EXERCISE

ANATOMY OF ALIMENTORY CANAL, DIGESTIVE GLANDS, HISTOLOGY OF ALIMENTARY CANAL

1. How many teeth in man grows twice in life :
(1) 32 (2) 28 (3) 20 (4) 12

2. In human teeth, which help in cutting
(1) Canine (2) Incisor
(3) Molar (4) Premolar

3. Molars and Premolars are modified for :
(1) Crushing (2) Tearing
(3) Peristalsis (4) Cutting

4. Pulp cavity of teeth is lined by :
(1) Odontoblast (2) Chondroblast
(3) Osteoblast (4) Amyloblast

5. The longitudinal mucosal folds of inner wall of stomach are called :
(1) Papilla of vater (2) Rugae
(3) Villi (4) Fissure

6. Glisson's capsule is associated with :
(1) liver (2) pancreas
(3) lungs (4) kidney

7. In mammals the teeth are
(a) of different types
(b) embedded in the cuplike socket in the jaw bones
(c) only two sets, present throughout life
The condition are referred as :
(1) heterodont, thecodont, diphyodont
(2) thecodont, heterodont, diphyodont
(3) diphyodont, thecodont, heterodont
(4) heterodont, diphyodont, thecodont

8. Find out the correct match :

Column I	Column II
A. Hepatic lobule	i. Sub mucosal glands
B. Brunner's glands	ii. Base of villi
C. Crypts of lieberkuhn	iii. Glisson's capsule
D. Sphincter of Oddi	iv. Gall bladder
E. Cystic duct	v. Hepatopancreatic duct
	vi. Serous glands

	A	B	C	D	E
(1)	iii	vi	ii	v	iv
(2)	v	ii	iii	vi	i
(3)	iii	i	ii	v	iv
(4)	iv	vi	v	ii	i

9. Gall bladder is found :
(1) below right lobe of liver
(2) below left lobe of liver
(3) in between the two lobes of liver
(4) third lobe of liver

10. Bile can be prevented to release into the duodenum by :-
(1) pyloric valve
(2) sphincter of oddi
(3) cardiac sphincter
(4) sphincter of Boyden

11. It is a correct dental formula for the child falling under age group 5-6 years :-
(1) i = 2/2, c = 1/1, pm = 0/0, m = 2/2
(2) i = 2/2, c = 1/1, pm = 2/2, m = 3/3
(3) i = 1/1, c = 2/2, pm = 2/2, m = 3/3
(4) i = 2/2, c = 2/2, pm = 1/1, m = 3/3

PHYSIOLOGY OF DIGESTION

12. Enzyme present in saliva is :
(1) Maltase (2) Ptyalin
(3) Sacrase (4) Invertase

13. Maximum digestion of food take place in –
(1) Stomach (2) Jejunum
(3) Colon (4) Duodenum

14. Absence of which of these in bile will make fat digestion difficult-
(1) Cholesterol (2) Salts
(3) Pigment (4) Acids

15. Pancreatic juice is released into-
(1) Duodenum (2) Ileum
(3) Stomach (4) Jejunum.

16. The three secretions meeting the food in small intestine are-
(1) Bile juice, pancreatic juice and intestinal juice
(2) Pancreatic, intestinal and gastric juice
(3) Bile, pancreatic and gastric juice
(4) Bile, gastric juice and Saliva.

17. Which one of the following hormone inhibits the secretion of gastric juice-
(1) Gastrin (2) Secretin
(3) CCK (4) Enterogastrin

18. The enzyme that catalyse the changing of emulsified oil to fatty acids and glycerol is-
(1) Pepsin (2) Lipase
(3) Amylase (4) Sucrose

19. Point out the odd one-
(1) Rennin (2) Secretin
(3) Calcitonin (4) Oxytocin

20. Which one is not an enzyme of digestive system-
(1) Enterokinase
(2) Amylase
(3) Trypsin
(4) Enterogastrin

21. Secretin stimulates the production of
(1) Saliva (2) Gastrin
(3) Bile (4) Pancreatic juice

22. The cells in the wall of intestine are stimulated to produce secretin by-
(1) Cholecystokinin (2) Bile juice
(3) Acid in chyme (4) Gastrin

23. Pancreatic lipase acts upon-
(1) Glycogen (2) Triglycerides
(3) Disacharides (4) Polypeptides

24. Amount of fat increases in the body due to excess intake of-
(1) Vitamins (2) Minerals
(3) Carbohydrates (4) None of these

