oligosaccharides into polysaccharides
 - C. Starch into disaccharides
 - D. Monosaccharides into pentoses

Answer: C



- 3. Deglutition means entry of food
 - A. From oesophagus to stomach
 - B. From stomach to duodenum
 - C. From anus to exterior
 - D. From pharynx to oesophagus

Answer: D



- 4. Excoriation in stomach results into
 - A. Emulsification of fats
 - B. Formation of chyme.
 - C. Damage to mucosa
 - D. Killing of microbes

Answer: C



5. Chyme is that food, which is ready

A. For absorption in ileum

B. To enter into oesophagus

C. To enter into duodenum

D. For defaecation

Answer: C



6. An enzyme of the gastric juice of infants that helps in the digestion of milk proteins is

- A. Rennin
- B. Amylase
- C. Lipase
- D. Nuclease

Answer: A



7. Which of the following is correct pairing site of action and substrate of rennin?

- A. Oral cavity starch
- B. Ileum protein
- C. Stomach casein
- D. Cuecum cellulose

Answer: C



8. In the intestine, trypsinogen is activated by

A. Rennin

B. Creatine kinase

C. Enterokinase

D. Chymotrypsinogen

Answer: C



9.	Most	effective	lipol	vtic	enz	vme	is
				,	~	, –	

- A. Erepsin
- B. Steapsin
- C. Ptyalin
- D. Enterokinase

Answer: B



10. Which of the following is not a component of pancreatic juice?

- A. Enterokinase
- **B.** Nucleases
- C. Trypsinogen
- D. Amylase

Answer: A



11. Which of the following is not a component of bile?

A. Bile pigments

B. Cholesterol

C. Bile salts

D. Lipase

Answer: D



12. Fatty acids and monoglycerides are converted into micelles by

- A. Lipase
- B. Bile
- C. Amylase
- D. Enterokinase

Answer: B



13. Which of the following does not pass through hepatopancreatic duct?

- A. Enzymes
- B. Alkaline bile
- C. Insulin
- D. Bilirubin

Answer: C



14. Set of enzymes that works in low pH is

A. Pepsin and trypsin

B. Salivary amylase and trypsin

C. Pepsin and rennin

D. Lipase and amylase

Answer: C



15. Of the starch consumed, about 30% is hydrolysed by

- A. Gastric amylase
- B. Salivary amylase
- C. Amylase of bile
- D. Microbes of caecum

Answer: B



16. Carbohydrates in the chyme are immediately acted by

- A. Gastric amylase
- B. Pancreatic amylase
- C. Amylase of bile
- D. Disaccharidases of intestinal juice

Answer: B



17. What is common between rennin, trypsin and amylase?

A. All are part of succus entericus

B. All works at a pH lower than 7

C. All are chemically proteins

D. All are proteolytic enzymes

Answer: C



18. Trypsin digests proteins in

A. Stomach in acidic medium

B. Stomach in alkaline medium

C. Intestine in alkaline medium

D. Intestine in acidic medium

Answer: C



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Exercise I Absorption Of Nutrients And Defaecation

1. Carrier ions like $Na^{\,+}$ required for the absorption of

A. Fructose

B. Glucose

C. Chloride ions

D. Water

Answer: A



2. This process makes the action of lipase e	asy
--	-----

- A. Deglutition
- **B.** Excoriation
- C. Peristalsis
- D. Emulsification

Answer: D



3. Substance that is absorbed by facilitated transport into blood is

A. Fructose

B. All amino acids

C. Glucose

D. Glycerol

Answer: A



4. Material that is transported by both passive and active transport is

A. Fructose

B. Glucose

C. Fatty acids

D. Micelles

Answer: B



5. Protein coated fat globules transported into lacteals are

- A. Micelles
- B. Chylomicrons
- C. Chyme
- D. Diglycerides

Answer: B



- 6. The large intestine absorbs
 - A. Alcohol and water
 - **B.** Most nutrients
 - C. Water, some drugs and vitamins
 - D. Bacteria and vitamins

