2 Nutrition in Animals

Multiple Choice Questions

1. Given below from (i) to (iv) are some food items.
   (i) Boiled and mashed potato
   (ii) Glucose solution
   (iii) A slice of bread
   (iv) Mustard oil

   Which of the above will give blue-black colour when tested with iodine?
   (a) (i) and (ii) (b) (i) and (iii)
   (c) (ii) and (iii) (d) (iii) and (iv)

2. Which of the following pair of teeth differ in structure but are similar in function?
   (a) canines and incisors.
   (b) molars and premolars.
   (c) incisors and molars.
   (d) premolars and canines.

3. Read carefully the terms given below. Which of the following set is the correct combination of organs that do not carry out any digestive functions?
   (a) Oesophagus, Large Intestine, Rectum
   (b) Buccal cavity, Oesophagus, Rectum
   (c) Buccal cavity, Oesophagus, Large Intestine
   (d) Small Intestine, Large Intestine, Rectum

4. The swallowed food moves downwards in the alimentary canal because of
   (a) force provided by the muscular tongue.
   (b) the flow of water taken with the food.
   (c) gravitational pull.
   (d) the contraction of muscles in the wall of food pipe.

5. The acid present in the stomach
   (a) kills the harmful bacteria that may enter along with the food.
   (b) protects the stomach lining from harmful substances.
   (c) digests starch into simpler sugars.
   (d) makes the medium alkaline.

6. The finger-like outgrowths of *Amoeba* helps to ingest food. However, the finger-like outgrowths of human intestine helps to
   (a) digest the fatty food substances.
   (b) make the food soluble.
   (c) absorb the digested food.
   (d) absorb the undigested food.

7. Read the following statements with reference to the villi of small intestine.
   (i) They have very thin walls.
   (ii) They have a network of thin and small blood vessels close to the surface.
   (iii) They have small pores through which food can easily pass.
   (iv) They are finger-like projections.

   Identify those statements which enable the villi to absorb digested food.
   (a) (i), (ii) and (iv) (b) (ii), (iii) and (iv)
   (c) (iii) and (iv) (d) (i) and (iv)

8. The false feet of *Amoeba* are used for
   (a) movement only.
   (b) capture of food only.
   (c) capture of food and movement.
   (d) exchange of gases only.

9. The enzymes present in the saliva convert
   (a) fats into fatty acids and glycerol.
   (b) starch into simple sugars.
   (c) proteins into amino acids.
   (d) complex sugars into simple sugars.

10. Cud is the name given to the food of ruminants which is
    (a) swallowed and undigested.
    (b) swallowed and partially digested.
    (c) properly chewed and partially digested.
    (d) properly chewed and completely digested.

11. Choose the correct order of terms that describes the process of nutrition in ruminants.
    (a) swallowing → partial digestion → chewing of cud → complete digestion
    (b) chewing of cud → swallowing → partial digestion → complete digestion
    (c) chewing of cud → swallowing → mixing with digestive juices → digestion
    (d) swallowing → chewing and mixing → partial digestion → complete digestion

12. Cellulose-rich food substances are good source of roughage in human beings because
    (a) human beings do not have cellulose-digesting enzymes.
    (b) cellulose gets absorbed in the human blood and converts into fibres.
    (c) the cellulose-digesting bacteria convert cellulose into fibres.
    (d) cellulose breaks down into smaller components which are egested as roughage.

VERY SHORT ANSWER QUESTIONS

13. Name the parts of the alimentary canal where
    (i) water gets absorbed from undigested food.
    (ii) digested food gets absorbed.
    (iii) taste of the food is perceived.
    (iv) bile juice is produced.

14. Mark the following statements as True or False. If false, write the correct statements.
    (a) Tongue is attached to the roof of the mouth cavity at the back.

(b) The large intestine is longer and wider than the small intestine of the human alimentary canal.
(c) Mucus protects the stomach lining from damage.
(d) All heterotrophs have a similar basic process of nutrition.

15. Choose the odd one out from each group and give reasons.
(i) liver, salivary gland, starch, gall bladder
(ii) stomach, liver, pancreas, salivary gland
(iii) tongue, absorption, taste, swallow
(iv) oesophagus, small intestine, large intestine, rectum

16. You were blindfolded and asked to identify the drinks provided in two different glasses. You could identify drink A as lime juice and B as bitter gourd juice. How could you do it inspite of being blindfolded?

17. Fill in the blanks with suitable words:
(a) The alimentary canal stretches from _____ to _____.
(b) Teeth are rooted in separate _____ in between the _____.
(c) Digestion of food starts in _____ and gets completed in _____.
(d) _____ is the largest gland in the human body.

18. Following statements describe the five steps in animal nutrition. Read each statement and give one word for each statement. Write the terms that describes each process.
(a) Transportation of absorbed food to different parts of body and their utilisation.
(b) Breaking of complex food substances into simpler and soluble substances.
(c) Removal of undigested and unabsorbed solid residues of food from the body.
(d) Taking food into the body.
(e) Transport of digested and soluble food from the intestine to blood vessels.

