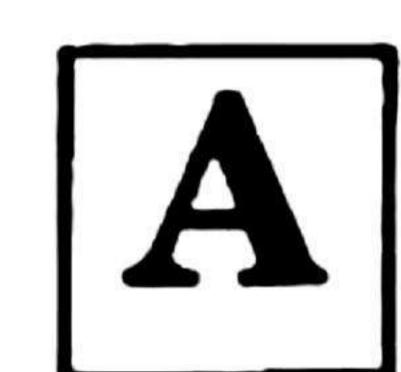
Test Booklet Code



BE-2011

Test Booklet No.

327393

This booklet contains 12 pages. DO NOT open this Test Booklet until you are asked to do so.

Important Instructions:

- 1. The BIOLOGY test consists of 40 questions. Each question carries 1 mark. For each correct response, the candidate will get 1 mark. For each incorrect response, ¼ mark will be deducted. The maximum mark is 40.
- 2. The Test is of 1 hour duration.
- 3. Use Black Ball Point Pen only for writing particulars on OMR Answer Sheet marking responses.
- 4. Rough work is to be done on the space provided for this purpose in the Test Booklet only.
- 5. On completion of the test, the candidate must handover the Answer Sheet to the Invigilator in the Room / Hall. The candidates are allowed to take away this Test Booklet with them.
- 6. The CODE for this Booklet is A. Make sure that the CODE printed on the Answer Sheet is the same as that on this booklet. In case of discrepancy, the candidate should immediately report the matter to the Invigilator for replacement of both the Test Booklet and the Answer Sheet.
- 7. The candidate should ensure that the Answer Sheet is not folded. Do not make any stray marks on the Answer Sheet.
- 8. Do not write your Seat No. anywhere else, except in the specified space in the Test Booklet / Answer Sheet.
- 9. Use of White fluid for correction is not permissible on the Answer Sheet.
- 10. Each candidate must show, on demand his / her Admission Card to the Invigilator.
- 11. No candidate, without special permission of the Superintendent or Invigilator, should leave his / her seat.
- 12. Use of Manual Calculator is permissible.
- 13. The candidate should not leave the Examination Hall without handing over their Answer Sheet to the Invigilator on duty and must sign the Attendance Sheet (Patrak 01). Cases where a candidate has not signed the Attendance Sheet (Patrak-01) be deemed not to have handed over the Answer Sheet and dealt with as an unfair means case.
- 14. The candidates are governed by all Rules and Regulations of the Board with regard to their conduct in the Examination Hall. All cases of unfair means will be dealt with as per Rules and Regulations of the Board.
- 15. No part of the Test Booklet and Answer Sheet shall be detached under any circumstances.
- 16. The candidate will write the Correct Test Booklet Code as given in the Test Booklet / Answer Sheet in the Attendance Sheet. (Patrak-01)

Candidate's Name :	
	(in words)
	Exam. Centre No.:
rest bookiet Code:	Test bookiet No. :

:e555

A .

BIOLOGY

1.	In tall plants, because of which factor, continuous water column extend upward?				
		Atmospheric pressure	(B)	Osmotic pressure	
		Suction pull		Root pressure	
2.	Whi	ch of the following does not affect	wate	r potential of Water?	
	(A)	Concentration of dissolved substa	ances		
	(B)	Atmospheric pressure.			
		Gravitation.			
	(D)	Capillarity.			
3.	Whose water potential is less than water potential of root hair during twater absorption by root hair?				
		Gravitational water	(B)	Soil solution	
		Pure water	(D)	Vacuolar sap	
4.	Whi	ch of the following is true for Pho	tosvn	thesis?	
	(A) Reduction of CO_2 and water.				
		Oxidation of CO ₂ and water.			
(C) Reduction of CO ₂ and oxidation of water.				ter.	
		Oxidation of CO ₂ and reduction of			
5.	Which of the following is not related to Photo-respiration?			oto-respiration ?	
	(A) Lysosome (B) Chloroplast				
		Peroxisome		Mitochondrion	
6.	With reference to three Calvin cycles, which of the given options is correct				
	the	following questions?			
	 (i) How many gross PGAL molecules are produced? (ii) Total, how many ATP molecules are required for synthesis of obtaine 			produced?	
				equired for synthesis of obtained	
PGAL molecules?					
	(iii) Total, how many $NADPH_2$ molecules are required for the synthesis of			are required for the synthesis of	
	obtained PGAL molecules?				
	(A)	(i) = 3 PGAL, (ii) = 3 ATP,	(iii) =	= 3 NADPH ₂	
		(i) = 6 PGAL, (ii) = 6 ATP,			
	(C)	(i) = 18 PGAL, (ii) = 18 ATP,	(iii) =	= 18 NADPH ₂	
	(D)	(i) = 9. PGAL, (ii) = 9. ATP,	(iii) =	= 9 NADPH ₂	
		(Space for Rou	igh \	Work)	

