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SSC-I NATIONAL BOOK FOUNDATION FBISE

BIOLOGY TEST - CHAPTER 5: TISSUES, ORGANS AND ORGAN SYSTEMS

Name:		Roll No.		Section:

Total Time: 2:30 Hour
Time Allowed: 150 Minutes

Total Marks: 150

PAPER OBJECTIVE
SECTION-A (MARKS 150)

NOTE: Section-A is compulsory. All parts of this section are to be answered on these pages and handed over to the center superintendent. Deleting / overwriting is not allowed. Do not use lead pencil.

Q.1 Fill the relevant bubble for each part. All parts carry one mark.

Questions	A	B	C	D	A B C D
1. Which is the smallest unit of life?	Atom	Organelle	Cell	Tissue	○○●○
2. Nucleus, ribosomes and mitochondria are examples of:	Cell organelles	Tissues	Organs	Biomolecules	●○○○
3. A group of similar cells working together on a specific task is a:	Tissue	Organ	Organ system	Organelle	●○○○
4. Two or more tissue types organized to perform a particular function form an:	Organ	Organelle	Organ system	Organism	●○○○
5. A group of organs with related functions forms an:	Organelle	Organism	Organ system	Tissue	○○●○
6. Several organ systems working together make up an:	Organ	Tissue	Cell	Organism	○○○●
7. Which list runs from smallest to largest level of organization?	Tissue, cell, organ, system	Organ, tissue, cell, system	Cell, tissue, organ, system	System, organ, tissue, cell	○○●○
8. Which level comes directly after organelles in the levels of organization?	Tissue	Cell	Organ	Molecule	○●○○
9. Which level comes directly after tissues in the levels of organization?	Cell	Organ	Organ system	Organism	○●○○
10. Which level is made up of atoms bonded together?	Organelle level	Molecular level	Cellular level	Tissue level	○●○○
11. The smallest unit of an element that retains its properties is the:	Molecule	Organelle	Cell	Atom	○○○●
12. Biomolecules assemble in a specific way to form:	Tissues	Organs	Organelles	Atoms	○○●○
13. Combining multiple organelles produces a:	Single cell	Tissue	Organ	Biomolecule	●○○○
14. Gain of new functions when parts combine into a higher level is called:	Homeostasis	Differentiation	Emergent properties	Adaptation	○○●○

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Questions	A	B	C	D	A B C D
15. Which is an example of an organ?	Neuron	Xylem	Mitochondrion	Heart	○○○●
16. Which is an example of a tissue in animals?	Stomach	Lung	Kidney	Muscle tissue	○○○●
17. Which is an example of an organ system?	Epithelium	Digestive system	Liver	Ribosome	○●○○
18. At each level of organization, structure is closely related to:	Function	Size	Colour	Location	●○○○
19. Small intestine absorptive cells look very different from muscle cells because of:	Their equal sizes	Their position only	Their different functions	Their age	○○●○
20. The structure of the heart reflects its job of:	Exchanging gases	Digesting food	Filtering wastes	Pumping blood	○○○●
21. The structure of the lungs maximizes the efficiency of:	Blood pumping	Gas exchange	Food absorption	Heat production	○●○○
22. The skin is an organ that mainly provides:	Digestion	Hormone secretion	Gas exchange	A protective barrier	○○○●
23. Most organs contain how many of the animal tissue types?	All four	Only one	Only two	Only three	●○○○
24. Which set lists the four animal tissue types?	Dermal, ground, vascular, nervous	Epithelial, connective, muscle, nerve	Epithelial, dermal, muscular, nervous	Connective, ground, muscular, nervous	○●○○
25. Which of the following is NOT an animal tissue?	Epithelial tissue	Dermal tissue	Nervous tissue	Connective tissue	○●○○
26. Plant tissues differentiate into how many main types?	Three	Two	Four	Five	●○○○
27. Which set lists the main plant tissue types?	Dermal, ground, vascular	Epithelial, ground, vascular	Dermal, muscular, vascular	Dermal, ground, nervous	●○○○
28. The heart and blood vessels together make up the:	Respiratory system	Digestive system	Cardiovascular system	Lymphatic system	○○●○
29. Which organs belong to the respiratory system?	Heart, veins, arteries	Stomach, liver, intestine	Nose, trachea, lungs	Brain, spinal cord, nerves	○○●○
30. Which structure is NOT an organ?	Flower	Xylem	Spinal cord	Artery	○●○○
31. Which structure is at a different level of organization from the other three?	Neuron	Kidney	Liver	Lung	●○○○