25. Bile is formed in-
(1) Gall bladder (2) Liver
(3) Spleen (4) Blood

26. Enzyme trypsinogen is changed to trypsin by-
(1) Gastrin (2) Enterogastrone
(3) Enterokinase (4) Secretin

27. Castle's intrinsic factor is connected with internal absorption of
(1) Pyridoxine (2) Riboflavin
(3) Thiamine (4) Cobalamine

28. Ptyalin, a digestive enzyme produces-
(1) Maltose (2) Smaller peptides
(3) Peptones (4) Amino acids

29. Rennin acts on-
(1) Milk, changing casien into calcium paracaseinate at 7.2 - 8.2 PH
(2) Proteins in stomach
(3) Fat in intestine
(4) Milk, changing casien into calcium paracaseinate at 1-3 PH

30. Muscular contraction of Alimentary canal are-
(1) Circulation (2) Deglutition
(3) Chewing (4) Peristalsis

31. Pepsinogen is converted to pepsin by:-
(1) Low pH (2) Trypsinogen
(3) Chymotrypsin (4) Enterokinase

32. Mucus is secreted by the :-
(1) Stomach (2) Duodenum
(3) Large intestine (4) All of the above

33. Lactose composed of :-
(1) Glucose + galactose (2) Glucose + fructose
(3) Glucose + glucose (4) Glucose + mannose

34. Which of the following stimulates the secretion of gastric juice :-
(1) Gastrin
(2) Enterogasterone
(3) Secretin
(4) Hepatocrinin

35. If for some reason the parietal cells of the gut epithelium become partially non-functional, what is likely to happen ?
(1) The pH of stomach will fall abruptly
(2) Steapsin will be more effective
(3) Proteins will not be adequately hydrolysed by pepsin into proteoses and peptones
(4) The pancreatic enzymes and specially the trypsin and lipase will not work efficiently

36. In stomach after physical and chemical digestion food is called:-
(1) Chyme (2) Chyle
(3) Amino acid (4) Bolus

37. A person who is eating rice. His food contains
(1) Cellulose (2) Starch
(3) Lactose (4) Protein

38. In mammals milk is digested by action of-
(1) Rennin (2) Amylase
(3) Intestinal bacteria (4) Invertase

39. Hydrolytic enzymes which does not act on low pH are called as :-
(1) Protease (2) α–Amylase
(3) Hydrolases (4) Peroxidase

40. Which of the following is a dissacharide :
(1) Glucose (2) Fructose
(3) Sucrose (4) Galactose

41. Glucose and galactose unite to form
(1) Maltose (2) Sucrose
(3) Isomaltose (4) Lactose

42. Gastric enzyme pepsin reacts only in acidic medium with in a limited pH concentration. It varies:
(1) 3.20 to 4.80
(2) 4.00 to 4.50
(3) 7.00 to 8.50
(4) 1.50 to 2.60

43. Stomach in vertebrates is the main site for digestion of :
(1) Proteins (2) Carbohydrates
(3) Fats (4) Nucleic acids

44. The chief function of bile is to :
(1) Digest fat by enzymatic action
(2) Emulsify fats for digestion
(3) Eliminate waste products
(4) Regulate digestion of proteins

45. The toxic substance are detoxicated in the human body by :
(1) Lungs (2) Kidneys
(3) Liver (4) Stomach

46. Function of HCl in stomach is to :
(1) Activate trypsinogen to trypsin
(2) Facilitate absorption of food
(3) Dissolve enzymes
(4) Activate pepsinogen to pepsin

47. The muscular contraction in the alimentary canal is known as :
(1) Systole (2) Diastole
(3) Peristalsis (4) Metachronal

48. Succus entericus is also called :
(1) Gastric juice (2) Intestinal juice
(3) bile juice (4) Saliva

49. Just as hydrochloric acid is for pepsinogen, so is the
(1) haemoglobin to oxygen
(2) enterokinase to typsinogen
(3) bile juice to fat
(4) glucagon to glycongen

50. What is the function of goblet cells :
(1) Production of enzyme
(2) Production of mucin
(3) Production of hormone
(4) Production of HCl

51. Which of the following is different from others :
(1) Gastrin (2) Ptyalin
(3) Glucagon (4) Secretin

52. Pancreatic juice is :
(1) alkaline in nature
(2) acidic in nature
(3) neutral in nature
(4) both acidic and alkaline in nature

53. What is the common passage for bile and pancreatic juices
(1) Ampulla of Vater (2) Ductus Choledochus
(3) Duct of Wirsung (4) Duct of Santorini

54. Cells of the pancreas is not digested by their own enzymes because :
(1) enzymes are secreted in inactive form
(2) cells are lined by mucous membrane
(3) enzymes are released only when needed
(4) none of the above