yitamin D, Ca ⁺² and vitamin I Vitamin D, Ca ⁺² and Iodine. Vitamin D, Ca ⁺² and vitamin A Vitamin A, Ca ⁺² and Zn ⁺² . Vitamin A, Ca ⁺² and Zn ⁺² . Vitamin A, Ca ⁺² and Zn ⁺² .	shoul K. A. drase given	fast through R.B.Cs. is absent in blood plasma.	
yitamin D, Ca ⁺² and vitamin I Vitamin D, Ca ⁺² and Iodine. Vitamin D, Ca ⁺² and vitamin A Vitamin A, Ca ⁺² and Zn ⁺² . Vitamin A, Ca ⁺² and Zn ⁺² . Vitamin A, Ca ⁺² and Zn ⁺² .	K. A. drase	is absent in blood plasma. assertion "A" and reason "R"?	
Vitamin D, Ca^{+2} and Iodine. Vitamin D, Ca^{+2} and vitamin A Vitamin A, Ca^{+2} and Zn^{+2} . tion: "A": CO_2 transport occurs on: "R": Enzyme Carbonic anhy of the following is true for the 'A" and "R" both are correct and	A. drase given	is absent in blood plasma. assertion "A" and reason "R"?	
Vitamin D, Ca^{+2} and vitamin A Vitamin A, Ca^{+2} and Zn^{+2} . tion: "A": CO_2 transport occurs on: "R": Enzyme Carbonic anhyologist true for the 'A" and "R" both are correct and	very	is absent in blood plasma. assertion "A" and reason "R"?	
Vitamin A, Ca+2 and Zn+2. tion: "A": CO ₂ transport occurs on: "R": Enzyme Carbonic anhy of the following is true for the 'A" and "R" both are correct and	very	is absent in blood plasma. assertion "A" and reason "R"?	
tion: "A": CO ₂ transport occurs on: "R": Enzyme Carbonic anhy of the following is true for the 'A" and "R" both are correct and	drase	is absent in blood plasma. assertion "A" and reason "R"?	
on: "R": Enzyme Carbonic anhyon of the following is true for the 'A" and "R" both are correct and	drase	is absent in blood plasma. assertion "A" and reason "R"?	
n of the following is true for the 'A" and "R" both are correct and	given	assertion "A" and reason "R"?	
'A" and "R" both are correct and			
	"R" is	the correct explanation for "A".	
'A" and "R" both are correct, but	: "R" is	s not correct explanation for "A".	
'A" is correct and "R" is wrong.			
'A" is wrong and "R" is correct.			
10. Which structure of the lungs is directly involved in O_2 / CO_2 exc. between air and blood capillary?			
Bronchi	(B)	Trachea	
Alveoli	(D)	Secondary bronchi	
Which teeth of human are shovel shaped and used for nibbling, cutting tearing?			
Canines	(B)	Premolars	
Molars	(D)	Incisors	
(Space for Ro	ugh Y	Work)	
	Canines Molars	Alveoli teeth of human are shovel shaped a g? Canines (B)	

