

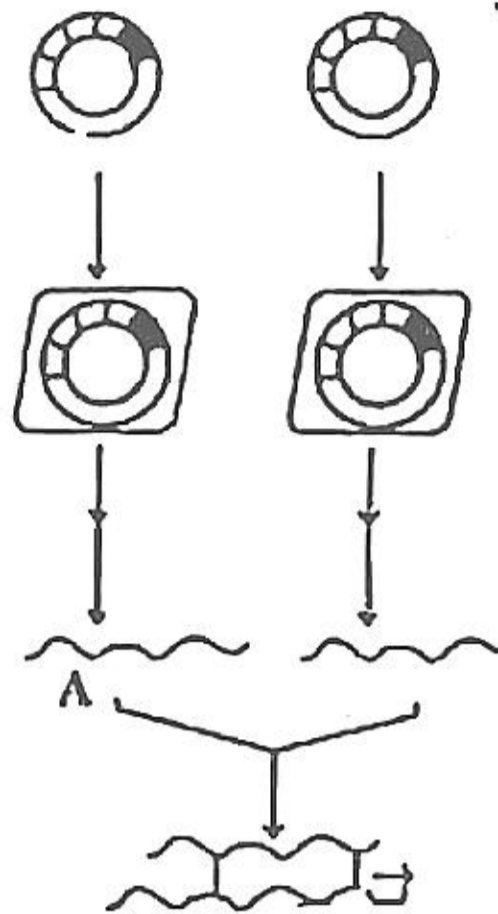
# BIOLOGY

- 81) In which field application of biotechnology occurs?
- (A) Bio-medicine
  - (B) Agriculture
  - (C) Environmental field
  - (D) All of the above
- 82) \_\_\_\_\_ shows anti-allergic and anti-inflammatory effect.
- (A) Glucocorticoids
  - (B) Mineralocorticoids
  - (C) Sexcorticoids
  - (D) Noradrenaline
- 83) During the process of decomposition in which stage complex organic matter convert into inorganic ions and salts by fungi?
- (A) Mineralization
  - (B) Catabolism
  - (C) Fragmentation
  - (D) All of the above
- 84) How much amount of volume of air is in lungs FRC?
- (A) 2100 ml to 2500 ml
  - (B) 1500 ml to 1600 ml
  - (C) 2500 ml to 3000 ml
  - (D) 1600 ml to 2100 ml

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85) What indicated "A" in given figure?



- (A) Glycosidic bond
- (B) Peptide bond ✗
- (C) Disulfide bond
- (D) Hydrophobic bond ✗

86) What is total diastolic time of ventricle in cardiac cycle?

- (A) 0.40 second ✗
- (B) 0.30 second
- (C) 0.50 second
- (D) 0.10 second

87) Which amino acid determines by four genetic codes?

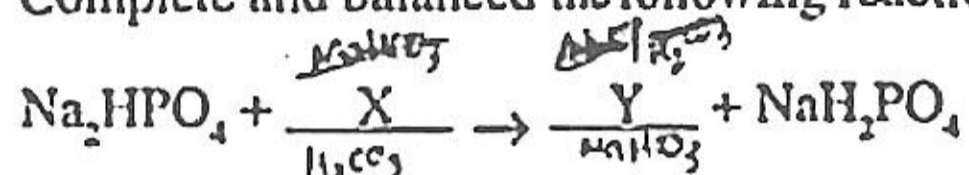
- (A) Proline (Pro)
- (B) Leucine (Leu) ✗
- (C) Serine (Ser)
- (D) Tyrosine (Tyr)

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88) Which is the inhibitory hormone of GH?

- (A) Parathormone ✗
- (B) Insulin ✗
- (C) Somatostatin ✗
- (D) Testosterone ✓

89) Complete and balanced the following reaction.



- (A)  $X = \text{H}_2\text{CO}_3$ ,  $Y = \text{NaH}_2\text{CO}_3$  ✗
- (B)  $X = \text{NaHCO}_3$ ,  $Y = \text{NaCl}$  ✗
- (C)  $X = \text{NaHCO}_3$ ,  $Y = \text{H}_2\text{CO}_3$  ✗
- (D)  $X = \text{H}_2\text{CO}_3$ ,  $Y = \text{NaHCO}_3$  ✓

90) How many molecules of ATP and NADPH are required in formation of two molecules of glucose? How many Calvin cycles are required?

- (A) 18 ATP, 12 NADPH, 6 Calvin cycles
- (B) 36 ATP, 24 NADPH, 12 Calvin cycles
- (C) 36 ATP, 24 NADPH, 6 Calvin cycles ✓
- (D) 24 ATP, 36 NADPH, 12 Calvin cycles

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✗



91) A - The DNA fingerprint is the same for every cell, tissue and organ of a person.

R - DNA fingerprint is used for treatment of inherited disorders like Huntington's disease, Alzheimer's and Sickle cell anemia.

(A) A and R both are correct but R is not explanation of A

(B) A and R both are correct. R is explanation of A

(C) A is correct and R is wrong

(D) A is wrong and R is correct

92) Which part is not included in Cochlear duct?

