

Bitan

331

SSLC MODEL EXAMINATION—FEBRUARY, 2012

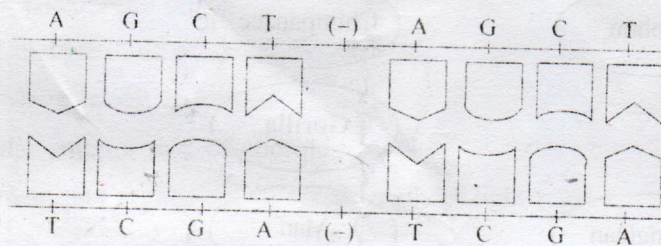
Biology

Time : 1½ hrs.

Total Score : 40

- 15 minutes are allowed as 'Cool off time'. During this period you have to read and comprehend the questions well.
- Answer all questions except for those given with choice.
- Write any one of the question where choice is given.
- Write all sub questions of the choice you selected.
- Sure of each question is given against them.

1. A portion of DNA molecule is shown below. Find out the missing nitrogen base pair from those given below.



(a) (b) (c) (d)

T G G A  
I I I I  
G C A C

2. The fusing of gametes during self pollination of  $F_1$  pea plants with two separate characters combined together, were tabulated.

	TR	Tr	tR	tr
TR	TTRR	TTRr	a) <u>TtRr</u>	TtRr
Tr	TTRr	b) <u>TtRr</u>	TtRr	Ttrr
tR	TtRR	TtRr	c) <u>TtRr</u>	ttRr
tr	TtRr	Ttrr	ttRr	d) <u>TtRr</u>

[P.T.O.]



- (A) Fill up the blanks  
 (B) How many white flowered pea plants will be formed, if 16 pea plants in  $F_2$  generations were produced?

(C) Define law of independent assortment based on this.

4

3. (A) Find out the second word pair based on the relation of first word pair.

(a) Sprouting of potatoes; Indol ————— Butyric acid

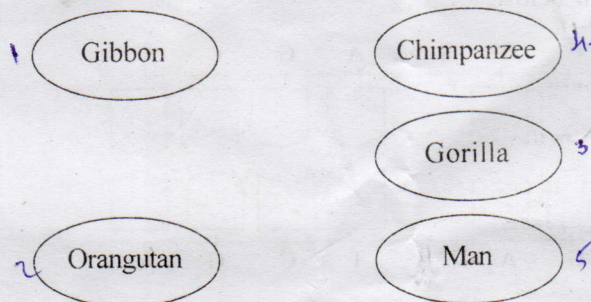
(b) —————; Ethyphon

(B) Which is the substance used for artificial fruit ripening?

(C) Use of these type of substances are harmful than its benefits substantiate

3

4. (A) Arrange as per the order of evolutionary relation.

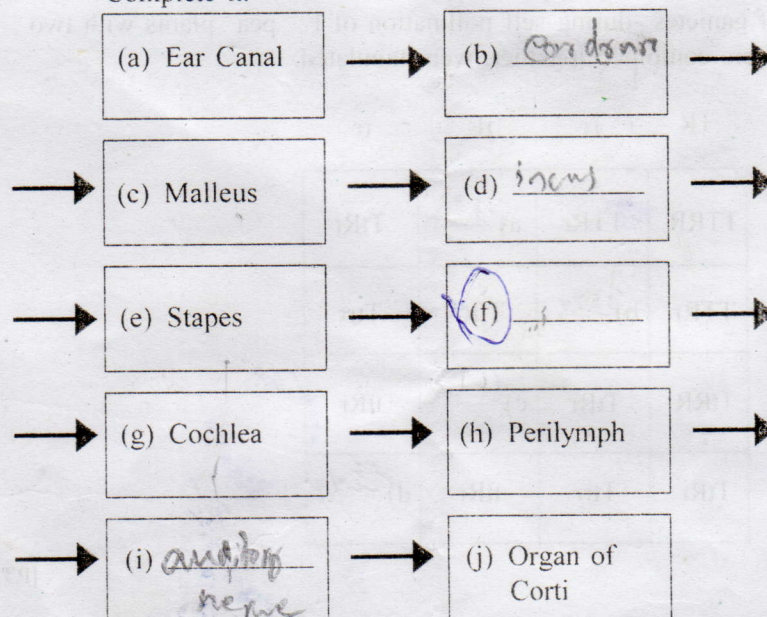


(B) Give two scientific evidences to justify evolution.