Answer: C



7. Which of the following are absorbed in the alimentary canal as such?

A. Albumen of egg

B. Polysaccharides

C. Fat soluble vitamins

D. Proteins

Answer: C



Exercise I Disorders Of Digestive System

1. A condition arises due to the deposit of bile pigemnts in blood is

A. Vomiting

B. Constipation

C. Diarrhoea

D. Jaundice

Answer: D



2. An abnormality, in which there is an increase in liquidity of faecal discharge is

A. Vomiting

B. Constipation

C. Diarrhoea

D. Jaundice

Answer: C



3. A doctor suggested a person to take ORS.

That person might be suffering from

- A. Diarrhoea
- B. Jaundice
- C. Constipation
- D. Indigestion

Answer: A



4. Protein and	calorie	deficiency	results into
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- A. Marasmus
- B. Kwashiorkor
- C. Obesity
- D. Rickets

Answer: A



5. One of the following is not a common disorder of the digestive system

A. Tetanus

B. Diarrhoea

C. Dysentry

D. Jaundice

Answer: A



6. Match the following regarding digestive

system and choose correct one.

Column-I	Column-II
A) Rennin	1) Fats emulsification
B) Bile salts	2) Mucous secretion
C) Brunner's glands	3) Hydrochloric acid
D) Oxyntic cellss	4) Curdling of milk
	SA. J

Answer: D



7. Match the following and choose correct one.

Column-I	Column-II
A) Duodenum	 Zymogen
B) Parietal cells	Secretin
C) Paneth cells	Lysozyme
D) Chief cells	4) HCl

Answer: C

8. Match the following and choose correct one.

Column-l	Column-II		
A) Kupfer cells	1) Salivary glands		
B) Crypts of Lieberkuhn	2) Tooth		
C) Serous cells	3) Liver		
D) Odoniobiasis	4) Intestine		

Answer: B



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Exercise Ii Allmentary Canal

1. Which of the following membranes covers the oesophagus?

A. Tunica adventia

B. Serosa

C. Visceral peritoneum

D. Parietal peritoneum

Answer: B



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2. Epithelial cells involved in food absorption on their surface have

A. Stereo cilia

B. Pinocytic vesicles

C. Microvilli

D. Phagocytic vesicles

Answer: C



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3. Plexus of Auerbach lies in

A. Diencephalon

B. Medulla

C. Intestine

D. Stomach

Answer: D



- **4.** Correct match about taste buds of the tongue is
 - A. Sweet base
 - B. Sour sides of the base
 - C. Salt tip and sides
 - D. Bitter tip

Answer: C



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- 5. Aggregated lymphatic follicle: in ileum are
 - A. Peyer's patches
 - B. Crypts of Lieberkun
 - C. Argentaffin cells
 - D. Paneth cells

Answer: A

6. The neural plexus that controls the secretions of organs of the GI tract is

A. Myenteric plexus

B. Submucosal plexus

C. Brachial plexus

D. Cervical plexus

Answer: B



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7. The number of teeth that grow twice in human life is

A. 8

B. 14

C. 12

D. 20

Answer: D



8. Which of the following is characteristic of the large intestine?

A. It has almost no bacterial populations

B. It contains chyme

C. It absorbs much of the water remaining

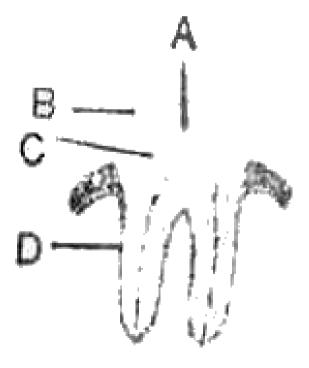
in waste materials

D. It is the site of most of digestion

Answer: C



9. In the given figure of human tooth, some parts are labeled as A, B, C and D. Identify these parts and match them with their description given below.



- (i) Contains dentine producing cells
- (ii) 70% mineral matter, mainly calcium
- (iii) Hardest material in the body
- (iv) Connects rooi to the jawbone

		В	С	D	
1)	(i)	(ii)	(iii)	(iv)	
2)	(ii)	(iii)	(iv)	(i)	
3)	(iii)	(i)	(iv)	(i)	
4)	(ii)	(iii)	(i)	(iv)	



10. Function of epiglottis is

A. Prevents flow of air into oesophagus

- B. Prevents backflow of food into laryngo pharynx
- C. Prevents flow of food into trachea
- D. Prevents flow of food into nasopharynx

Answer: C



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11. Select which is not true of intestinal villi among these.

