## Classical Thinking

### 14.0 Introduction

1. Intake of food is called
(A) ingestion (B) egestion
(C) digestion (D) assimilation

2. Breaking up of complex, non-diffusible and non-absorbable food substances into simple, diffusible and assimilable substances is called
(A) ingestion (B) egestion
(C) digestion (D) assimilation

### 14.1 Human Digestive System

3. The alimentary canal in humans has length of
(A) 8-10 metres (B) 2-5 metres
(C) 10-28 metres (D) 1-2 metres

4. The roof of buccal cavity is called
(A) lingua (B) tongue
(C) palate (D) maxilla

5. _____ lies in the floor of buccal cavity.
(A) Tongue (B) Parotid gland
(C) Palate (D) Pharynx

6. How many canine teeth are present in a normal human adult?
(A) 2 (B) 3
(C) 4 (D) 1 or 2

7. How many teeth are present in upper jaw?
(A) 32 (B) 20 (C) 16 (D) 8

8. The hardest part of the tooth is
(A) dentin (B) pulp
(C) enamel (D) dental tubules

9. Basic shape of the tooth is derived from
(A) dentin (B) pulp
(C) enamel (D) cementum

10. The upper surface of the tongue bears numerous projections called
(A) rugae (B) villi
(C) pulp (D) papillae

11. The pharynx opens into trachea through an opening called
(A) gullet (B) glottis
(C) epiglottis (D) vestibule

12. The opening of glottis is guarded by a cartilaginous flap called
(A) gullet (B) epiglottis
(C) vestibule (D) tongue

13. The epiglottis closes during the swallowing (deglutition) action and prevents entry of food into the
(A) pharynx (B) oesophagus
(C) trachea (D) oropharynx

14. The common passage of air and food is called
(A) pharynx (B) larynx
(C) oesophagus (D) trachea

15. Oesophagus
(A) passes through thoracic cavity
(B) pierces the diaphragm
(C) passes through lungs
(D) both (A) and (B)

16. The thin, muscular tube connecting pharynx to the stomach is called
(A) Trachea
(B) Alimentary canal
(C) Oesophagus
(D) Duodenum

17. The food moves through the oesophagus due to
(A) peristalsis
(B) vibratory movement of cilia
(C) osmosis
(D) none of these

18. The anterior sphincter present at the opening of the oesophagus into the stomach is
(A) cardiac sphincter
(B) pyloric sphincter
(C) fundic sphincter
(D) antric sphincter

19. Fundus is the part of _____ in alimentary canal.
(A) intestine (B) rectum
(C) stomach (D) pharynx

20. Pyloric sphincter is present at the junction of
(A) oesophagus and stomach
(B) stomach and duodenum
(C) duodenum and ileum
(D) ileum and rectum

21. The second part of small intestine is
(A) jejunum (B) ileum
(C) duodenum (D) colon

22. At the junction of the ileum and colon, there is a blind pouch called
(A) caecum (B) jejunum
(C) rectum (D) duodenum

23. _____ is the vestigial structure of human alimentary canal.
(A) Vermiform appendix
(B) Jejunum
(C) Ileum
(D) Rectum

24. Vermiform appendix arises from the
(A) ileum (B) caecum
(C) stomach (D) rectum

25. Vermiform appendix is functional in herbivorous animals for the digestion of
(A) carbohydrates (B) proteins
(C) cellulose (D) chitin

26. Caecum opens into the
(A) colon (B) rectum
(C) ileum (D) jejunum

27. _____ temporarily stores faeces till it is egested through the anus.
(A) Rectum (B) Caecum
(C) Appendix (D) Colon

28. The process by which anus expels faecal matter is called
(A) ingestion (B) egestion
(C) defaecation (D) Both (B) & (C)

## 14.2 Histological Structure of Alimentary Canal

29. The outermost layer of the gastrointestinal tract made up of squamous epithelium is the
(A) serosa (B) muscularis
(C) submucosa (D) mucosa

30. The layer of the gastrointestinal tract formed by smooth muscles arranged in three concentric layers is
(A) serosa (B) submucosa
(C) muscularis (D) mucosa

31. _____ is formed of loose connective tissues containing blood vessels, lymph vessels and nerves.
(A) Muscularis (B) Submucosa
(C) Serosa (D) Mucosa

32. Which of the following is innermost part of intestinal wall?
(A) Muscularis (B) Serosa
(C) Mucosa (D) Submucosa

33. Which layer of the alimentary canal shows presence of goblet cells?
(A) Muscularis (B) Submucosa
(C) Serosa (D) Mucosa

34. In stomach, mucosa is thrown into irregular folds called _____.
(A) oblique muscles (B) rugae
(C) lobules (D) villi

35. Identify the INCORRECT statement.
(A) Villi are supplied with a network of capillaries and lymph vessels called lacteals.
(B) Crypts of Lieberkuhn are formed in between the bases of villi.
(C) Submucosa of small intestine forms finger like foldings called villi.
(D) Intestinal villi are lined by brush border or epithelial cells.

