

BIOLOGY

BOOKS - MBD

Digestion and Absorption

Example

1. Define digestion?



2. Name the largest gland of human body.



3. Name a heterocrine gland.



4.sphincter checks the regurgitation of food from stomach to oesophagus.



5. True or False

Small intestine is larger than large intestine.



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6. True or False

Sphincter of oddi guards the opening of hepatopancreatic duct into duodenum.



7. Name the sphincter present between the small and large intestines.



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8. Mention the vestigial part of the human alimentary canal.



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9. State the anatomical location of pancreas.





10. What are crypts of Leiberkuhn?



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11. Name the regions of colon.



12.	Hepato-pancreatic	duct	opens	into	the	
duodenum and carries:						

- A. bile
- B. pancreatic jiuce
- C. both bile and panceratic jiuce
- D. saliva.

Answer:



13. Match the two columns:

	Column I		Column II
(a)	Biomacromolecules of food	i.	Alimentary canal and associated glands
(b)	Human digestive	ii.	Embedded in
	system		jawbones.
(c)	Stomach	iii.	Outer wall of visceral organs
(d)	Thecodont	iυ.	Converted into simple substances
(e)	Serosa	U.	J-shaped bag-like structure



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14. What is the function of bile salts?



15. How does pepsinogen change into its active form?



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16. Name two processes by which food is absorbed.



17. Name the principal organ of absorption for absorption of food.



18. How does bile help in the digestion of fats?



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19. Why are proteases generally released in inactive form? What is emulsification and why it is required?



20. What is the site of fat digestion in humans? Name the enzyme that digests fats.

Mention the end products of fat digestion.



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21. Name any two disorders of digestive system.



22. Which organ is affected during jaundice?



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23. List the common reasons of indigestion.



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24. Fill in the blank

.....sphincter prevents regurgitation of food from the stomach.



25. Fill in the blank

Intestinal juices are also called



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26. Fill in the blank

The involuntary muscular movements of the alimentary canal are called......



27. Fill in the blank

The hardest material in the human body



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28. Fill in the blank

Acidic, thick and fluidy food found in the stomach is called.....



29. Fill in the blank

Cholecystokinin stimulates the secretion of

•••••



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30. Fill in the blank

Presence of different types of teeth is

called.....



31. True or False:

Pancreatic amylase digests proteins to amino acids.



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32. True or False:

Sodium is absorbed in the intestine with the help of the sodium pump of the cell membrane.



33. True or False:

Enteropeptidase activiates pepsinogen to pepsin.



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34. True or False:

Bile salts have an enzyme to digest the emulsified fats.



35. True or False:

Chymotrypsinogen is a milk coagulating agent.



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36. Give the technical terms used for the following:

Any protein spliting enzyme.



37. Give the technical terms used for the following:

The enzymes which digest the complex food molecules by hydrolysis.



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38. Give the technical terms used for the following:

An enzyme which helps in the hydrolysis of interior peptide bonds of proteins.



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39. Give the technical terms used for the following:

An enzyme which helps in the hydrolysis of peptide bonds of adjecent to free amino $(\,-\,NH_2)$ or carboxyl (-COOH) groups.



40. Give the technical terms used for the following:

A substance which activates the trypsinogen produced by the pancreas into trypsin.



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41. Gastric juice contains:

- A. pepsin, lipase and rennin
- B. trypsin, lipase and rennin
- C. trypsin, pepsin and lipase
- D. trypsin, peppsin and rennin

Answer:



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42. Succus entericus is the name given to:

A. a junction between ileum and large intestine

B. intestinal juice

C. swelling in the gut

D. appendix

Answer:



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43. Match the two columns:

Column I Column II

Bilirubin and Biliverdin Parotid.

Hydrolysis of starch Bile.

Digestion of fat Lipases.

Salivary Gland Amylases.



44. Why are villi present in the intestine and not in the stomach?



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45. How does pepsinogen change into its active form?



46. What are the basic layers of the wall of alimentary canal?



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47. How does bile help in the digestion of fats?



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48. State the role of pancreatic juice in the digestion of proteins.



49. Describe the process of digestion of protein in stomach.



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50. Give the dental formula of human beings.



51. Bile juice contains no digestive enzymes, yet it is important for digestion. Why?



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52. Describe the digestive role of chymotrypsin. Which two other digestive enzymes of the same category are secreted by its source gland?



53. How are polysaccharides and disaccharides digested?



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54. What would happen if HCI were not secreted in the stomach?



55. How does butter in your food get digested and absorbed in the body?



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56. Discuss the main steps in the digestion of proteins as the food passes through different parts of the alimentary canal.