- A. They possess microvilli
- B. They increase the surface area
- C. They are supplied with capillaries and the lacteal vessels
- D. They only participate in digestion of fats

Answer: D



12. Match the two columns and select the correct among options given.

Column-I		Column-II
A)Biomacromole	i)	Alimentary canal
cules of food		and associated gland
B) Human digestive	ii)	Embedded in
system		jawbones
C)Stomach	iii)	Outer wall of
•		visceral organs
D)Thecodont	iv)	Converted into
		simple substances
E) Serosa	v)	J-shaped bag like
		structure

A.
$$A-ii, B-i, C-v, D-iii, E-iv$$

B.
$$A-iv, B-i, C-v, D-ii, E-iii$$

C.
$$A-i, B-ii, C-iii, D-iv, E-v$$

D.
$$A-i, B-iii, C-ii, D-iv, E-v$$

Answer: B



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13. Match the two columns and select the right one among options given

E-MACE.	Column I		Column II
	Duodenum Epiglottis Glottis		A cartilaginous flap Small blind sac 'U' shaped structure emerging
D.	Caecum	iv.	from stomach Opening of wind pipe

A.
$$A-i, B-ii, C-iii, D-iv$$

B. A-iv, B-iii, C-ii, D-i

C. A-iii, B-i, C-iv, D-ii

D. A-ii, B-iv, C-i, D-iii

Answer: C



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14. Dental formula in human beings is

A. $\frac{3223}{3223}$

 $\frac{2123}{2123}$

c.
$$\frac{1232}{1232}$$

Answer: B



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Exercise Ii Digestive Glands

1. Salivary glands that are absent in humans are

- A. Infra orbital
- B. Parotid
- C. Sub-maxillary
- D. Sub-lingual

Answer: A



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2. Bile salts helps in absorption of fats as a result of

- A. Excoriation
- B. Micelles formation
- C. Chylomicron formation
- D. Deglutition

Answer: B



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3. Of the following true about bilirubin and biliviridin.

- A. They help in emulsification of fats
- B. Plays important role in formation of micelles
- C. Formed due to breakdown of RBCs
- D. They act as enzymes

Answer: C



4. Proteolytic enzymes are not the components of

- A. Saliva
- B. Gastric juice
- C. Succus entericus
- D. Pancreatic juice

Answer: A



5. Which of the following does not occur in digestive system?

A. Lingual lipase

B. Gastric lipase

C. Pancreatic lipase

D. Biliary lipase

Answer: D



6. Function of stellate reticuloendothelial cells is

A. Enzyme secretion

B. Hormonal secretion

C. Deamination

D. Phagocytosis

Answer: D



7. Set of digestive juices that contain starch digesting enzymes is

A. Pancreatic juice and succus entericus

B. Saliva and gastric juice

C. Gastric juice and bile

D. Saliva and pancreatic juice

Answer: D



- 8. The gall bladder
 - A. Produces bile
 - B. Is part of the liver
 - C. Stores bile which is produced in the liver
 - D. Produces cholecystokinin

Answer: C



9. The pancreas

- A. Produces exocrine products involved in chyme digestion
- B. Is exclusively an endocrine gland which produces salivary amylase
- C. Contains villi to increase surface area
- D. Produces urobiligen (a bile pigment)

Answer: A



10. Bile produced in the liver is associated with which of the following?

A. Emulsification of fats into tiny globules in the small intestine

B. Digestive action of pancreatic amylase

C. Emulsification of fats into tiny globules

in the stomach

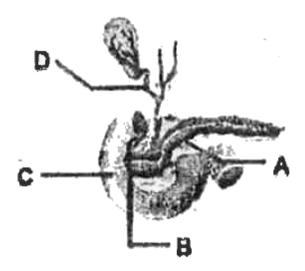
D. Digestion of proteins into amino acids

Answer: A



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11. Study the following figure.



