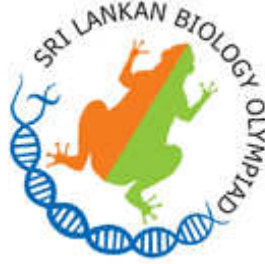


# Sri Lankan Biology Olympiad Model Questions 2009



## Instructions:

Question paper will contain two parts, A and B.

**Part A** consists of 40 multiple choice questions. Each question scores 1 mark. Total 40 Marks

**Part B** consists of 20 short answer questions. Marks for each question are given with the question. Total 60 Marks

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Three multiple choice questions and three short answer questions are given in this model paper.  
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## Part A – Multiple Choice Questions

Questions 1 and 2 are based on the following hormones.

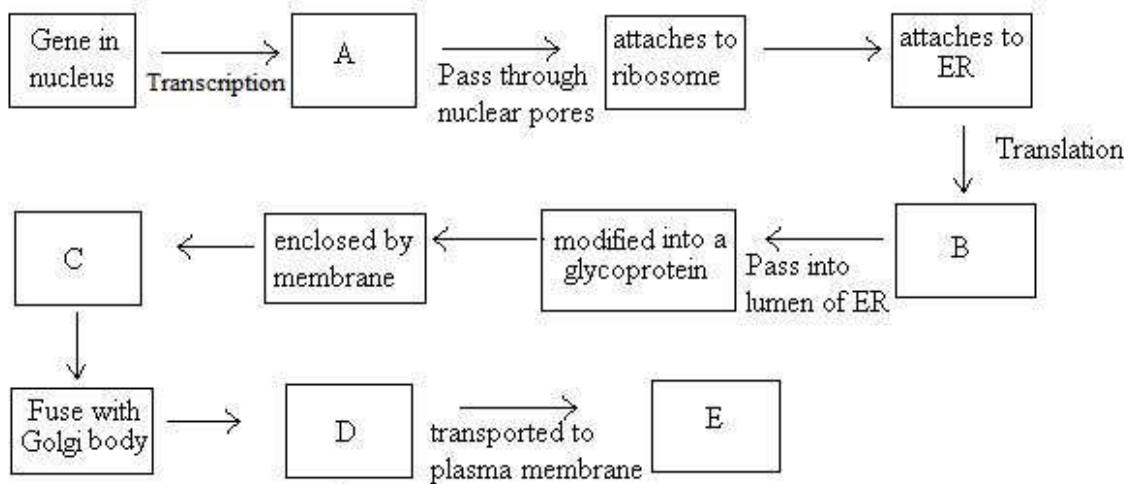
A. GnRH      B. hCG      C. progesterone      D. oestrogen      E. LH

1. Which of the above hormones are important for maintaining pregnancy?
  - (1) A and E
  - (2) D and E
  - (3) A and B
  - (4) A and D
  - (5) B and C
2. Increase in the level of one hormone in blood will result in a decrease in the level of another. These two are,
  - (1) C and A
  - (2) B and C
  - (3) A and E
  - (4) C and D
  - (5) E and C

3. The path that a CO<sub>2</sub> molecule produced in brain cells of man takes to reach lung,
- (1) Cephalic vein - Innominate vein – Superior Vena Cava – Heart – Pulmonary artery - lung.
  - (2) Carotid vein – Innominate vein – Superior Vena Cava – Heart – Pulmonary artery - lung.
  - (3) Internal Juglar vein – Innominate vein – Superior Vena Cava – Heart – Pulmonary artery - lung.
  - (4) Internal Cephalic vein – Common Cephalic vein – Innominate vein – Superior Vena Cava - Heart – Pulmonary artery - lung.
  - (5) Internal Carotid vein – Innominate vein – Superior Vena Cava – Heart – Pulmonary artery - lung.

## Part B – Short Answer Questions

1. (5 Marks) Following is a flow diagram indicating how a cell produces a glycoprotein and secretes it out of the cell.



Indicates most appropriate terms to replace A,B,C,D and E of the diagram by connecting letters given on the left below with appropriate terms given in the right.

- |   |                      |
|---|----------------------|
| A | carbohydrates        |
|   | secretory vesicle    |
| B | transfer RNA         |
|   | messenger RNA        |
| C | polypeptide          |
|   | exocytosis           |
| D | DNA                  |
|   | transmission vesicle |
| E | lipids               |

2. (5 Marks) Indicate whether the following will increase or decrease the blood pressure by putting a tick mark (✓) in the appropriate boxes

	Effects	Increase	Decrease
a.	Adrenaline		
b.	Parasympathetic nervous system		
c.	Nicotine		
d.	Higher CO <sub>2</sub> concentration in veins		
e.	Higher pH in arteries		

3. (6 Marks) The following table gives some vitamins and some symptoms of vitamin deficiencies. Mark appropriate boxes in the table with ✓ sign to indicate correct matches.

Deficiency syndrome	Vit.A	Vit.C	Vit.D	Vit.B1	VitB5	Vit.B6
Dryness of the skin						
Anemia						
Muscle fatigue						

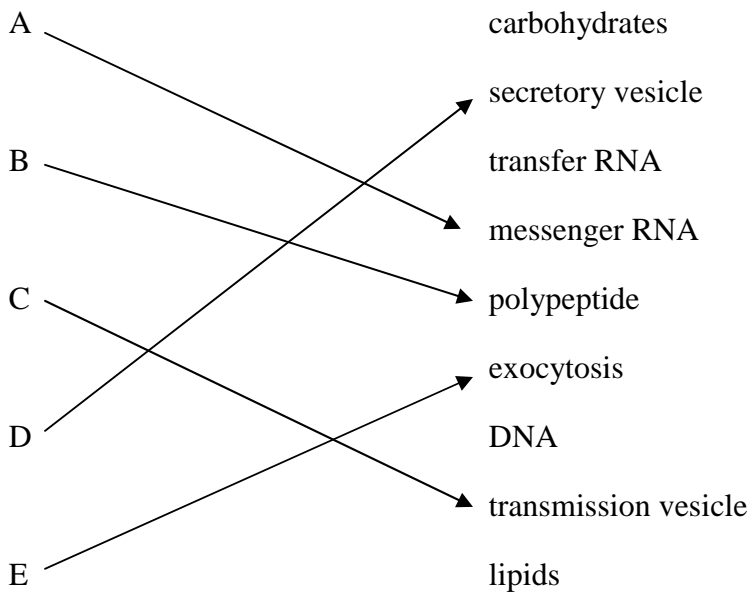
**Answers for model questions:**

**Part A**

- 1 - 5
- 2 - 1
- 3 - 3

**Part B**

1.



2.

	Effects	Increase	Decrease
a.	Adrenaline	√	
b.	Parasympathetic nervous system		√
c.	Nicotine	√	
d.	Higher CO <sub>2</sub> concentration in veins	√	
e.	Higher pH in arteries		√

3.

Deficiency syndrome	Vit.A	Vit.C	Vit.D	Vit.B1	VitB5	Vit.B6
Dryness of the skin	√					√
Anemia		√				√
Muscle fatigue				√	√	