Questions	A	B	C	D	A B C D
32. A neuron seen under the microscope shows which level of organization?	Cell	Tissue	Organ	Organ system	●○○○
33. The inner lining of the stomach secretes mucus, hydrochloric acid and:	Pepsin	Insulin	Bile	Amylase	●○○○
34. Pepsin secreted by the stomach lining is a(n):	Hormone	Enzyme	Vitamin	Mineral	○●○○
35. In the stomach wall, smooth muscle contracts to:	Secrete pepsin	Absorb oxygen	Make mucus	Move food through the gut	○○○●
36. In the stomach, nervous tissue controls muscle contraction and:	Blood clotting	Heat production	Secretion of digestive substances	Gas exchange	○○●○
37. In the stomach, connective tissue supports the mucosa and connects it to the:	Muscular layer	Skin	Bone	Lung	●○○○
38. Blood supply to the stomach wall provides it with:	Hydrochloric acid	Nutrients	Pepsin	Mucus	○●○○
39. Which tissue forms the inner surface of the stomach that secretes mucus?	Nervous tissue	Skeletal muscle	Bone tissue	Epithelial tissue	○○○●
40. Which pair of systems works together to exchange O_2 and CO_2 between cells and environment?	Digestive and skeletal	Nervous and urinary	Respiratory and circulatory	Muscular and endocrine	○○●○
41. Where does the circulatory system pick up oxygen?	Stomach	Kidneys	Liver	Lungs	○○○●
42. Which system expels carbon dioxide and brings in oxygen-containing air?	Kidneys (urinary system)	Heart (circulatory system)	Skin (integumentary system)	Lungs (respiratory system)	○○○●
43. The tendency to maintain a stable internal environment is called:	Metabolism	Emergence	Differentiation	Homeostasis	○○○●
44. Which factor is regulated by homeostasis?	Rate of photosynthesis	Number of chromosomes	Blood glucose concentration	Eye colour	○○●○
45. If internal values become too high or too low, a person can:	Grow faster	Gain emergent properties	Develop new organs	Get very sick	○○○●
46. The stomach maintaining a pH different from nearby organs shows homeostasis at:	Whole-body level only	Atomic level	Organ level	Organism level only	○○●○
47. Each cell maintains ion concentrations different from the surrounding:	Cell wall	Nucleus	Skin	Tissue fluid	○○○●
48. During exercise, muscles increase production of:	Heat	Oxygen	Glucose	Water vapour	●○○○

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Questions	A	B	C	D	A B C D
49. After drinking fruit juice, which blood factor rises?	Oxygen	Glucose	Heat	Urea	○●○○
50. The temperature regulation centre of the brain is the:	Cerebellum	Medulla	Spinal cord	Hypothalamus	○○○●
51. The set point of body temperature is:	The highest tolerable temperature	The temperature of the skin	The value the body tries to maintain	The temperature of the air	○○●○
52. High body temperature is detected mainly by:	Sweat glands	Nerve cells in skin and brain	Red blood cells	Kidney tubules	○●○○
53. In temperature regulation, sweat glands act as:	Sensors	Effectors	Control centres	Stimuli	○●○○
54. In the homeostatic loop, the control centre:	Detects the stimulus	Produces sweat	Processes info, activates effector	Loses heat to air	○○●○
55. Which sequence shows the correct order in a homeostatic response?	Stimulus, sensor, centre, effector	Effector, sensor, stimulus, centre	Sensor, effector, centre, stimulus	Centre, stimulus, effector, sensor	●○○○
56. When body temperature rises, blood flow to the skin:	Decreases	Increases	Stops	Stays unchanged	○●○○
57. Sweating cools the body through:	Evaporation of sweat	Condensation	Increased heat production	Reduced blood flow	●○○○
58. Heavy breathing during exercise helps to:	Decrease heat loss	Increase heat loss	Raise body temperature	Stop sweating	○●○○
59. Homeostatic regulation of temperature is an example of:	Positive feedback	Negative feedback	Emergent property	Differentiation	○●○○
60. Which organ system transports oxygen, nutrients and wastes through the body?	Cardiovascular	Skeletal	Endocrine	Integumentary	●○○○
61. The cardiovascular system helps stabilize gases, wastes, temperature and:	Calcium in bones	Digestion rate	pH	Hormone levels only	○○●○
62. Which system defends against infection and transfers lymph between tissues and blood?	Lymphatic system	Endocrine system	Nervous system	Skeletal system	●○○○
63. The lymphatic system helps maintain homeostasis of:	Bone minerals	Blood glucose	Body hair	Tissue fluid	○○○●
64. Which system processes foods and absorbs nutrients, minerals, vitamins and water?	Digestive system	Respiratory system	Urinary system	Muscular system	●○○○
65. The digestive system helps maintain levels of ___ in blood.	Hormones	Nutrients	Oxygen	Lymph	○●○○