7. In which cells of leaf, Pyruvate is converted to PEP in C₄ pathway?

- 12. Which of the following option shows correct order of some stages of muscle contraction from the beginning to the end of the process?
 - (A) Stimuli \rightarrow Neurotransmitter secretion \rightarrow Release of Ca⁺⁺ \rightarrow Cross bridges formation \rightarrow Excitation of T-system \rightarrow sliding of actin filaments.
 - (B) Stimuli \rightarrow Neurotransmitter secretion \rightarrow Excitation of T-system \rightarrow Release of $Ca^{++} \rightarrow Cross$ bridges formation \rightarrow sliding of actin filament -> 'H' band diminishes.
 - Stimuli \rightarrow Excitation of T-system \rightarrow Neurotransmitter secretion \rightarrow Cross bridges formation \rightarrow sliding of actin filaments \rightarrow 'H' band diminishes.
 - Stimuli → Neurotransmitter secretion → Cross bridges formation → Excitation of T-system \rightarrow sliding of actin filament.
- 13. Which of the following organs synthesises Urea?
 - (A) Duodenum

(B) Kidney

Liver

Pancreas

- 14. What is the location of Troponin in the process of muscle contraction?
 - (A) Attached to mysin filament. (B) Attached to tropomyosin.

(C) Attached to myosin crossbridge. (D) Attached to T - tubule

15. Which of the following is correct for the given assertion 'A' and reason 'R'? Assertion: 'A' = Nitrogenous waste from arterial blood is removed, when blood passes through dialyser unit.

Reason: 'R' = Arterial blood of patient and dialysing liquid are made to flow on two sides of permeable membrane.

- (A) 'A' and 'R' both are correct and 'R' is not correct reason for 'A'.
- (B) 'A' and 'R' both are correct and 'R' is the correct reason for 'A'.
- (C) 'A' is correct and 'R' is wrong.
- (D) 'A' is wrong and 'R' is correct.

(Space for Rough Work)

BE-2011 BOOKLET A

[5]

P.T.O.

16.	They are Phagocytic in nature			
	(A)	Neutrophil, Monocyte and Basop	hil.	
	(B)	Neutrophil, Monocyte and Macro	pha	ge.
	(C)	Neutrophil, Basophil and Macrop	hag	e.
	(D)	Acidophil, Basophil and Lymphod	cyte.	
17.	11.00	e to this, swelling around eyes, a erved in an individual. Who has		large and popping eye balls are
	(A)	Less secretion of thyroxine in adv	ult.	
	(B)	Excessive secretion of thyroxine.		
	(C)	Excessive secretion of Calcitonin.		
	(D)	Less secretion of thyroxine right	fron	a birth.
18.	It re	egulates cell division, protein synth	esis	and growth of the bone
	(A)	Prolactin	(B)	Somatotropic hormone.
	(C)	TSH	(D)	MSH
19.	It co	onverts short time memory into lor	ıg tii	me remembrance
	(A)	Reticular system	(B)	Hippocampus
	(C)	Thalamus	(D)	Medulla oblongata
20.	It is	a bridge between Nervous system	and	Endocrine system
	(A)	Thalamus	(B)	Hypothalamus
	(C)	Limbic system	(D)	Parietal lobe

21. On the basis of corelation, find out the correct option from columns I, II and III.

Column-I	Column-II	Column-III
(a) Foolish plant (b) Induces senescence	(p) Volatile hormone(q) GA(r) Zeatin	(x) Induces dormancy(y) Ripens fruits(z) Usually sterile plant

(A)
$$[a-p-y], [b-r-x]$$

(B)
$$[a-r-z], [b-q-z]$$

(C)
$$[a-q-z], [b-p-y]$$

(D)
$$[a-q-x], [b-r-y]$$

22. If stock contains 58 chromosomes and scion contains 30 chromosomes, then how many chromosomes are present in root and egg cell of resultant plant respectively?

(B) 15 and 58

(D) 29 and 30

23. How many nuclei take part in double fertilization of flowering plants?

$$(A)$$
 3

(B) 2

(D) 8

24. Which type of electron is present in free radical?

- (A) Unpaired and extremely reactive.
- (B) Paired and extremely inactive.
- (C) Unpaired and extremely inactive.
- (D) Paired and extremely reactive.

