

BIOLOGY

BOOKS - KUMAR PRAKASHAN KENDRA BIOLOGY (GUJRATI ENGLISH)

DIGESTION AND ABSORPTION

Section A Exam Oriented Question Answer From Darpan

1. What is included in components of food? What is their contribution in metabolic processes?



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2. What are digestive organs? Describe various parts of human digestive system



3. Draw a labelled diagram of human digestive system.



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4. Explain the structure of mouth.



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5. Give types of teeth and describe the arrangement of teeth in mouth with diagram.

6. Explain about Tongue.



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7. Describe pharynx, oesophagus and external structure of stomach of digestive track of human beings.



8. Describe external structure of small intestine and large intestine.



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9. Draw a labelled diagram of T. S. of Intestine.



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10. Describe tissue structure of wall of digestive tract.



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11. Describe in short about saliva gland, its location and types.



12. Write a short note on Liver, Gall bladder and pancreas.



13. Describe the process of digestion occurring in oral cavity.



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14. Describe the process of digestion occurring in stomach.



15. Give composition and function of gastric juice.



16. Describe the process of digestion seen in small intestine in detail.



17. Describe various components present in pancreatic juice.



18. Describe compositional elements present in bile juice.



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19. Describe the process of digestion occurring in large intestine.



20. Explain Endocranial regulation of digestion process.



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21. Give names of various gastric intestinal hormones and describe their functions.



22. How various components are absorbed through the process of absorption? Give explanation.



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23. Give explanation: (1) Assimilation (2) Egestion



24. Give the names of diseases cause due to disorder of digestive tract.



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25. Which diseases are caused due to deficiency of nutritive substances/nutrients? Which are their symptoms?



26. What is called digestion?



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27. What is called digestion system?



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28. Explain the thecodont and diphyodont type of dental arrangement.



29. Give dental formula of an adult man.



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30. Show main three parts of pharynx.



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31. Give main parts of stomach.



32. Into how many parts is large intestine distributed?



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33. Which are types of salivary glands? Give names only.



34. What is the function of liver?



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35. Give a reason: Pancreas is endocrine as well as exocrine gland.



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36. What is the function of Lysozyme?



37. Gives names of cells seen in mucous layer of stomach.



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38. What is the function of secretion of Gastrin



39. How does pepsinogon gets converted into its active form?



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40. Clarify the contribution of pancreatic juice in digestion of protein



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41. How does bile help in digestion of fat?



42. Which substances are absorbed by active transport ?



43. What are called Micelles?



44. Give explanation: (1) Assimilation (2) Egestion



45. Give the names of diseases cause due to disorder of digestive tract.



46. What is PEM?



Section B Difference Scientific Reasons

1. Difference between Chyme and Completely digested food.



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2. Difference between Pepsinogen and Trypsinogen.

3. Give scientific reasons : Food tastes sweet after chewing



4. Give scientific reasons : Excretory substances are seen in Bile juice



5. Give a reason : Pancreas is endocrine as well as exocrine gland.



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6. Give scientific reasons: Liver though not taking part in the process of digestion is an important accessory digestive gland.



7. Give scientific reasons : Heterodontic dentition is seen in human beings.



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Section C Definition Explanation Terms Location Function Significance Importance

1. What is called digestion?





3. Definition/Explanation : Absorption



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4. Definition/Explanation : Assimilation



| 5. Definition/Explanation : Diphyodont | |
|---|--|
| | |



6. Definition/Explanation: The codont



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7. Definition/Explanation: Heterodont



| 8. Definition/Explanation : Appendix | |
|--------------------------------------|--|
| | |

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10. Location/Function: Villi



| 11. Location/Function : Oxyntic cells | |
|--|--|
| | |



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12. Location/Function: Goblet cells



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13. Location/Function: Islets of Langerhans



| 14. Location/Function : Gall bladder |
|---|
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| |
| 15. Significance/Importance: Ptyalin |
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17. Significance/Importance: Enterokinase



18. Significance/Importance: Gastric Inhibitory Peptide (GIP)



19. Significance/Importance: Taste buds



Section D Textual Exercise

- 1. Gastric juice contains ____
- (A) pepsin, lipase and rennin
- (B) trypsin, lipase and rennin
- (C) trypsin, pepsin and lipase
- (D) trypsin, pepsin and renin
 - A. pepsin, lipase and rennin
 - B. trypsin, lipase and rennin
 - C. trypsin, pepsin and lipase
 - D. trypsin, pepsin and renin

Answer:



- 2. 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

A. a junction between ileum and large intestine

B. intestinal juice

C. swelling in the gut

D. appendix

Answer:



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



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4. How does pepsinogen change into its active form?



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



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6. How does bile help in digestion of fat?



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7. Clarify the contribution of pancreatic juice in digestion of protein



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



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9. Give dental formula of an adult man.



10. Bile juice contains no digestive enzymes. Yet it is important for digestion. Why?



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11. Describe the digestive role of chymotrypsin.

Which two other digestive enzymes of the same category are secreted by its source gland?



12. How are polysaccharides and disaccharides digested?



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



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



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



16. Explain the thecodont and diphyodont type of dental arrangement .



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17. Give types of teeth and describe the arrangement of teeth in mouth with diagram.