The correct one about 'A', 'B', 'C' and 'D' is

- A. 'A' is bile duct while 'C' is ileum
- B. 'B' is bile duct while 'C' is ielum
- C. 'D' is cystic duct while 'A' is pancreatic duct
- D. 'B' is hepatopancreatic duct while 'D' is bile duct

Answer: C



12. Study the following given table and select the correct option that represents the letters.

Medium	Medium Enzyme Secreted	
Acidic	Z	Gastric glands
W	Trypsin	Pancreas
Alkaline	Steapsin Y	
Acidic	X	Sublinguals

	Z.	W	Y	X
1)	Pepsin	Acidic	Pancreas	Maltase
2)	Rennin	Acidic	Stomach	Amylase
3)	Pepsin	Alkaline	Pancreas	Amylase
4)	Rennin	Alkaline	Liver	Sucrase



13. Match the enzyme with their respective substrate and choose the right one among options given

	Column I	T	Column II
A.	Lipase	1.	Dipeptides
B .	Nuclease	2.	Fats
C.	Carboxypeptidase	3.	Nucleic acids
D.	Dipeptidases	4.	Proteins, peptones and proteoses

A.
$$A-ii$$
, $B-iii$, $C-i$, $D-iv$

B.
$$A-iii, B-iv, C-ii, D-i$$

C.
$$A-iii, B-i, C\equiv iv, D-ii$$

D.
$$A-ii, B-iii, C-iv, D-i$$

Answer: D

14. Liver is the largest gland and is associated with various functions, choose one which is not correct.

- A. Metabolism of carbohydrate
- B. Digestion of fat
- C. Formation of bile
- D. Secretion of hormone called gastrin

Answer: D

- **15.** Mark the right statement among the following
 - A. Trypsinogen is an inactive enzyme
 - B. Trypsinogen is secreted by intestinal mucosa
 - C. Enterokinase is secreted by pancreas
 - D. Bile contains trypsin

Answer: A



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Exercise Ii Digestion Of Nutrients

- 1. Mastication is important because
 - A. It minimizes damage to the gut mucosa
 - B. To allow ptyalin to act for a long time
 - C. To increase surface area of food particles

D. To destroy protective covering of food

Answer: C



- 2. During deglutition this will happen
 - A. Faeces are sent out
 - B. Food enters into oesophagus
 - C. Air enters into trachea
 - D. Food comes out through mouth

Answer: B



- **3.** Which of the following docs not occur once the food is fully mixed with gastric juice in the stomach?
 - A. Digestion of lipids
 - B. Digestion of proteins
 - C. Digestion of starch
 - D. Absorption of alcohol



- **4.** Carbohydrates, proteins, fats, and nucleic acids all
 - A. Are digested and absorbed in the human stomach
 - B. Cannot be digested by an animal unless it has a gizzard

- C. Are chemically digested by enzymes produced in the oesophagus
- D. Must be broken down into simple compounds before being absorbed

Answer: D



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5. Which of the following lists the four stages of food processing in order?

A. Ingestion, digestion, absorption, elimination B. Digestion, ingestion, absorption, elimination C. Ingestion, absorption, elimination, digestion D. Ingestion, digestion, elimination, absorption **Answer: A**

6. Which of the answers below would not work in the following sentence? In order for the body to absorb and use____, they must be broken down by hydrolysis into_____.

- A. Polysaccharides...... monosaccharides
- B. Amino acids....proteins
- C. Fats.....glycerol and fatty acids
- D. Disaccharides....monosaccharides

Answer: B

7. Find out the correct statement

- A. Pepsin gets destroyed below the freezing point
- B. Alpha amylase becomes immediately inactive on reaching stomach
- C. Fats are effectively absorbed in stomach
- D. Pancreatic enzymes are secreted under

the influence of CCK

Answer: D



- **8.** If anybody chew food for more time the following is likely to occur.
 - A. Monosaccharides form in oral cavity
 - B. Food becomes more acidic
 - C. More amount of disaccharides form
 - D. Fatty acids are formed by lingual lipase



- **9.** Digestion of proteins begins in the _____, and digestion of polysaccharides begins in the _____.
 - A. Mouth.....stomach
 - B. Stomach.....small intestine
 - C. Stomach....mouth
 - D. Stomach....stomach



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10. Which of the following might make the most effective antiulcer medication? A chemical that

A. Stimulates parietal cells of the gastric glands

B. Kills bacteria in the stomach

C. inhibits mucous cells of the gastric glands

D. Stimulates secretion of bile

Answer: B



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11. Which of the following component is not digested by the gastric juice?