(C) Does the presence of human beings influence the process of evolution? Substantiate.

4

5. The flow chart of Sound waves passing through ear is shown below. Complete it.



2



6. (A) Which is the part of nervous system excited during emergency situation.

(B) How does this system acts on the following internal organs

- Heart
- Liver
- Urinary bladder
- Eye

3

7. Find out the odd one.  
Justify your answer.

- (a) Blinking of eyes in intense light
- (b) Withdrawing of hands on touching hot objects
- (c) Withdrawing of legs while contact with thorns

1

8. A wound occurred on the leg of Raju while playing on ground. The description of processes during every minute is shown below:

(A) Fill up the blanks:

1st minute	→	Blood oozes out
2nd minute	→	Prothrombin converted to Thrombin
3rd minute	→	(a) <u>Fibrin</u>
4th minute	→	Formation of blood clot

(B) What is the role of calcium here?

2

9. Point out two symptoms to confirm Filariasis

1

10. Name two contagious diseases caused by bacteria

1

11. Construct an awareness poster against the bad effects of drug abuse

2

12. We need to drink daily 2-3 Litres of water - Analyse the statement

1

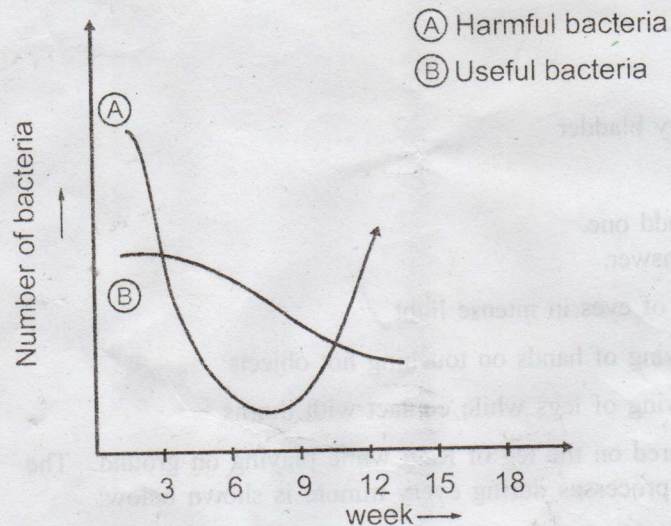
13. Descriptions of Darwin's theory given by Aarya is given below. Which is the wrong statement.

- (a) Competition between organisms for the limited resources is known as struggle for existence
- (b) Organisms with favourable variations survive
- (c) The structure of organs formed by continuous use is transmitted to next generations
- (d) Organs with unfavourable variations get eliminated

1



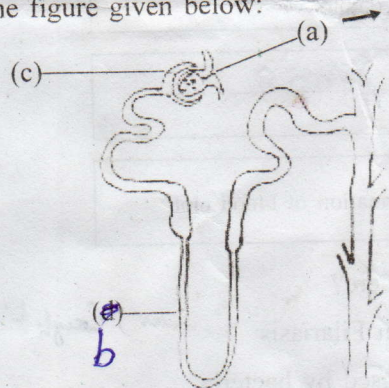
14. The graph representing the difference in number of two bacteria, while applying a particular antibody on a patient is shown below:



- (A) Analyse the graph and record the findings.  
(B) Is this antibiotic effective against the bacteria-why

3

15. Observe the figure given below:

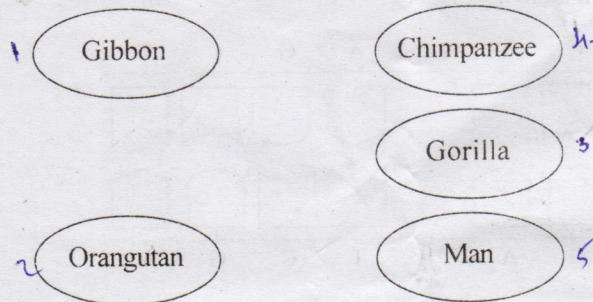


- (A) Which are the parts labelled as 'a' and 'b' ✓  
(B) Which portion of nephron is labelled as 'c'. What is its function? ✓  
(C) What is the mechanism used to sustain life of an individual whose Kidney fail to function ✓  
(D) Point out two precautionary measures taken for successful kidney transplantation. ✓

4



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