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Questions	A	B	C	D	A B C D
66. Which organs are part of the digestive system?	Liver, gallbladder, pancreas	Pituitary, thyroid, pineal	Kidneys, ureters, bladder	Tonsils, spleen, thymus	●○○○
67. Which system communicates through hormones and directs long-term change?	Nervous system	Endocrine system	Muscular system	Lymphatic system	○●○○
68. Which is an endocrine gland?	Salivary gland	Sweat gland	Pituitary	Gallbladder	○○●○
69. The endocrine system helps balance blood glucose, water and:	Oxygen	Lymph	Mucus	Calcium	○○○●
70. Skin, hair and nails belong to the:	Skeletal system	Integumentary system	Muscular system	Immune system	○●○○
71. The integumentary system protects against injury, fluid loss and:	Gravity	Microorganisms	Hormones	Aging	○●○○
72. Skeletal, cardiac and smooth muscles belong to the:	Skeletal system	Nervous system	Muscular system	Endocrine system	○○●○
73. Muscles help temperature regulation by:	Storing calcium	Secreting hormones	Absorbing water	Heat production	○○○●
74. Brain, spinal cord, nerves and sense organs make up the:	Nervous system	Endocrine system	Immune system	Muscular system	●○○○
75. The nervous system maintains homeostasis by:	Slowly storing minerals	Filtering blood	Absorbing nutrients	Rapidly controlling body functions	○○○●
76. Which system directs short-term changes in other organ systems?	Nervous system	Endocrine system	Skeletal system	Urinary system	●○○○
77. The respiratory system helps control the balance of:	Water and salts	Oxygen and carbon dioxide	Calcium and phosphorus	Glucose and insulin	○●○○
78. Which list contains only respiratory system organs?	Ureters, bladder, urethra	Bones, cartilage, ligaments	Pharynx, larynx, bronchi	Spleen, thymus, tonsils	○○●○
79. Which system supports and protects soft tissues and allows movement at joints?	Muscular system	Nervous system	Immune system	Skeletal system	○○○●
80. Which set lists skeletal system structures?	Heart, blood, vessels	Skin, hair, nails	Bones, cartilage, ligaments	Nose, trachea, lungs	○○●○
81. The skeletal system helps homeostasis by regulating blood levels of:	Glucose	Calcium	Oxygen	Urea	○●○○
82. Besides support, bones store minerals and:	Secrete hormones	Digest food	Produce blood cells	Filter urine	○○●○