A. Lipids

- B. Carbohydrates
- C. Proteins
- D. None of these

Answer: B



- **12.** Digestive enzymes responsible for breaking down disaccharides include
 - A. Pepsin, trypsin and trypsinogen

- B. Amylase, pepsin, and lipase
- C. Sucrase, lactase, and maltase
- D. Pepsin, trypsin and chymotrypsin



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13. A drug is given to an animal that completely blocks the absorption of nutrients within the digestive system. Which of the

following structures is most severely impacted
by this treatment?
A. Intestine
D. Duggal gavity
B. Buccal cavity
C. Crop

D. Stomach

Answer: A



- **14.** The digestive enzymes are able to digest meat taken in diet but does not digest the cells which are producing them. It can be explaned as follows.
 - A. Cells of intestine have a protective coat
 - B. Cells are digested but repaired immediately
 - C. Enzymes are secreted in inactive form
 - D. Enzymes become inactive on contact of

cells



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15. Which of the following enzyme works at a pH of 1.6 in stomach and digests proteins?

- A. Trypsin
- B. Amylase
- C. Erepsin
- D. Pepsin

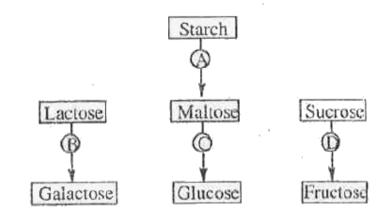
Answer: D



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16. The given flowchart shows the fate of carbo hydrates during digestion in the human alimentary canal. Identify the enzymes acting at stages included as A, B, C and D and select

the correct option



A. A-amylase, B-maltase, C-lactase, D-invertase

B. A-amylase, B-maltase, C-invertase, D-lactase

C. A-amylase, B-invertase, C-maltase, D-

lactase

D. A-amylase, B-lactase, C-maltase, D-invertase

Answer: D



- **17.** Consider the following statements and select the correct option stating which ones are true (T) and which ones are false (F).
- i) Amylase hydrolyzes proteins to amino acids
- ii) Pancreatic amylase hydrolyses poly

saccharides to disaccharides.

iii) Enteropeptidase activates pepsinogen to pepsin.

iv) Trypsin coagulates the milk protein casein.

A.
$$i$$
 ii iii iv
 T T F F

B. i ii iii iv
 T T T T

C. i ii iii iv
 T T T T T

D. i ii iii iv
 T T T T

Answer: C



Exercise Ii Absorption Of Nutrients

1. Absorption of fat soluble vitamins require one of the following

A. Bile

B. Pancreatic amylase

C. Enterokinase

D. Villikinin

Answer: A

2. Which of the following absorption is Na dependent?

A. Water

B. Fats

C. Vitamin B_{12}

D. Fructose

Answer: D



3. The absorption of which of the following does not occur in stomach?

A. Simple sugars

B. Alcohol

C. Water

D. Amino acids

Answer: D



- **4.** Which of the following is the primary absorptive process in the large intestine?
 - A. Active transport of $Na^{\,+}\,$ from the lumen to the blood
 - B. Absorption of amino acids and fructos
 - C. Active transport of potassium from the lumen to the blood .
 - D. Active absorption of HCO_3^- into the blood.

Answer: A



- **5.** Read the following statements and answer thequestion following them.
- A)Chylomicrons are very small proteins coated by fat globules.
- B)During assimilation absorbed substances finally reach tisssues which utilise them for their activities.

C) Defaecation is a voluntary process.

How many of these statements are correct?

A. Two

B. One

C. Three

D. None

Answer: A



6. Read the following statements and select the correct option.

Statement 1: The human small intestine is the longest portion in the alimentary canal.

Statement 2: Absorption of digested food requires a very large surface area.

A. Both statements 1 and 2 are correct and statement 2 is the correct explanation of statement 1.

B. Both statement 1 and 2 are correct but statement 2 is not the correct explanation of statement 1

C. Statement 1 is correct and statement 2 is incorrect.

D. Both statements 1 and 2 are incorrect.

Answer: B



7. Statement (A): Fructose enters into the epithelial cell by facilitated transport.

Statement (B): Movement of fructose molecules enters into the epithelial cells by spending some energy.