(A) Macula of Utricle

(B) Reissner's membrane

(C) Scala Media

(D) Tectorial membrane

93) Which is Gynandromorph type of animal?

(A) Drosophilla

(B) Beetles

(C) Silk worms

(D) All of the above

94) DNA polymerase enzyme is isolated from which bacteria?

(A) Thermus aquaticus

(B) E.Coli

(C) Bacillus thuringiensis

(D) Agro bacterium

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✓ 95) Match the column I, II and III

Column I	Column II	Column III
P) Trichomoniasis	i) Herpes Simplex	x) Pain in lower abdomen
Q) Syphilis	ii) Neisseria gonorrhoeae	y) Inflammation and itching in and around vagina
R) Gonorrhoea	iii) Treponema Pallidum	z) Patchy hair loss
S) Genital herpes	iv) Trichomonas Vaginalis	w) Feeling of uneasiness

- (A) (P - iv - y) (Q - i - z) (R - ii - x) (S - iii - w)  
(B) (P - iv - y) (Q - iii - z) (R - ii - x) (S - i - w)  
(C) (P - iv - x) (Q - i - w) (R - ii - y) (S - iii - z)  
(D) (P - i - z) (Q - ii - y) (R - iv - w) (S - iii - x)

96) What is the height and weight of twelve weeks old human embryo?

- (A) 7.5 cm, 14 gram  
(B) 7.5 cm, 650 gram ✓  
(C) 42 cm, 1800 gram ✗  
(D) 32 cm, 650 gram ✗

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97) Assertion A : Restriction endonuclease recognize short palindromic sequence and cut at specific sites.

Reason - R : When a restriction endonuclease acts on Palindrome, it cleaves both the strands of DNA molecule.

(A) A and R are both correct but R is not explanation of A

(B) A and R are both correct. R is explanation of A

(C) A is correct and R is wrong

(D) A is wrong and R is correct

98) Write proper option by matching column I, II and III.

Column I (Name)	Column II (Enzyme)	Column III (Function)
i) Gastric Juice	P) Chymo- trypsinogen	A) Dipeptide convert into amino acid
ii) Intestinal Juice	Q) Ptylin	B) Proteoses convert into small polypeptides
iii) Saliva	R) Renin	C) Casein convert into paracasein
iv) Pancreatic juice	S) Erepsin	D) Conversion of starch into maltose

(A) (i - R - C) (ii - S - A) (iii - Q - D) (iv - P - B)

(B) (i - R - C) (ii - S - A) (iii - Q - B) (iv - P - D)

(C) (i - S - D) (ii - R - C) (iii - P - B) (iv - Q - A)

(D) (i - Q - A) (ii - P - C) (iii - R - B) (iv - S - D)

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(Space for Rough Work)



99) Write the correct sequence of genetic diversity.

- (A) Population → Species → Chromosomes → Genes → Nucleotides  
(B) Kingdom → Population → Species → Genes → Chromosome → Nucleotides ✗  
(C) Species → Genes → Population → Chromosomes → Nucleotides ✗  
(D) Kingdom → Species → Chromosomes → Genes → Nucleotides

100) Match the column I and II and select the correct option.

Column I			Column II (concentration of DDT in ppm)		
A) Zooto Plankton			P) 0.003 ppm		
B) Small fishes			Q) 2 ppm		
C) Water			R) 25 ppm		
D) Fish eating birds			S) 0.04 ppm		
E) Big fishes			T) 0.5 ppm		
	A	B	C	D	E
(A)	S	T	P	Q	R
(B)	S	T	P	R	Q
(C)	S	T	R	Q	P
(D)	Q	P	S	T	R

(Space for Rough Work)

D E B A C

101) Which of the following disease shows the blockage of kidney tubules and causes severe back pain?

- (A) Kidney failure
- (B) Renal calculi
- (C) Uremia
- (D) Nephritis

102) During photorespiration which compounds are formed having 2C and 3C respectively in Peroxisome?

- (A) Glycine, Glycerate
- (B) Glycolate, Glycine
- (C) Serine, Glycine
- (D) Phosphoglycerate, Glycolate

103) During rainy season wooden doors and windows are not properly closed. Why?

- (A) Diffusion
- (B) Plasmolysis
- (C) Osmosis
- (D) Imbibition

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104) Match the column I, II and III

Column I	Column II	Column III
A) Sickle Cell Anaemia	i) Due to recessive PP genes	P) Arrangement of Valine in place of Glutamic acid
B) Phenyl Ketonuria	ii) Due to absence of homogentisic oxidase enzyme	Q) Inborn error of metabolism
C) Alkaptonuria	iii) Follows Mendelian Principles	R) Urine turns black when exposed to air
D) Thalassaemia	iv) Characters caused by homozygous recessive genes	S) The required haemoglobin is not generated in the blood

(A) (A - iv - P) (B - i - Q) (C - ii - R) (D - iii - S)

(B) (A - ii - S) (B - iii - R) (C - i - Q) (D - iv - P)

(C) (A - iv - P) (B - iii - R) (C - i - S) (D - ii - R)

(D) (A - iii - R) (B - i - Q) (C - iv - P) (D - ii - S)

105) Which of the following is the symptom of Ulcerative colitis?