## 14.3 Digestive Glands

36. The name of salivary glands present in front of ear is
(A) parotid (B) sub-maxillary
(C) sub-lingual (D) parietal

37. The name of the salivary gland present below lower jaw is
(A) parotid gland
(B) sub-maxillary gland
(C) sub-lingual gland
(D) sub-mandibular gland

38. _____ is the salivary gland lying below the tongue.
(A) Sub-maxillary (B) Sub-lingual
(C) Parotid (D) None of these

39. The secretion of salivary glands is called
(A) bile (B) chyme
(C) saliva (D) chyle

40. The serous cells of salivary gland produce an enzyme called
(A) pepsin (B) trypsin
(C) amylase (D) mucin

41. The largest gland of the human body is
(A) pancreas (B) liver
(C) salivary gland (D) thyroid

42. Each lobe of the liver is covered by a thin covering called
(A) Glisson's capsule (B) peritoneum
(C) neurilemma (D) renal capsule

43. Structural and functional units of the liver are called
(A) hepatic lobules (B) acini
(C) Kupffer cells (D) nephron

44. Kupffer cells can destroy
(A) toxic substances
(B) old and worn out blood cells
(C) microorganisms
(D) all of these

45. Gall bladder stores the bile secreted by
(A) pancreas (B) liver
(C) salivary gland (D) both (A) and (B)

46. Which of the following is NOT a function of liver?
(A) Production of bile
(B) Production of insulin
(C) Glycogen storage
(D) Synthesis of vitamins

47. The glucose is converted into glycogen stored in
(A) liver (B) pancreas
(C) spleen (D) stomach

48. Common bile duct is formed by
(A) hepatic duct and duct of gall bladder
(B) hepatic duct and pancreatic duct
(C) duct of gall bladder and pancreatic duct
(D) pancreatic duct and salivary duct

49. Blood proteins like prothrombin and fibrinogen are produced by
(A) liver (B) pancreas
(C) parotid glands (D) stomach

50. Pancreas lie between
(A) pharynx and oesophagus
(B) ileum and caecum
(C) ascending and descending colon
(D) duodenum and stomach

51. The exocrine part of pancreas is made up of pancreatic lobules called
(A) acini (B) follicle
(C) alveoli (D) vesicles

52. Acinar cells are present in _____.
(A) liver (B) pancreas
(C) gastric glands (D) intestinal glands

53. The common bile duct joins pancreatic duct to form _____.
(A) hepato-pancreatic duct
(B) hepatic duct
(C) inter-locular duct
(D) cystic duct

54. Opening of hepato-pancreatic duct is guarded by
(A) sphincter of Oddi
(B) hepato-cardiac sphincter
(C) gastro-oesophageal sphincter
(D) pyloric sphincter

55. Endocrine part of pancreas contain group of cells in the connective tissue called
(A) parafollicular cells
(B) Leydig's cells
(C) islets of Langerhans
(D) oxyntic cells

56. Islets of Langerhans are made up of
(A) α cells (B) δ cells
(C) β cells (D) all of these

57. Complete the analogy.
Alpha cells: Glucagon :: Delta cells : _____
(A) Insulin (B) Somatostatin
(C) Ghrelin (D) Gastrin

## 14.4 Physiology of Digestion

58. Mastication is
(A) chewing of food
(B) churning in stomach
(C) peristaltic movements of gastrointestinal tract
(D) all of the above

59. Deglutition means
(A) chewing of food
(B) mastication of food
(C) swallowing of food
(D) throwing up of food

60. Saliva is made up of
(A) water and salivary amylase
(B) water, salivary amylase, lysozyme and electrolytes
(C) electrolytes and salivary amylase
(D) lysozyme and electrolytes

61. _____% starch gets converted to maltose in the mouth.
(A) 30 (B) 5
(C) 100 (D) 70

62. Saliva contains a starch splitting enzyme called
(A) saliva (B) trypsinogen
(C) salivary amylase (D) rennin

63. Starch is converted to _____ by the action of amylase.
(A) glucose (B) galactose
(C) maltose (D) lactose

64. The _____ controls the passage of food into the stomach.
(A) gastro-oesophageal sphincter
(B) pyloric sphincter
(C) hepatopancreatic sphincter
(D) sphincter of Oddi

