



Enrollment No.....

Faculty of Science

End Sem (Even) Examination May-2022

FS3EL11 Human Physiology

Programme: B.Sc. (FS)

Branch/Specialisation: Forensic
Science**Duration: 3 Hrs.****Maximum Marks: 60**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d.

- Q.1 i. Which of the following is produced with the combination of apoenzyme and coenzyme? **1**
 (a) Holoenzyme (b) Enzyme substrate complex
 (c) Prosthetic group (d) Enzyme product complex
- ii. Beta-oxidation of fatty acids occurs in- **1**
 (a) Peroxisome
 (b) Peroxisome and Mitochondria
 (c) Mitochondria
 (d) Peroxisome, Mitochondria and ER
- iii. Which of the following vitamin helps in blood clotting? **1**
 (a) Vitamin A (b) Vitamin C
 (c) Vitamin D (d) Vitamin K
- iv. DNA fingerprinting recognizes the differences in- **1**
 (a) Satellite DNA (b) Bulk DNA
 (c) Repetitive DNA (d) Both (a) and (c)
- v. Which of the following blood cells play an important role in blood clotting? **1**
 (a) Thrombocytes (b) Neutrophils
 (c) Leucocytes (d) Erythrocytes
- vi. Which of the following are the most active phagocytic cells? **1**
 (a) Lymphocytes and macrophages
 (b) Neutrophils and eosinophils
 (c) Neutrophils and monocytes
 (d) Eosinophils and lymphocytes

- vii. Which of the following is responsible for gaseous exchange in lungs? **1**
 (a) Alveoli (b) Pharynx (c) Larynx (d) Trachea
- viii. Which of the following is the function of trachea? **1**
 (a) Gaseous Exchange
 (b) Filters the air we breathe
 (c) Exhales the air from the body
 (d) All of the above
- ix. Which of the following is divided into four lobes? **1**
 (a) Cerebral hemisphere (b) Cerebellum
 (c) Hypothalamus (d) Cerebral cortex
- x. Which of the following is related to the hippocampus lobe? **1**
 (a) Vision (b) Memory (c) Heating (d) Balance

- Q.2 i. What are Polysaccharides? **2**
 ii. What are digestive enzymes? **3**
 iii. Explain key and lock theory of enzymatic action. **5**
 OR iv. What do you understand by lipid metabolism? **5**

- Q.3 i. What is Ninhydrin test and its uses? **2**
 ii. Explain various qualitative tests for amino acid estimation. **8**
 OR iii. Explain about DNA structure and its various types. **8**

- Q.4 i. Describe the propagation of cardiac impulse. **3**
 ii. Write about various components of blood. **7**
 OR iii. What is the mechanism of blood coagulation? **7**

- Q.5 i. What are alveoli and trachea? **4**
 ii. Write the method of blood purification through respiration. **6**
 OR iii. What do you understand by dead space and uneven ventilation? **6**

- Q.6 Attempt any two:
 i. What are ionotropic and metabotropic receptors? **5**
 ii. Explain action potential in nerves. **5**
 iii. What is the role of GABA receptors in brain? **5**

P.T.O.

Marking Scheme
FS3EL11 Human Physiology

Q.1	i.	Which of the following is produced with the combination of apoenzyme and coenzyme?		1
		(a) Holoenzyme	1 Mark	
	ii.	Beta-oxidation of fatty acids occurs in-		1
		(c) Mitochondria	1 Mark	
	iii.	Which of the following vitamin helps in blood clotting?		1
		(d) Vitamin K	1 Mark	
	iv.	DNA fingerprinting recognizes the differences in-		1
		(d) Both (a) and (c)	1 Mark	
	v.	Which of the following blood cells play an important role in blood clotting?		1
		(a) Thrombocytes	1 Mark	
	vi.	Which of the following are the most active phagocytic cells?		1
		(c) Neutrophils and monocytes	1 Mark	
	vii.	Which of the following is responsible for gaseous exchange in lungs?		1
		(a) Alveoli	1 Mark	
	viii.	Which of the following is the function of trachea?		1
		(b) Filters the air we breathe	1 Mark	
	ix.	Which of the following is divided into four lobes?		1
		(d) Cerebral cortex	1 Mark	
	x.	Which of the following is related to the hippocampus lobe?		1
		(b) Memory	1 Mark	
Q.2	i.	Definition of Polysaccharides	1 Mark	2
		Any two name of Polysaccharides	1 Mark	
	ii.	Definition of digestive enzymes	1 Mark	3
		Any two name of digestive enzymes	2 Marks	
	iii.	As per explanation	5 Marks	5
OR	iv.	As per explanation	5 Marks	5
Q.3	i.	Ninhydrin test	1 Mark	2
		Its uses	1 Mark	
	ii.	Any four qualitative tests	2 Mark each (2 Mark * 4)	8
OR	iii.	DNA structure	4 Marks	8

		Its various types	4 Marks	
Q.4	i.	Propagation of cardiac impulse	3 Marks	3
	ii.	Blood	2 Marks	7
		Classification	2 Marks	
		Components of blood	3 Marks	
OR	iii.	Mechanism of blood coagulation	7 Marks	7
Q.5	i.	Alveoli	2 Marks	4
		Trachea	2 Marks	
	ii.	Method of blood purification	6 Marks	6
	OR	iii.	3 Marks	6
		Dead space	3 Marks	
		Uneven space	3 Marks	
Q.6		Attempt any two:		
	i.	Ionotropic receptors	2.5 Marks	5
		Metabotropic receptors	2.5 Marks	
	ii.	Action potential in nerves	5 Marks	5
	iii.	Role of GABA receptors in brain	5 Marks	5