A. Both (A) and (B) are true

B. Both (A) and (B) are false

C. (A) is correct but (B) is incorrect

D. (A) is incorrect but (B) is correct

Answer: C

Exercise Ii Disorders Of Digestive System

1. In case of hepatitis this one will increase in its blood values.

A. Haematocrit value

B. Bile salts

C. Bilirubin

D. Diapedesis



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2. Statement (A): Jaundice occurs if liver is affected.

Statement (B): In case of jaundice the skin, eyes (sclera) turn yellow due to deposit of bile salts in then.

- A. Both (A) and (B) are true
- B. Both (A) and (B) are false

- C. (A) is correct but (B) is incorrect
- D. (A) is incorrect but (B) is correct



- **3.** Irregular bowel movement but solid faeces are egested in case of
 - A. Diarrhoea
 - B. Roughage consumption

C. Constipation

D. Rich fibre diet

Answer: C



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4. Stool of a person contain whitish grey colour due to malfunction of which type of organ:

A. Pancreas

- B. Spleen
- C. Kidney
- D. Liver

Answer: D



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5. One of the following is not a common disorder of the digestive system

A. Tetanus

- B. Diarrhoea
- C. Jaundice
- D. Dysentery

Answer: A



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6. Match the following regarding diseases and choose correct one.

Disease	Due to deficiency
A) Marasmus	1) Niacin
B) Scurvy	2) Vitamin-B ₁
C) Pellagra	3) Proteins
D) Beriberi	4) Ascorbic acid

of

Answer: B



Exercise Iii Previous Aipmt Neet Questions

1. Which cells of 'Crypts of Lieberkuhn' secrete antibacterial lysozyme?

A. Argentaffin cells

B. Paneth cells

C. Zymogen cells

D. Kupffer cells

Answer: B



2. Which of the following option best represents the enzyme composition of pancreatic juice?

A. amylase, peripatus, trypsinogen, rennin

B. amylase, pepsin, trypsinogen: maltase

C. peptidase, amylase, pepsin. renna

D. lipase, amylase, trypsinogen,

procaroxypeptidase

Answer: D



- **3.** Which hormones do stimulate the production of pancreatic juice and bicarbonate?
 - A. Gastrin and insulin
 - B. Cholecystokinin and secretin
 - C. Insulin and glucagon
 - D. Angiotensin and epinephrine

Answer: B



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4. Which of the following guards the opening of hepatopancreatic duct into the duodenum?

- A. Ileocaccal valve
- B. Pylori sphincter
- C. Sphincter of Oddi
- D. Semilunar valve

Answer: C



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5. In the stomach, gastric acid is secreted by the

- A. Gastrin secreting cells
- B. Parietal cells
- C. Peptic cells
- D. Acidic cells

Answer: B



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6. Which of the following statements is not correct

A. Brunner's glands are present in the submucosa of stomach and secrete pepsinogen.

- B. Goblet cells of mucosa of intestine and secrete mucus
- C. Oxyntic cells are present in the mucosa of intestine and secrete HCI
- D. Acini are present in the pancreas and secrete carboxypeptidase

Answer: A



- 7. Gastric juice of infants contains
 - A. Maltase, pepsinogen, rennin
 - B. Nuclease. pepsinogen, lipase
 - C. Pepsinoge, lipase, rennin
 - D. Ainylase, rennin. pepsinogen

Answer: C



8. The primary dentition in human differs from permanent dentition in not having one of the following type of teeth

- A. Incisors
- **B.** Carines
- C. Premolars
- D. Molars

Answer: C



9.	The	enzyme	that	is	not	present	in	succus
en	teric	cus is						

- A. Lipase
- B. Maltase
- C. Nucleases
- D. Nucleosidase

Answer: C



10. The initial step in the digestion of milk in hu-mans is carried out by

- A. Lipase
- B. Trypsin
- C. Rennin
- D. Pepsin

Answer: C



11. Fructose is absorbed into the blood through mucosa cells of intestine by the process called

- A. Active transport
- B. Facilitated transport
- C. Simple diffusion
- D. Co-transport mechanism

Answer: B



12. Select the correct match of the digested products in human given in column I with their absorption site and mechanism in





