S.S.L.C. EXAMINATION, MARCH - 2015
BIOLOGY (English)

Time : 1½ Hours Total Score : 40

Instructions:

1) **Read carefully the question before answering them.**
2) **Score for each question is given against the concerned questions.**
3) **15 minutes are given as cool off time. This time is to be used for reading and understanding the question.**

[SCORE]

Q1) Find out the relationship between the pair of words and fill up the blanks [3]

a) Rod cells : Rhodopsin

Cone cells : _____

b) Cranial nerve : Communication from Brain to organ

_____ : Communication from Spinal cord to organ

c) Water vapor : Stomata

Water droplet : _____

~~*Q2)*~~ Find the odd one and identify the common features of others [2]

a) Dengue fever, Swine flu, Ring worm, Chikungunya

b) Bt-Cotton, Superbug, Iguana , Bt-Brinjal

[SCORE]

Q3) "Germs, both alive and dead are used to get immunity" Substantiate the statement with vaccines used for rabies and tuberculosis. [1]

Q4) Diagrammatically represent with symbols the First generation of progenies of Tall and Dwarf pea plants when cross pollinated as in Mendel's first stage of Experiment. [1]

Q5) "Receptors are modified neurons" Justify the statement with examples of receptors in different sense organs? [2]

Q6) Write your inference by analyzing the following Information in connection with Evolution. [2]

Number of amino acids in β chain of

Man is - 146

The variation in the Number of Amino acids in β chain :-

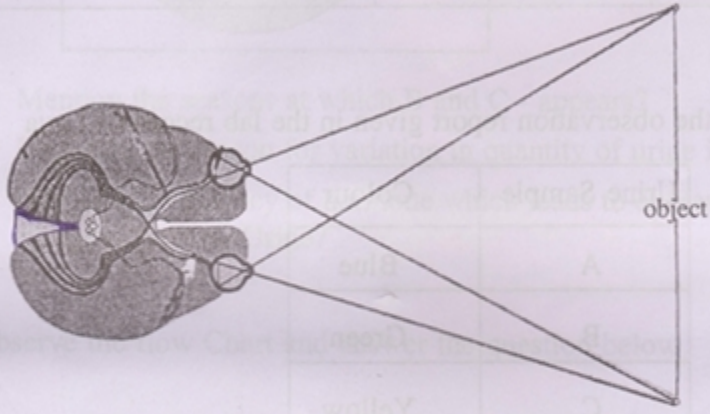
Chimpanzee	**- Nil**
Gorilla	**- 1**
Rhesus monkey	**- 8**
Dog	**- 16**

[SCORE]

a) Substantiate the reason for variation of amino acids of protein like hemoglobin in above organisms?

b) Write the advantage of the micro level knowledge of protein and genes of related organism?

Q7) Name the process represented in following illustration? Write the peculiarity of image formed in labeled sense organ? [2]



Q8) "Some specific processes during Meiosis helps to create variation in characters among organisms". [3]

a) Analyze this statement and explain the process?

b) What happens if some sudden changes occur in chromosome number and structure? Cite examples?

[SCORE]

Q9) Match the item in column B and C with systems of treatment given in Column A [3]

A	B	C
a)_____	Sages and Maharishis	Life style maintain the body fit
Homeopathy	Samuel Haniman	b)_____
Allopathy	c)_____	Importance to diagnosis treatment and medicine.

Q10) Analyse the observation report given in the lab record of Laya [2]

Urine Sample	Colour
A	Blue
B	Green
C	Yellow
D	Orange
E	Red

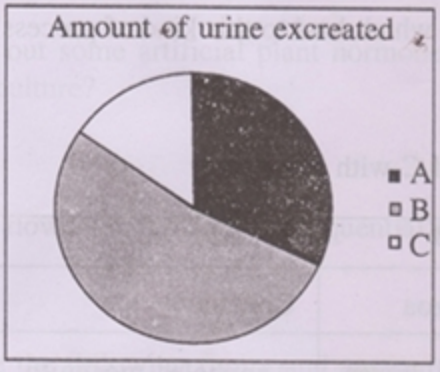
a) Mention the name of reagent used to test in these sample solutions?

b) Which among the samples contain highest concentration of glucose?

c) What might be the endocrine malfunction leads to this condition?