57. Explain the term thecodont and diphyodont.



58. Name different types of teeth and their number in an adult human.



59. What are the functions of liver?

60. The food mixes thoroughly with the acidic gastric juice of the stomach by the churning movements of its muscular wall. What do we call the food then?



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61. Trypsinogen is an inactive enzyme of pancreatic juice. An enzyme, enterokinase,

activates it. Which tissue/cells secrete this enzyme? How is it activated?



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62. In which part of alimentary canal does absorption of water, simple sugars and alcohol take place?



63. Name the enzymes involved in the breakdown of nucleotides into sugars and bases?



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64. Define digestion in one sentence.



65. What do we call type of teeth attachment to jaw bones in which each tooth is embedded in a socket of jaws bones?



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66. Stomach is located in upper left portion of the abdominal cavity and has three major parts. Name these three parts.



67. Does gall bladder make bile?



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68. Correct the following statements by deleting one of entries (given in bold).

Goblet cells are located in the intestine mucosal epithelium and secretes chymotrypsin/ mucus.



69. Correct the following statements by deleting one of entries (given in bold).

Fats are broken down into di-and monoglycerides with the help of amylase/ lipases.



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70. Correct the following statements by deleting one of entries (given in bold). Gastric glands of stomach mucosa have

oxyntic cell/ chief cells which secretes HCL.



71. Correct the following statements by deleting one of entries (given in bold).
Saliva contains enzymes that digest starch / protein.



72. What is pancreas? Mention the major secreations of pancreas that are helpful in digestion.



73. Name the part of the alimentary canal where major ansorption of digested food takes place. What are the absorbed forms of different kinds of food materials?



74. List the organs of human alimentary canal and name the major digestive glands with

their location.



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75. What is the role of gall bladder? What may happen if it stops functioning or is removed?



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76. Correct the statement given below by the right option shown in the bracket against them:

Absorption of amino acids and glycerol takes place in the (small intestine/large intestine)



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77. Correct the statement given below by the right option shown in the bracket against them:

The faeces in the rectum initiate a reflex causing an urge for its removal. (neural/hormonal)



78. Correct the statement given below by the right option shown in the bracket against them:

Skin and eyes turn yellow in infection. (liver/stomach)



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79. Correct the statement given below by the right option shown in the bracket against them:

Rennin is a proteolytic enzyme found in gastric juice in (infants/adults)



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80. Correct the statement given below by the right option shown in the bracket against them:

Pancreatic juice and bile are relased thorugh.

(intestine-pancreatic/hepato-pancreatic duct)



81. Correct the statement given below by the right option shown in the bracket against them:

Dipeptides, disaccharides and glycerides are broken down into simple substances in region of small intestine. (jejunim/duodenum)



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82. What are three major types of cells found in the gastric glands? Name their secretions.



83. How is the instestinal mucosa protected from the acidic food entering from stomach?



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84. How are the activities of gastro-intestinal tract regulated?



85. Distinguish between constipation and indigestion. Mention their major causes.



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86. Describe the enzymatic action on fats in the duodenum.



87. A person had roti and dal for his lunch. Trace the changes in those during its passage through the alimentary canal.



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88. What are the various enzymatic types of glandular secretions in our gut helping digestion of food? What is the nature of end products obtained after complete digestion of food?





89. Discuss mechanism of absorption of food.



90. Discuss the role of hepato-pancreatic complex in digestion of carbohydrate, protein and fat components of food.



91. Explain the process of digestion in the buccal cavity with a note on the arrangement of teeth.



92. What are nutrients?



93. What is nutrition?



94. What is length and diameter of ileum in adult man.



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95. Name the various parts of alimentary canal of man.



96. Name the various salivary glands present in oral cavity.



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97. What is villus? Mention its role.



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98. How many villi are present in the small intestine of man?



99. Mention any two structural features of small intestine which add to its absorptive capacity.



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100. Name the three major classes of digestive enzymes?



101. What are the advantages of cooked food?



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102. Give one reason as to why many of the intestinal proteases are secreated in an inactive form.



103. Name one function of saliva other than digestion of food.



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104. Name one gland in human body, which secretes digestive enzymes as well as hormones.



105. Give two functions of pancreas.



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106. What is the pH inside stomach?



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107. Name the chemical substance that changes pepsinogen into its active form.



108. What do you understand by nutrition?



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109. What is digestion?



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110. Why is digestion necessary?



111. List the steps of nutrition.



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112. What type of food is digested?



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113. What is the advantage of digestive cavity?



114. Briefly describe the buccal cavity of man.



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115. Draw a labelled diagram of oral cavity of man.