25. Due to deficiency of which hormone, bones become weak in female?

(A) ACTH

(B) TSH

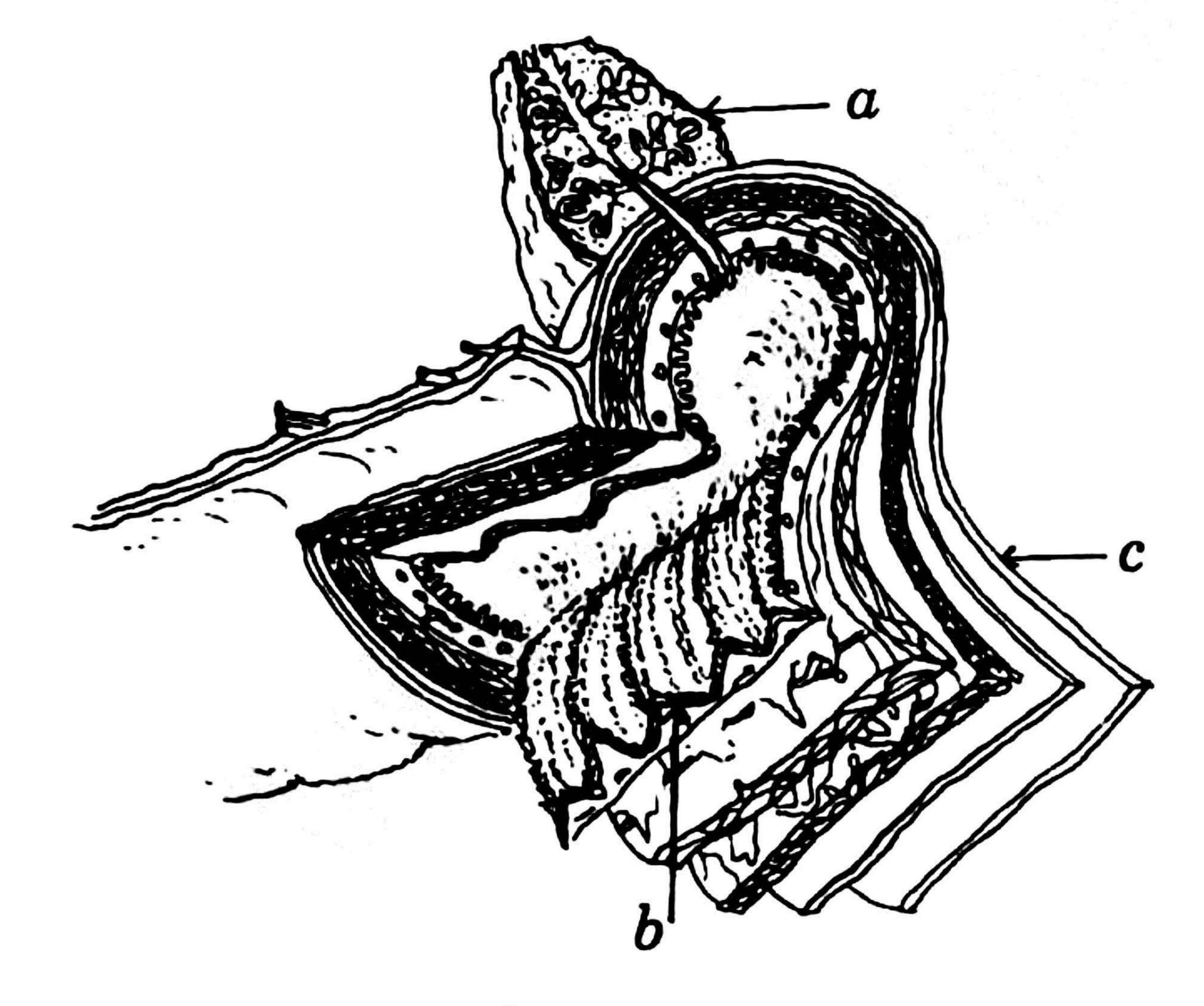
(C) Progesterone

(D) Estrogen

- 26. Assertion 'Q': Due to fragmentation in Planaria, each part develops the remaining body parts and becomes a complete animal.
 - Reasons 'R': Differentiated tissue present in each broken part of Planaria undergoes dedifferentiation and then differentiation for regeneration.

On the basis of assertion 'Q' and reason 'R', select the correct option.