[SCORE]

~~Q11~~) Observe the graphical representation of the amount of urine excreted from a person in different season and answer the question given below [3]

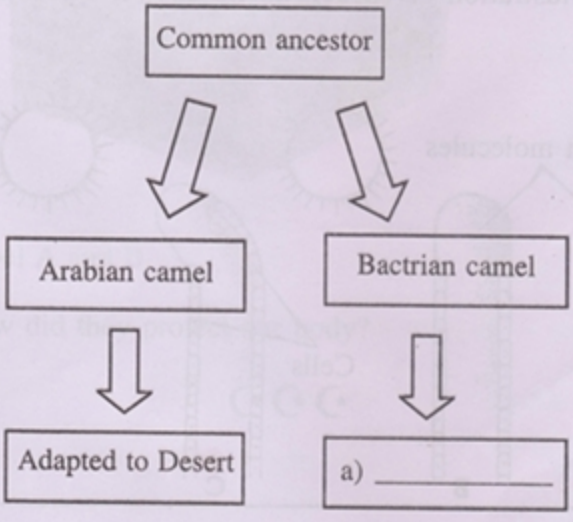


a) Mention the seasons at which B and C - appears?

b) Elucidate the reason for variation in quantity of urine in B&C.

c) Name the deficiency of hormone which leads to excessive loss of water through Urine?

~~Q12~~) Observe the flow Chart and answer the question below [3]



[SCORE]

a) Complete the flow chart.

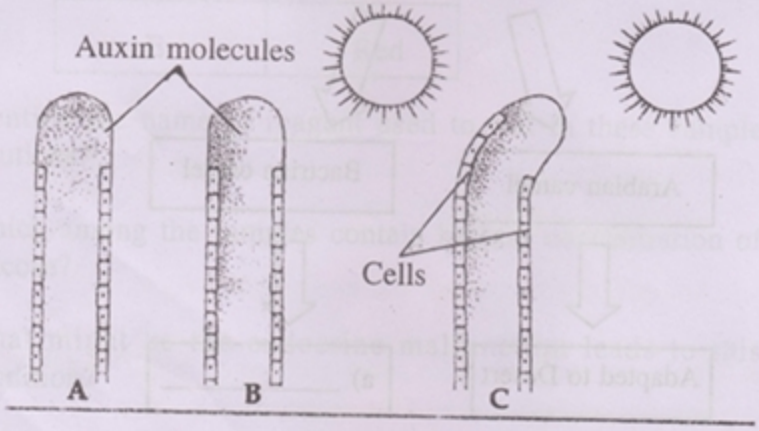
b) Name the process by these two types of camels were evolved?

c) What are the reasons which lead to this kind of process?

~~Q13~~) Match the column B and C with column A [4]

A	B	C
Tuberculosis	Protozoa	Contact
Dysentery	Filarial larvae	Anopheles mosquito
Malaria	Bacteria	Food/water
Ringworm	Plasmodium	Culex mosquito
	Fungus	Air

~~Q14~~) Observe the illustration given below and answer the following questions [4]



[SCORE]

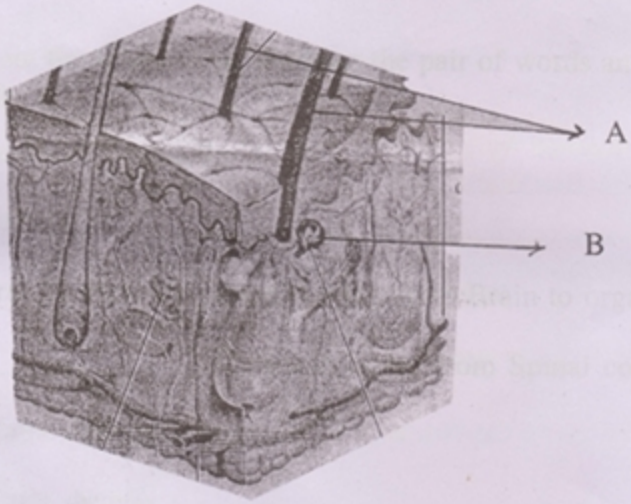
a) What kind of hormone action is represented in illustration?

b) Draw the opposite action of these hormones in plant root.

c) List out some artificial plant hormone that can be utilized in agriculture?

~~Q15~~) Make a flowchart showing the sequential stages to feel the smell? [3]

~~16~~) Observe the following figure and answer the given questions [2]



a) Label A and B

b) How did they protect our body?

C C C