55. Bile salts help in :-
(1) digestion of fats
(2) emulsification of fats
(3) absorption of fats
(4) both absorption and digestion of fats

56. Bile secretion is proportional to the concentration of:
(1) Protein (2) Fat
(3) Carbohydrate (4) None of these

57. pH of gastric juice is :
(1) 2 (2) 4 (3) 6 (4) 8

58. Which of the following hormone helps in secretion of HCl from stomach ?
(1) renin (2) gastrin
(3) secretin (4) somatomedin

59. Carbohydrate digestion occurs first in which structure?
(1) mouth (2) intestine
(3) stomach (4) none of these

60. Which of the following is called pseudo digestive juice ?
(1) Saliva (2) Bile juice
(3) Gastric juice (4) Intestinal juice

61. Pepsinogen is secreted by :
(1) chief-cells (2) oxyntic cells
(3) mast cells (4) parietal cells

62. Prorennin is secreted by :
(1) zymogen cells (2) sertoli cells
(3) islets of langerhans (4) hepatacytes

63. Which one of the following is the correct matching of the site of acion on the given substrate, the enzyme acting upon it and the end product :

(1) Small intestine : proteins $\xrightarrow{\text{pepsin}}$ amino acids

(2) Stomach : fats $\xrightarrow{\text{lipase}}$ micelles

(3) Duodenum :
tryglycerides $\xrightarrow{\text{trypsin}}$ monoglycerides

(4) Small intestine : starch $\xrightarrow{\alpha-\text{amylase}}$ disaccharide (maltose)

64. Which one of the following enzymes carries out the initial step in the digestion of milk in humans ?
(1) Pepsin (2) Rennin
(3) Lipase (4) Trypsin

65. Another substance of the category of glucose, sucrose and maltose is-
(1) Myoglobin (2) Starch
(3) Amino acids (4) Haemoglobin

ABSORPTION – ASSIMILATION – EGESTION

66. Glycogen is stored in-
(1) Blood (2) Liver
(3) Lungs (4) Kidney

67. Lacteals take part-
(1) Digestion of milk
(2) Absorption of fat
(3) Digestion of lactic acid
(4) None of the above

68. Fatty acids and glycerol are first absorbed by-
(1) Lymph vessels (2) Blood
(3) Blood capillaries (4) Hepatic portal Vein

69. Water absorption is mainly occur in :-
(1) Colon (2) Intestine
(3) Gastrium (4) Appendix

70. Which of the following is absorbed in proximal intestine :-
(1) Iron (2) sodium
(3) Bile salts (4) Vitamin B_{12}

71. Fully digested food reaches to liver by
(1) Hepatic portal vein (2) Hepatic artery
(3) Hepatic vein (4) All the above

72. The organ in human body where glycogenolysis takes place?
(1) muscles (2) liver
(3) small intestine (4) kidney

73. Protein are mainly required in the body for-
(1) Growth (2) Repair
(3) Both of these (4) None of these

74. In mammals carbohydrate is stored in the form of-
(1) Lactic acid in muscles
(2) Glycogen in liver and muscles
(3) Glucose in liver and muscles
(4) Glycogen in liver and spleen

DISORDERS

75. Jaundice is a disorder of :
(1) Skin and eyes (2) Digestive system
(3) Circulatory system (4) Excretory system

76. Osteomalacia occurs due to the deficiency of :
(1) Vitamin A (2) Vitamin B
(3) Vitamin C (4) Vitmina D

77. Protein deficiency leads to :
(1) kwashiorkar (2) marasmus
(3) cretinism (4) both (1) and (2)

78. A patient is generally advised to specially, consume more meat, lentils, milk and eggs in diet only when the suffers from :
(1) Kwashiorkar (2) Rickets
(3) Anaemia (4) Scurvy

ANSWER KEY

Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	**3**	**2**	**1**	**1**	**2**	**1**	**1**	**3**	**1**	**2**	**1**	**2**	**4**	**2**	**1**
Que.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Ans.	**1**	**4**	**2**	**1**	**4**	**4**	**3**	**2**	**3**	**2**	**3**	**4**	**1**	**4**	**4**
Que.	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Ans.	**1**	**4**	**1**	**1**	**3**	**1**	**2**	**1**	**2**	**3**	**4**	**4**	**1**	**2**	**3**
Que.	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Ans.	**4**	**3**	**2**	**2**	**2**	**2**	**1**	**1**	**1**	**2**	**2**	**1**	**2**	**1**	**2**
Que.	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
Ans.	**1**	**1**	**4**	**2**	**2**	**2**	**2**	**1**	**2**	**1**	**1**	**2**	**3**	**2**	**2**
Que.	76	77	78												
Ans.	**4**	**4**	**1**												