65. Match the following.

| | Column I | | Column II |
|---|---|---|---|
| a. | Mucus cells | 1. | Proenzyme pepsinogen |
| b. | Peptic cells | 2. | Mucus |
| c. | Parietal cells | 3. | HCl and Intrinsic factor |

(A) a - 2, b - 1, c - 3
(B) a - 2, b - 3, c - 1
(C) a - 1, b - 2, c - 3
(D) a - 3, b - 1, c - 2

66. _____ stops the activity of salivary amylase.
(A) $H_2SO_4$ (B) HCl
(C) Pepsin (D) Protease

67. Action of pepsin on proteins mainly forms
(A) proteoses and peptones
(B) amino acid
(C) polysaccharides
(D) all of these

68. Rennin is a _____ enzyme.
(A) carbolytic (B) proteolytic
(C) lipolytic (D) nucleolytic

69. Chyme is formed after digestion in the
(A) buccal cavity (B) stomach
(C) small intestine (D) large intestine

70. Inactive trypsinogen is converted into _____ by enterokinase.
(A) ptyalin (B) trypsin
(C) peptones (D) pharynx

71. Emulsification of fats is brought about by
(A) bile pigments (B) bile salts
(C) pancreatic juice (D) HCl

72. Proteins and proteoses are broken down into polypeptides by the action of
(A) Pepsin (B) Proteases
(C) Trypsin (D) Peptidase

73. Acidic chyme is neutralized by
(A) succus entericus (B) pancreatic juice
(C) bile (D) both (A) and (B)

74. Enzyme enterokinase is present in
(A) saliva
(B) intestinal juice
(C) secretion of pancreas
(D) bile

75. Choose the CORRECT set of enzymes in pancreatic juice.
(A) Pancreatic amylase, lipases, trypsin, chymotrypsin, nucleases
(B) dipeptidases, nucleases, lipases
(C) amylase, disaccharidases, chymotrypsinogen
(D) pepsin, amylase, nucleases

76. Which enzyme converts polypeptides to dipeptides?
(A) Chymotrypsin (B) Somatostatin
(C) Pepsin (D) Amylase

77. Nucleases present in pancreatic juice help in digestion of nucleic acids to _____.
(A) pentose sugar and proteoses
(B) pentose sugar and nitrogenous base
(C) dipeptides and nitrogenous base
(D) pentose sugar and amino acids

78. Maltase converts maltose into
(A) glucose (B) fructose
(C) galactose (D) lactose

79. The food after its passage through the small intestine, forms an alkaline fluid emulsion, called
(A) faeces (B) chyme
(C) bolus (D) chyle

80. Which of the following does not produce any digestive enzymes?
(A) Pancreas (B) Stomach
(C) Small intestine (D) Large intestine

81. _____ cranial nerve stimulates secretion of gastric juice in stomach.
(A) X (B) VII (C) V (D) III

82. _____ hormone of the gastro intestinal tract stimulates gastric glands for the secretion of hydrochloric acid and pepsinogen.
(A) Secretin (B) Gastrin
(C) Cholecystokinin (D) GIP

83. Which hormone inhibits the secretion of gastric juice and stimulates secretion of bile juice?
(A) Secretin (B) CCK
(C) GIP (D) Gastrin

84. The hormone that induces satiety is
(A) Secretin (B) CCK
(C) GIP (D) Gastrin

85. _____ inhibits gastric secretion.
(A) Pepsin (B) GIP
(C) Gastrin (D) Chymotrypsin

## 14.5 Absorption, Assimilation and Egestion

86. About 90% of absorption takes place in the
(A) kidneys (B) small intestine
(C) large intestine (D) stomach

87. Absorption of part of glucose, amino acids and some electrolytes like chloride ions are absorbed by
(A) simple diffusion
(B) osmosis
(C) facilitated transport
(D) active transport

88. Some amino acids as well as substances like fructose are absorbed by
(A) simple diffusion
(B) osmosis
(C) facilitated transport
(D) active transport

89. Chylomicrons are
(A) undigested proteins
(B) undigested carbohydrates
(C) fat globules coated with proteins
(D) fat droplets coated with phospholipids

90. Absorbed food material finally reaches the tissue and becomes a part of the protoplasm. This process is called
(A) deglutition (B) assimilation
(C) egestion (D) digestion

91. Elimination of undigested food from the body is called
(A) ingestion (B) egestion
(C) digestion (D) assimilation

92. The amount of heat liberated by combustion of 1g. of food in a bomb calorimeter is called
(A) heat energy
(B) gross calorific value /gross energy
(C) kinetic energy
(D) calorie