Questions	A	B	C	D	A B C D
83. Which system removes excess water, salts and wastes from blood?	Digestive system	Urinary system	Skeletal system	Lymphatic system	○●○○
84. Which organs belong to the urinary system?	Liver, pancreas, stomach	Kidneys, ureters, bladder	Lungs, trachea, bronchi	Brain, nerves, spinal cord	○●○○
85. The urinary system controls blood levels of water, salts and:	Glucose and oxygen	Calcium only	Wastes and pH	Hormones only	○○●○
86. Which system defends against pathogens and disease-causing agents?	Skeletal system	Immune system	Endocrine system	Urinary system	○●○○
87. Which organs belong to the immune system?	Kidneys, bladder, ureters	Heart, arteries, veins	Thymus, spleen, tonsils	Pituitary, thyroid, pancreas	○○●○
88. Plants are multicellular:	Prokaryotes	Viruses	Eukaryotes	Protozoa	○○●○
89. Dermal tissue of a plant mainly:	Carries out photosynthesis	Transports sugars	Stores minerals only	Covers and protects the plant	○○○●
90. In plants, ground tissue serves as a site for:	Absorbing light only	Photosynthesis	Gas exchange only	Transporting water only	○●○○
91. Besides photosynthesis, ground tissue provides support and:	Covers the plant	Transports minerals	Stores water and sugars	Forms stomata	○○●○
92. Which plant tissue transports water, minerals and sugars?	Dermal tissue	Ground tissue	Vascular tissue	Epithelial tissue	○○●○
93. Leaves, stems and roots are plant:	Tissues	Organs	Organelles	Cells	○●○○
94. The main function of leaves is:	Photosynthesis	Anchorage	Absorbing water	Seed storage	●○○○
95. Stems support the plant and also:	Transport substances	Absorb minerals from soil	Perform most photosynthesis	Anchor roots	●○○○
96. Vascular plants have two organ systems called:	Dermal and ground systems	Leaf system and stem system	Xylem and phloem systems	Shoot system and root system	○○○●
97. The shoot system includes:	Roots only	Roots and stems	Stems, leaves, flowers, fruits	Xylem and phloem only	○○●○
98. Which are the vegetative (non-reproductive) parts of the shoot?	Flowers and fruits	Stems and leaves	Roots and fruits	Flowers and leaves	○●○○
99. Which are the reproductive parts of the shoot system?	Stems and leaves	Roots and stems	Leaves and fruits	Flowers and fruits	○○○●

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Questions	A	B	C	D	A B C D
100. The shoot system generally grows:	Above ground	Underground	In water only	Inside the root	●○○○
101. The root system is usually located:	Above ground	Underground	On leaves	On flowers	○●○○
102. Which is a function of the root system?	Photosynthesis	Anchoring the plant in the soil	Producing seeds	Gas exchange through stomata	○●○○
103. The root system absorbs water and minerals and also:	Performs photosynthesis	Forms flowers	Stores food	Releases oxygen	○○●○
104. A leaf develops laterally from the stem at the:	Root tip	Flower	Node	Fruit	○○●○
105. Besides photosynthesis, a leaf performs:	Transpiration	Anchorage	Reproduction	Seed dispersal	●○○○
106. For photosynthesis leaf cells need water, light and:	Nitrogen	Oxygen	Glucose	Carbon dioxide	○○○●
107. The outermost layer of a leaf is the:	Mesophyll	Xylem	Epidermis	Phloem	○○●○
108. The leaf epidermis is made of how many layers of cells?	Two layers	Three layers	A single layer	Many layers	○○●○
109. The waxy substance covering the upper epidermis is:	Cellulose	Cutin	Lignin	Chlorophyll	○●○○
110. Cutin forms the:	Cuticle	Stoma	Mesophyll	Phloem	●○○○
111. The epidermis protects leaf tissues and prevents:	Gas entry	Light absorption	Photosynthesis	Water loss	○○○●
112. Stomata are mainly present on the leaf's:	Lower epidermis	Upper epidermis	Mesophyll	Xylem	●○○○
113. Each stoma is enclosed by how many guard cells?	One	Three	Four	Two	○○○●
114. Unlike other epidermal cells, guard cells contain:	Cutin	Lignin	Wax	Chloroplasts	○○○●
115. Guard cells control:	Opening and closing of stomata	Water absorption by roots	Food transport	Cutin formation	●○○○
116. Which process does NOT occur through stomata?	Transport of sugar	Oxygen exchange	Carbon dioxide exchange	Evaporation of water vapour	●○○○

