

DPP

DAILY PRACTICE PROBLEMS

Class : XIth
Date :

Solutions

Subject : BIOLOGY
DPP No. : 3

Topic :- Digestion & Absorption

- 1 (c)
Physiological jaundice is the mild form of jaundice, which occurs due to the elevation of unconjugated bilirubin concentration during the first week of newborn children. It disappears as the liver matures. Neonatal jaundice is the severe form of jaundice
- 2 (a)
Colon part of the large intestine contains some bacteria. Some of them are symbiotic in nature. These bacteria feeds on undigested matter.
This bacteria (*E. coli*) in turn produce vitamin-B₁₂, vitamin-K along with vitamin-B₁ and B₂
- 3 (a)
Vitamin-B₁ (thiamine) is found in whole wheat bread. Its deficiency causes beri-beri.
- 4 (d)
The upper surface of tongue has small projections called papillae. These papillae can be divided into four types: circumvallate or vallate papillae, fungiform papillae, filiform papillae and foliate papillae. Out of four, filiform papillae lacks taste buds, while rest all three have taste buds.
Opening of stomach into duodenum is guarded by pyloric sphincter, while oddi sphincter guards the opening of hepatic ampulla into duodenum
- 5 (a)
One half of each jaw has four different types of teeth (i) two incisors (ii) one canine (iii) two premolars (iv) three molars. Last (*i. e.*, third) molars are called wisdom teeth thus, these are totally four in number.
- 6 (d)
Pancreas is single endodermal flat leaf-like yellowish, heterocrine gland present between ascending and descending limb of duodenum. **Serosa** is the outermost covering of human intestine. It is followed by submucosa and mucosa.
- 7 (a)
Saliva - the secretion of salivary glands in human constitutes a mixture of water and salts or electrolytes. It's medium is slightly acidic with the pH 6.8. Saliva also contains antibacterial agent, lysozyme
- 8 (d)
Sulcus terminalis (an inverted V shape furrow) divides the upper surface of furrow into buccal part and pharyngeal part. This upper surface of tongue has several small projections. These projection are termed as papillae
- 9 (a)
Nucleotidase enzyme is secreted by **intestinal juice** or **succus entericus**. It hydrolyses nucleotides into nucleosides and phosphate.
- 10 (a)
Digestion of nucleic acids takes place in the small intestine. The enzyme present in pancreatic and intestinal juices acts on nucleic acids as follows

$$\text{RNA} \xrightarrow[\text{Pancreatic juice}]{\text{RNase}} \text{Ribonucleotides}$$

$$\text{Ribonucleotides (Nucleotides)} \xrightarrow{\text{Nucleotidases}} \text{Nucleosides} + \text{IPO}_4$$

- 11 Nucleosides $\xrightarrow{\text{Nucleosidases}}$ Nitrogenous base + Pentose sugar
(c)
 Fats are broken down by lipases with the help of bile into di- and monoglycerides.
- 12 Fats $\xrightarrow[\text{Bile}]{\text{Lipases}}$ Diglycerides \rightarrow Monoglycerides
(a)
 The rights and left hepatic duct join to form the common hepatic duct which joins the cystic duct arises from gall bladder. The cystic duct and common hepatic duct join to form bile duct which after joining the main pancreatic duct forms hepatopancreatic ampulla. The ampulla opens into duodenum. The opening is guarded by sphincter of Oddi?
- 3 **(a)**
 Stomach is located in the upper left part of the abdominal cavity. It has three parts, a **cardiac portion**; a **fundic portion** and a **pyloric portion**, which opens into the proximal part of small intestine
- 14 **(c)**
 The opening of the common bile duct is guarded by sphincter of Oddi.
- 15 **(c)**
 Small intestine of alimentary canal consists of region/part namely duodenum, colon, rectum. Duodenum (proximal part) is some what C-shaped. The middle jejunum is coiled part and the distal or lower part, ileum is highly coiled. The later part opens into the first part of, large intestine (caecum)
- 16 **(d)**
 Pellagra is caused due to deficiency of vitamin-B₃ (niacin or nicotinic acid). Deficiency of vitamin -B₁₂ (cyanocobalamin) causes pernicious anaemia. Deficiency of vitamin-B₆ (pyridoxine) causes loss of appetite. Deficiency of Vitamin-B₂(thiamine) causes beri-beri.
- 17 **(b)**
Incisors are located anteriorly. Incisors are chisel-shaped and possess sharp cutting end and, therefore, specialized for cutting.
- 18 **(c)**
 Pepsin is a proteolytic enzyme, secreted by chief cells or peptic cells of gastric glands in the form of pepsinogen. It acts in highly acidic medium (pH = 2).
- 19 **(d)**
 Glisson's capsule is formed by a layer of connective tissue surrounding the liver and ensheathing hepatic artery portal vein and bile ducts within the liver. It was so named after the biologist **Francis Glisson (1597-1677)**
- 20 **(b)**
 The correct sequence of food processing, in human being is
 Mouth \rightarrow Buccal cavity \rightarrow Pharynx \rightarrow Oesophagus \rightarrow Stomach \rightarrow Duodenum \rightarrow Ileum \rightarrow Caecum \rightarrow Rectum \rightarrow Elimination

ANSWER-KEY

Q.	1	2	3	4	5	6	7	8	9	10
A.	C	A	A	D	A	D	A	D	A	A
Q.	11	12	13	14	15	16	17	18	19	20
A.	C	A	A	C	C	D	B	C	D	B