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18. What is the function of liver?

Section E Ncert Exemplar Mcqs

- **1.** Select what is not true of intestinal villi among following
 - A. They posses 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



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2. Hepato-pancreatic duct opens into the duodenum and carries ____

A. bile

B. pancreatic juice

C. both bile and pancreatic juice

D. saliva

Answer: C



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3. One of the following is not the common disorder associated with digestive system.

A. Tetanus

B. Diarrhoea

C. Jaundice

D. Dysentery

Answer: A



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4. The gland not associated with the alimentary canal is

A. Pancreas

B. Adrenal

C. Liver

D. Salivary glands

Answer: B



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5. Match the following columns

| Column - I | | Column - II | |
|------------|------------|-------------|---|
| (a) | Duodenum | (1) | A cartilagious flap |
| (b) | Epiglottis | (2) | Small blind sac |
| (c) | Glottis | (3) | 'U' shaped structure emerging from the stomach. |
| (d) | Caecum | (4) | Opening of wide pipe. |

B. (a-4),(b-3),(c-2),(d-1)

C. (a-3),(b-1),(c-4),(d-2)

D. (a-2),(b-1),(c-4),(d-3)

Answer: C



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6. Match the enzymes with their respective substrate and choose the right one among

options given:

| Column - I | | Column - II | |
|------------|-------------------|-------------|----------------------------------|
| (a) | Lipase | (1) | Dipeptides |
| (b) | Nuclease | (2) | Fats |
| (c) | Carboxy peptidase | (3) | Nucleic acids |
| (d) | Dipeptidases | (4) | Proteins, peptones and proteoses |

Answer: D



7. Dental formula in human beings is

- A. $\frac{3, 2, 2, 3}{3, 2, 2, 3}$
- B. $\frac{2, 1, 2, 3}{2, 1, 2, 3}$
- c. $\frac{1, 2, 3, 2}{1, 2, 3, 2}$
- D. $\frac{2, 2, 3, 3}{2, 2, 3, 3}$

Answer: B



8. 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



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

Answer: A



Section E Ncert Exemplar Very Short Answer

1. 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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2. Trypsinogen is an inactive enzyme of pancreatic juice. An enzyme enterokinase

activates it. Which tissue/cell secretes this enzyme? How is it activated?



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



4. Name the enzyme involved in the breakdown of nucleotides into sugars and bases?



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5. Define digestion in one sentence.



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



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



8. Does gall bladder form bile?



- **9.** Correct the following statements by deleting one of entries (given in bold).
- (a) Goblet cells are located in the intestinal mucosal epithelium secrete mucus/chymotrypsin.
- (b) Fats are broken down into di-and monoglycerides with the help of amylase/lipase.

(c) Gastric glands of stomach mucosa have oxyntic cell/chief cell which secrete HCl.

(d) Saliva contains enzymes that digest starch/protein.



Section E Ncert Exemplar Short Answer

1. What is pancreas? Mention the major secretions of pancreas that are helpful in digestion.

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



3. List the organs of human alimentary canal and name the major digestive glands with their location.

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



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5. Correct the statements given below by the right option shown in the bracket against them.

(a) Absorption of amino acid and glycerol

takes place in the (small intestine/large intestine). (b) The faeces in the rectum initiate a reflex causing an urge for its removel (neural/ hormonal). (c) Skin and eyes turn yellow in infection (liver/stomach). (d) Renin is a proteolytic enzyme found in gastric juice in (infants/adult). (e) Pancreatic juice and bile are released through (intestine pancreatic/hepato pancreatic duct). (f) Dipeptides disaccharides and glycerides are

broken down into simple substance in region of small intestines. (jejunum/ duodenum).



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



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7. How is the intestinal mucosa protected from the acidic food entering from stomach?



8. How are the activities of gastro-intesinal tract regulated ?



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



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



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Section E Ncert Exemplar Long Answer

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



2. 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 ?



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3. Discuss mechanisms of absorption.



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



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



Question From Module Important Mcq For Neet

1. By which process fructose is absorbed by mucous cells of intestinal tract?

A. Simple diffusion

B. Active transport

C. Facilitated diffusion

D. Cotransport

Answer: A



2. In human body symbiotic micro-organisms are present in ____

A. Caecum

B. Buccal cavity and surface of the tongue

C. Vermiform

D. Duodenum

Answer: A



3. If our goblet cells become inactive it has adverse effect on which process?

A. Production of somatostatin

B. Secretion of sebum from sweat gland

C. Maturation of sperm cells

D. Simple transport process in intestine

Answer: D



- 4. Humans have which type of teeth?
- (A) Acrodont
- (B) Thecodont
- (C) Diphyodont
- (D) Monophyodont
 - A. Acrodont
 - B. Thecodont
 - C. Diphyodont
 - D. Monophyodont

Answer: B



Question From Module Question Paper

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



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2. State the types of human teeth.



3. Name two ducts which joins to form common bile duct?



4. Name the enzymes, which acts on proteoses and peptones.



5. What are symptoms of constipation?



6. What is chyme?



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7. Give main parts of stomach.



8. What is succus entericus ? State its composition.



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



10. Describe structure of small intestine having microvill with labelled diagram.



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11. How various components are absorbed through the process of absorption ? Give explanation.