SHORT ANSWER QUESTIONS

19. Match the animals in **Column I** with their mode of feeding listed in **Column II**

Column I	**Column II**
Animals	*Mode of Feeding*
(a) House fly	(i) Biting and chewing
(b) Cockroach	(ii) Suckling
(c) Mosquito	(iii) Sponging
(d) Infants	(iv) Sucking

20. Boojho took some grains of boiled rice in test tube 'A' and Paheli took boiled and chewed rice in test tube 'B'. Both of them poured 1 – 2 drops of iodine solution into the test tube and observed the colour change. What colour change would they have observed? Give reasons for your answer.

21. 'A' got her gall bladder removed surgically as she was diagnosed with stones in her gall bladder. After the surgery, she faced problems in digestion of certain food items when consumed in bulk. Can you tell which kind of food items would they be and why?

22. Match the organs in **Column I** with the words listed in **Column II.**

Column I	**Column II**
(a) Rectum	(i) Mucous
(b) Gall bladder	(ii) Villi
(c) Stomach	(iii) Taste buds
(d) Tongue	(iv) Faeces
(e) Small intestine	(v) Bile juice

23. Ruminants such as cows and buffaloes swallow their food hurriedly and then sit restfully and chew their food. Can you reason why?

24. Boojho and Paheli were eating their food hurriedly so that they could go out and play during the recess. Suddenly, Boojho started coughing violently. Think of the reasons why he was coughing and discuss with your friends.

LONG ANSWER QUESTIONS

25. Fill in the blanks using the words listed below.

water, front, intestinal, salts, pseudopodia, back, vacuole

(a) The digestion of all food components is completed by the _____ juice.
(b) Large intestine absorbs _____ and some _____ from the undigested food.
(c) Tongue is attached at the _____ to the floor of the mouth cavity and is free at the _____.
(d) Amoeba pushes out _____ around the food and traps it in a food _____.

26. Label the below given Figure 2.1 as directed below in (i) to (iv) and give the name of each type of teeth.



Fig. 2.1

(i) The cutting and biting teeth as 'A'
(ii) The piercing and tearing teeth as 'B'
(iii) The grinding and chewing teeth as 'C'
(iv) The grinding teeth present only in adult as 'D'

27. Read the following passage carefully and answer the questions that follows it.

Bile juice is stored in a sac called, gall bladder, located near its organ of secretion, liver. The gall bladder releases the bile juice into the small intestine whenever food reaches there. Though bile juice is devoid of any digestive enzymes, it is required for the digestion of fats. The fats cannot be digested easily because they are insoluble in water and are present as large globules. Bile juice breaks down big fat droplets into smaller droplets. These are then easily digested by the enzymes released from the pancreas.

(a) Which organ secretes the bile juice?
(b) Why is digestion of fats difficult as compared to that of other nutrients?
(c) How does bile juice help in digestion of fat?
(d) Where is the digestion of fat completed?
(e) Does bile juice digest fat completely?

28.



Fig. 2.2

Label the following parts in Figure 2.2 and name them.
(a) The largest gland in our body.
(b) The organ where protein digestion starts.
(c) The organ that releases digestive juice into the small intestine.
(d) The organ where bile juice gets stored.

29. Open your mouth, look into a mirror and try to count the different types of teeth in your mouth. Compare them with Figure 2.3 on page 13 of your NCERT textbook. Record your observations in the table below:

Type of Teeth	Number of Teeth	
	In my mouth	In the figure
Incisors		
Canines		
Premolar		
Molar		

(a) Did you observe any difference in the number of teeth? If yes, could you identify which type of teeth showed the difference?

(b) Compare the number and type of teeth in an adult (say your parents or cousins who have reached the age of 25–30 or more). Note your observation.

30. Solve the crossword given as Figure 2.3.

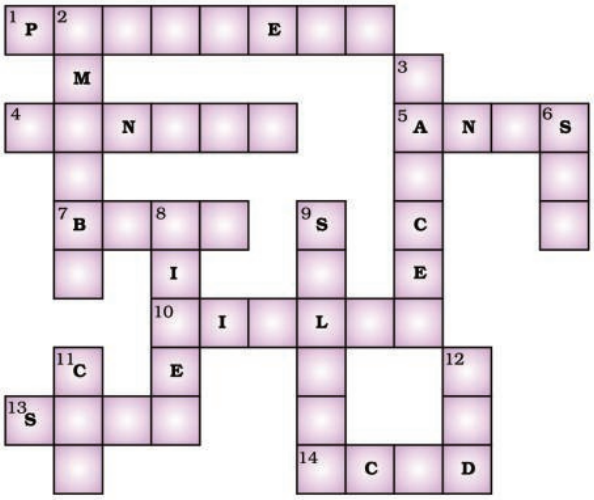

Fig. 2.3

Across

1. Cream-coloured digestive gland
3. Undigested excretory solid residues
4. Organ that mixes saliva with the food
5. Point of defecation
7. Stored in gall bladder
10. Finger-like outgrowth in the small intestine
13. Kind of taste buds
14. Kills bacteria in the stomach

Down

2. Feeds with the help of pseudopodia
6. Total number of molars in one jaw of an adult
8. Largest gland
9. Watery secretion in the mouth
11. A ruminant
12. Form of food chewed by ruminants