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Questions	A	B	C	D	A B C D
117. Cells lying between the two epidermal layers of a leaf are called:	Guard cells	Cuticle	Root hairs	Mesophyll	○○○●
118. The two types of mesophyll are palisade and:	Cuboidal	Squamous	Columnar	Spongy	○○○●
119. Palisade mesophyll consists of:	Loosely arranged irregular cells	One layer of flat cells	Dead hollow cells	Two or three layers of cylindrical cells	○○○●
120. Palisade cells are specialized for photosynthesis because they contain:	Many stomata	Cutin	Many chloroplasts	Large vacuoles only	○○●○
121. Spongy mesophyll cells are:	Loosely arranged and irregular	Tightly packed cylinders	Long and dead	Flat and waxy	●○○○
122. Large intercellular spaces in spongy mesophyll facilitate:	Support	Absorption of minerals	Cutin secretion	Diffusion of gases	○○○●
123. Xylem vessels in leaves are:	Long and dead cells	Short and living cells	Round and green cells	Guard-like cells	●○○○
124. Xylem carries water from:	Leaves to roots	Roots to leaves	Leaves to fruits	Soil to stomata only	○●○○
125. Phloem carries prepared food from:	Root to leaf	Soil to root	Stomata to xylem	Leaf to other plant parts	○○○●
126. Which leaf cells perform most photosynthesis?	Upper epidermis	Xylem vessels	Palisade mesophyll	Cuticle cells	○○●○
127. The leaf tissue that transports water is the:	Xylem	Phloem	Spongy mesophyll	Cuticle	●○○○
128. Which cell is adapted for absorption in plants?	Root hair cell	Xylem vessel	Guard cell	Palisade cell	●○○○
129. A xylem vessel is adapted for:	Absorption of water	Transport of oxygen	Contraction	Transport of water and support	○○○●
130. Red blood cells are adapted for:	Support	Absorption of water	Transport of oxygen	Contraction	○○●○
131. Muscle cells are adapted for:	Absorption	Contraction and movement	Water transport	Photosynthesis	○●○○
132. Xylem is correctly described as a:	Cell used for absorption	Tissue used for transport	Organ used for transport	Organ system for conduction	○●○○
133. Xylem and mesophyll are both tissues of which organ?	Root	Flower	Leaf	Fruit	○○●○

Questions	A	B	C	D	A B C D
134. Which animal tissue supports body parts and connects them?	Nervous tissue	Connective tissue	Epithelial tissue	Cardiac muscle	○●○○
135. Do animals have photosynthetic tissue?	No	Yes, in skin	Yes, in muscle	Yes, in epithelium	●○○○
136. Tendon, bone and blood are examples of which animal tissue?	Epithelial tissue	Muscular tissue	Nervous tissue	Connective tissue	○○○●
137. Skeletal, cardiac and smooth muscle are types of:	Muscular tissue	Connective tissue	Epithelial tissue	Nervous tissue	●○○○
138. Brain, spinal cord and nerves are made of:	Muscular tissue	Connective tissue	Nervous tissue	Epithelial tissue	○○●○
139. Squamous, cuboidal and columnar are shapes of cells of:	Connective tissue	Nervous tissue	Muscular tissue	Epithelial tissue	○○○●
140. Heart, liver and stomach are examples of the:	Tissue level	Cellular level	Organ system level	Organ level	○○○●
141. Muscle, epithelial and connective are examples of the:	Organ level	Cellular level	Tissue level	Organelle level	○○●○
142. A human being is an example of which level?	Organism level	Organ system level	Organ level	Tissue level	●○○○
143. If the tissue level did not develop, which next level could not form?	Atomic level	Organ level	Molecular level	Organelle level	○●○○
144. Homeostasis is best described as maintaining a:	Near-constant internal environment	Fixed external environment	Changing internal environment	Fixed body shape	●○○○
145. Why is homeostasis advantageous?	It stops all body changes	Keeps conditions suitable for cells	It increases external fluctuations	It removes need for organs	○●○○
146. Homeostasis is maintained at which levels?	Whole body only	Cell level only	Organ level only	Cell, organ and whole body	○○○●
147. The hypothalamus detects that temperature has strayed from the:	Set point	Threshold of pain	Effector level	Sensor range	●○○○
148. Which is a sensor in temperature control?	Sweat glands	Hair	Skin blood vessels only	Nerve endings in skin	○○○●
149. Which action does NOT help cool a hot body?	Sweating	Heavy breathing	Decreasing blood flow to skin	Increasing blood flow to skin	○○●○
150. The layered wall of the stomach is an example of how tissues form a(n):	Organelle	Organ	Cell	Organ system	○●○○