- 'Q' and 'R' both are correct and 'R' is not a correct reason for 'Q'.
- (B) 'Q' and 'R' both are correct and 'R' is a correct reason for 'Q'.
- (C) 'Q' and 'R' both are wrong.
- (D) 'Q' is correct but 'R' is wrong.
- 27. Which is the correct option for labels a, b and c in the given diagram?



- (A) (a) Liver
- Mucosa

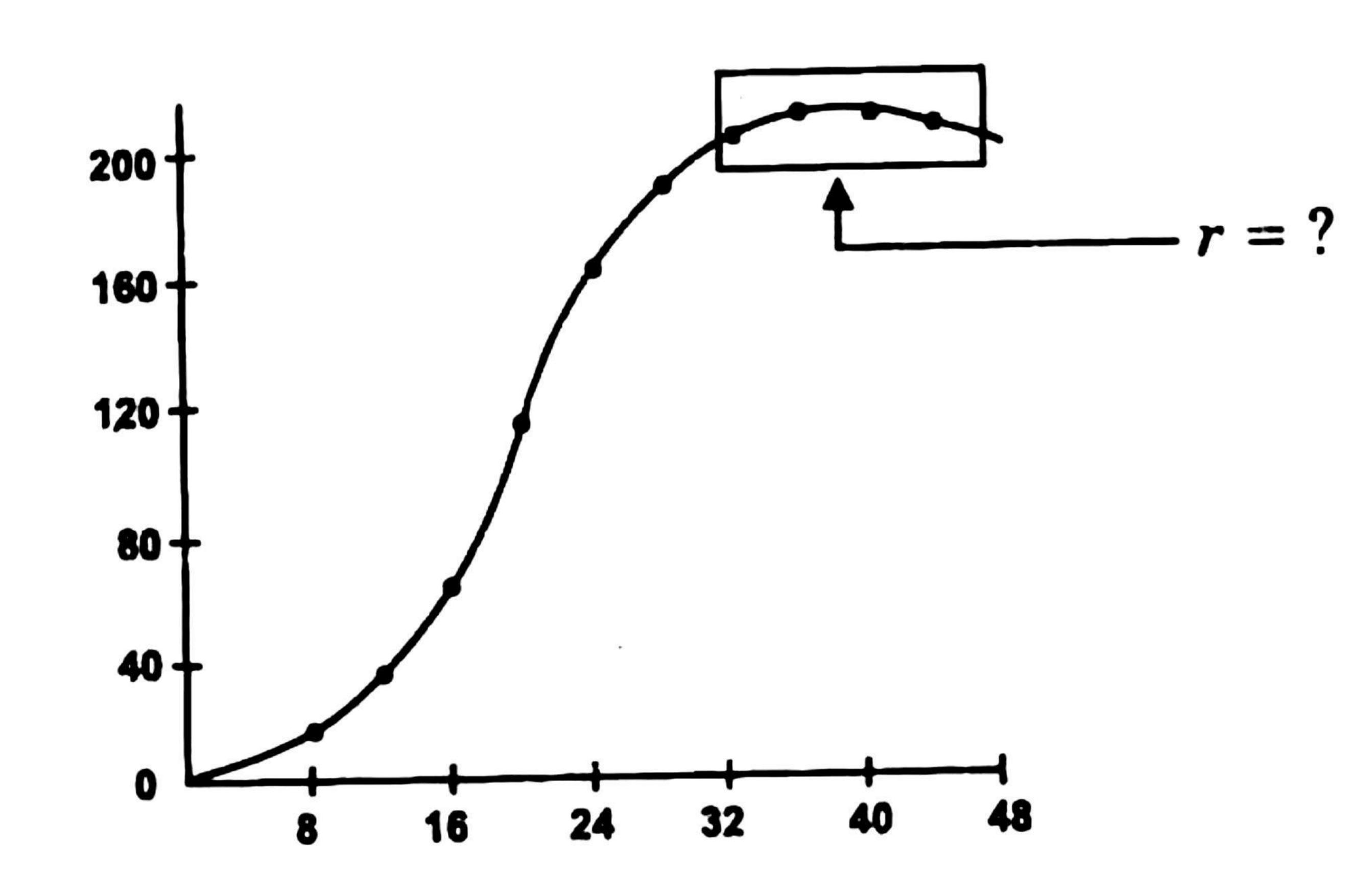
(c) Peritoneum

- (b) Circular muscle layer
- (c) Serosa

- (C) (a) Pancreas (b) Mucosa

- (c) Peritoneum
- (D) (a) Pancreas (b) Submucosa
- (c) Serosa

28. From the given graph of population growth select the correct option having correct value of 'r' and bargraph.



- A) $r = \text{ve} \rightarrow$
- (B) $r = + \text{ve} \rightarrow$
- (C) $r = -ve \rightarrow$
- (D) $r = 0 \rightarrow$
- 29. There are two optional ways of exploitation. One way is Parasitism. Which is the other one?
 - (A) Antibiosis

(B) Competition

(C) Predation

- (D) Commensalism
- 30. In which regions of the world are hot deserts located?
 - (A) Equator and Tropic of Cancer.
 - (B) Equator and Tropic of Capricon.
 - (C) Polar region.
 - (D) Tropic of Cancer and Tropic of Capricon.

31.	31. At what height in Himalaya region of our country are taiga forest loc				
	(A)	At the height of 1000 to 1500 meters.			
	(B)	At the height of 2000 to 3000 meters.			
	(C) At the height of 500 to 1000 meters.				
	(D)	At the height of 1000 meters to 1200 meters.			
32.	32. Which of the following is correct range of latitudes for Temperate region				
	(A)	40° - 60° (B) 0° - 20°			
	(C)	20° - 40° (D) 60° - 80°			
33.	Which of the following is a correct option with reference to pathogenic bacteria and DDT?				
	(A)	Bacteria can undergo multiplication and DDT is degraded by living cells.			
	(B)	Bacteria can be degraded by living cells and DDT can not be degraded by living cells.			