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13. A healthy person eats the following diet- 5 gm raw sugar,4 gm albumin,10 gm pure buffalo ghee adulterated with 2 gm vegetable

ghee and 5 gm lignim .How many calories he is likely to get

- A. 126
- B. 164
- C. 112
- D. 144

Answer: D



14. Which enzymes are likely to act on the baked potatoes eaten by a man, starting from the mouth and as it moves down the alimentary canal

A. Pancreatic amylase ightarrow Salivary amylase

ightarrow Lipases

B. Disaccharide like maltase ightarrow Lipases

 \rightarrow Nucleases

C. Salivary amylase \rightarrow Pancreatic amylase

ightarrow Disaccharides

D. Salivary maltase ightarrow Carboxypeptidase

ightarrow Trypsinogen

Answer: C



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15. Which one of the following correctly represents the normal adult human dental formula:

A.
$$\frac{3}{3}$$
, $\frac{1}{1}$, $\frac{3}{2}$, $\frac{1}{1}$

B.
$$\frac{2}{2}$$
, $\frac{1}{1}$, $\frac{3}{2}$, $\frac{3}{3}$

c.
$$\frac{2}{2}$$
, $\frac{1}{1}$, $\frac{2}{2}$, $\frac{3}{3}$

D.
$$\frac{3}{3}$$
, $\frac{1}{1}$, $\frac{3}{3}$, $\frac{3}{3}$

Answer: C



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16. If for some reason the parietal cells of the gut epithelium become partially non-functional, what is likely to happen?

A. The pancreatic enzymes and specially the trypsin and lipase will not work efficiently

B. The pH of stomach will fall abruptly

C. Steapsin will be more effective

D. Proteins will not be adequately hydrolysed by pepsin into proteoses and peptones

Answer: D



- 17. Jaundice is a disorder of -
 - A. Excretory system
 - B. Skin and eyes
 - C. Digestive system
 - D. Circulatory system

Answer: C



18. Which one of the following pairs of food components in humnas reaches the stomach totally undiagested?

- A. Starch and fats
- B. Fats and ceilulose
- C. Starch and cellulose
- D. Proteins and starch

Answer: B



19. A young infant may be feeding entirely on mother's milk which is white in colour but the stools which the infant passes out is quite yellowish. The yellow colour of stool is due to

A. Bile pigments passed through bile juice

B. Undigested milk protein casein

C. Pancreatic juice poured into duodenum

D. Intestinal juice

Answer: A



20. When breast feeding is replaced by less nutritive food, low in proteins and calories, the infants below the age of one year are likely to suffer from

- A. Rickets
- B. Kwashiorkor
- C. Pellagra
- D. Marasmus

Answer: D

21. Which of the following statements is true regarding digestion and absorption of food in humans?

- A. Fructose and amino acids are absorbed through intestinal mucosa with the help of carrier ions like $Na^+.$
- B. Chylomicrons are small lipoprotein particles that are transported from

intestine into blood capillaries

C. About 60% of starch is hydrolysed by salivary amylase in our mouth.

D. Oxyntic cells in our stomach secrete the proenzyme pepsinogen.

Answer: A



- **22.** What will happen if the secretion of parietal cells of gastric glands is blocked with an inhibitor?
 - A. In the absence of HCI secretion, inactive pepsinogen is not converted into the active enzyme pepsin
 - B. Enterokinase will not be released from the duodenal mucosa and so trypsinogen is not converted to trypsin.

C. Gastric juice will be deficient in chymosin.

D. Gastric juice will be deficient in pepsinogen.

Answer: A



23. Which one of the following is the correct mathcing of the site of action on the given

substrate, the enzyme acting upon it and the end producrt?

A. Small intestine:

 $\operatorname{proteins} \xrightarrow{\operatorname{Pepsin}} \operatorname{amion acids}$

 $\textbf{B. Stomach}: \ fats \xrightarrow{Lip ase} micelles$

 ${\tt C.}\ Duode\nu m: trigly cerides$

overset("Trypsin")to "monoglycerides"`

D. Small inestine : $\operatorname{starch}^{\alpha \text{ Amylase}}$

disaccharide (maltose)

Answer: D

24. Which one of the following is a fat-soluble vitamin and it's related deficiency disease?

A. Retinol · xerophthalmia

B. Cobalamin - beri-beri

C. Calciferol - pellagra

D. Ascorbic acid - scurvy

Answer: A