116. Draw a well labelled diagram of V.S. of tooth.



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117. Draw a labelled diagram to show kinds of teeth in man.



118. Define the following terms:

Thecodont



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119. Define the following terms:

Heterodont



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120. Describe the structure of a typical tooth.



121. What are the functions of tongue and teeth?



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122. Write a note on salivary glands and saliva.



123. What is peristalsis?



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124. Give an account of stomach of man.



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125. Write the functions of large intestine.



126. In what form and why are many proteases released inactive form? Name the three intestinal enzymes involved in protein digestion.



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127. What are microvilli? State their function.



128. Name the cells that secrete mucus.



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129. what are the functions of mucus?



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130. What are crypts of Leiberkuhn?



131. Why does food not enter the wind pipe?

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132. Why is bile alkaline in nature?



133. Why is bile green in colour?



134. Draw a labellel diagram showing liver, pancreas and associated ducts.



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135. Briefly describe digestion of carbohydrates, proteins and fats.



136. What is the similarity in the action of carboxypeptidase and aminopeptidase enzymes?



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137. How are secretions of digestive juices regulated?



138. What is peristalsis? How does it help in the digestion?



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139. Show peristalsis with the help of diagram.



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140. How are the following enzyme activated in the alimentary canal?

Pepsin



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141. How are the following enzyme activated in the alimentary canal?

Carboxypeptidase



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142. How are the following enzyme activated in the alimentary canal?

Rennin



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143. How are the following enzyme activated in the alimentary canal?

Trypsin



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144. How are the following enzyme activated in the alimentary canal?

Chymotrypsin



145. Differentiate diffusion and active absorption.



146. Describe the following processes in the body.

Coagulation of milk in the alimentary canal.

147. Describe the following processes in the body.

Digestion of starch in the alimentary canal.



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148. Describe the following processes in the body.

Role of bile salts in the digestion and absorption of fats.



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149. Explain common disorders of digestive system.



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150. Make a table showing nutritional disorders due to overnutrition.



151. Draw a labelled diagram showing the alimentary canal and associated glands of man.



152. Describe the structure of liver.



153. Describe the role of intestinal juice?



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154. What is absorption? Describe absorption of aft in the alimentary canal.

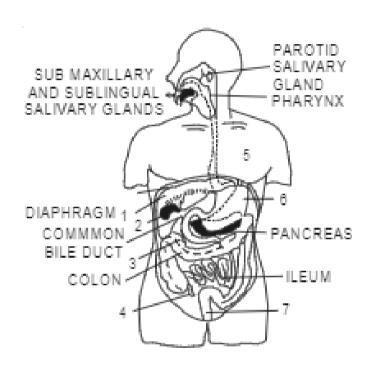


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155. Figure is of alimentary canal and digestive glands.

Study the figure and answer the following question

Label the 1-7

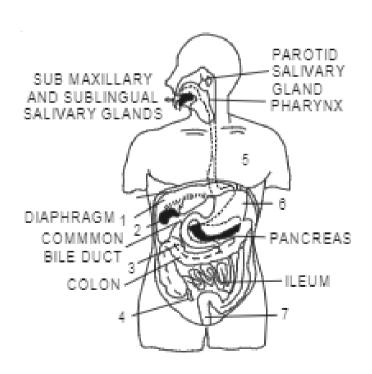




156. Figure is of alimentary canal and digestive glands.

Study the figure and answer the following question

Write functions, of 1,4 and 5.





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157. Given scientific reasons for the following:

Proteins, lipids, starches, nucleic acids do not form solution and hence do not pass into cytoplasm or blood or lymph.



158. Given scientific reasons for the following:

Some digestion of food accurs in buccal cavity.



159. Given scientific reasons for the following:

Panceras is heterocrine gland.



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Exercise

1. Name the different types of teeth.



2. In which part of alimentary canal does absorption of water, simple sugars and alcohol take place?



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3. Define digestion in one sentence.



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4. Does gall bladder make bile?



5. Correct the statement by deleting one of entries: Saliva contain enzyme that digest starch/ protein.



6. Name the major digestive gands and write location.



7. Hoe is intestinal mucosa protected?



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8. Why is digestion necessary?



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9. Distinguish between constipation and indigestion.



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10. How are activities of gastro-intestine tracrt regulated?



11. Discuss the absorption of food in different parts od alimentary canal.



12. Give a historical account of wall of mammalian gut.



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13. Write a note on salivary glands and saliva.



Watch Video Solution

14. Discuss the main steps in the digestion of proteins as the food passes through different

parts of the alimentary canal.