	(C)	Bacteria can undergo Biological magnification and DDT can be degraded by living cells.			
	(D)	Bacteria can undergo Biological magnification and DDT can not be degraded by living cells.			
34.	Whi	ch non conventional method is used to produce electricity at Sardar			

(Space for Rough Work)

(B) Tidal energy

(D) Hydropower

Sarovar Dam?

(A) Wind energy

(C) Geothermal energy

35.	Which of the following is the age of Agricultural Revolution?					
	(A)	Transitional period between Iron Age and Middle Age.				
	(B) Transitional period between New Stone Age and Bronze Age.					
	(C)	lge and Modern Times.				
	(D) Transitional period between Old Stone Age and New Stone Ag					
36.	. Which of the following is a Crustacean ?					
	(A)	Snail	(B)	Sea anemone		
	(C)	Hydra	(D)	Prawn		
37.	Whi	ch of the following is STD?				
	(A)	Cancer	(B)	Malaria		
	(C)	Pneumonia	(D)	Trichomonasis		
38.	Whi	ch of the following is used in diag	mosis	of Epilepsy?		
	(A)	X-ray radiography.				
	(B)	B) DSA (Digital Subtraction Angiography).				
	(C)	C) Sonography.				
	(D)	PET (Positron Emission Tomog	raphy).		
39.	9. What is the name of complex formed at the time of action of 'T' cells			time of action of 'T' cells?		
	(A)	HLA	(B)	STD antigen complex		
	(C)	HLA antigen complex	(D)	MHC antigen complex		
40.	In w	hich of the following, optical fibr	es are	used?		
	(A)	Sonography	(B)	Endoscopy		
	(C)	MRI	(D)	CT-scan		
		(Space for Ro	ugh	Work)		

(Space for Rough Work)

GUJCET Biology 2011 Paper Answer Key (Eng)

BIOLOGY (ENG) SET - A					
Question No.	Answer	Question No.	Answer		
	C	21	C		
2		22			
3	В	23	C		
4	C	24	A		
5	A	25			
6	C	26	В		
7	В	27	C		
8		28			
9	В	29	C		
10		30			
11		31	В		
12	В	32	A		
13	C	33	В		
14	В	34			
15	C	35			
16	В	36	D		
17	В	37			
18	В	38			
19	В	39			
20	В	40	В		