- (A) Difficulty in swallowing
- (B) Watery stools containing blood and mucus
- (C) Loss of appetite
- (D) Eyes turn yellow

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106) Which one is not cranial bone?

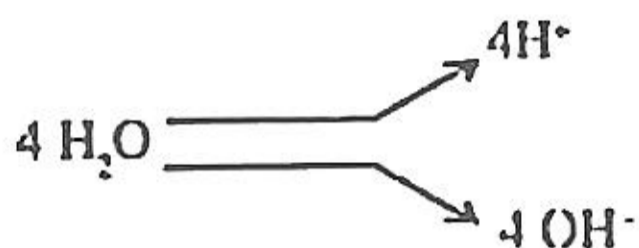
(A) Zygomatic

(B) Frontal

(C) Temporal

(D) Sphenoid

107)



In this process which of the following play important role?

(A) Chlorophyll

(B) Light energy

(C)  $\text{Ca}^{++}$ ,  $\text{Mn}^{++}$ ,  $\text{Cl}^-$

(D) All of the above

108) Which of the following is correct trend of succession in Hydroseric succession?

(A) Phytoplankton → Reed swamp → Rooted submerged → Sedge meadow

(B) Phytoplankton → Rooted submerged → Reed swamp → Sedge meadow

(C) Phytoplankton → Sedge meadow → Reed swamp → Root submerged

(D) Rooted submerged → Phytoplankton → Reed swamp → Sedge meadow

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109) On which surface of cell Donnan equilibrium occur?

- (A) Tonoplast (B) Cell wall  
(C) Plasma membrane (D) Nuclear membrane

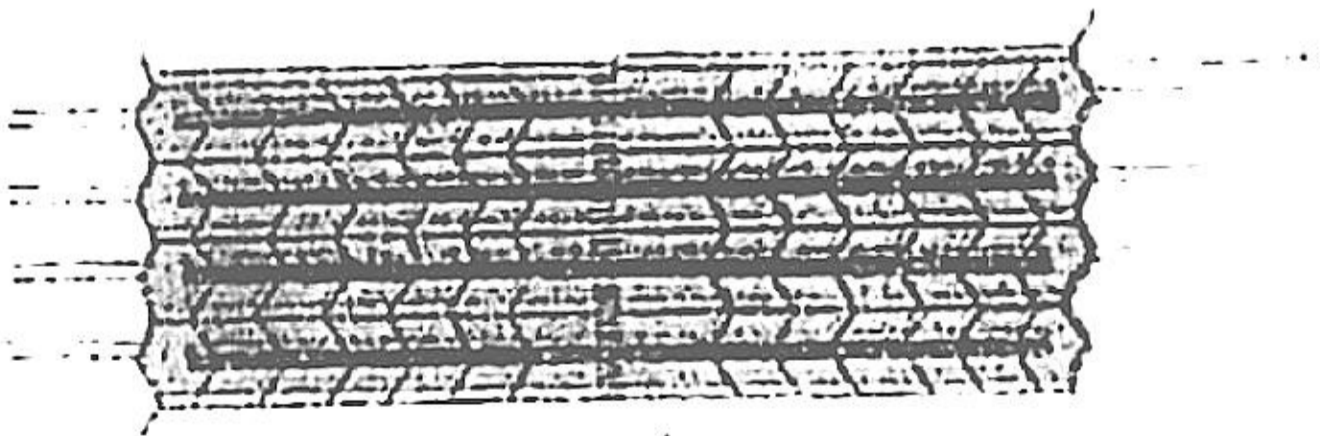
110) Which type of gene regulate sex-determination in Spinach plant?

- (A) Heterozygous genes (B) Homozygous genes  
(C) Single gene (D) Multiple genes

111) When the respiratory substances are more than one then which respiratory substrates are not used?

- (A) Pure Protein (B) Lipid  
(C) Carbohydrate (D) (A) and (B) both

112) State the condition of muscle contraction in following diagram.



- (A) Resting potential (B) Contraction  
(C) Maximally contracted (D) None

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(Space for Rough Work)



113) How many years are considered in one minute in Geological clock?

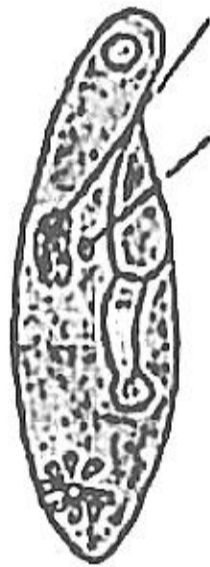
(A) 1,87,50,000 years

(B) 52000 years

(C) 3,25,000 years

(D) 1,90,000 years

114) Which structure is formed at the time of exchange of gamete nuclei in given animal during sexual reproduction.



(A) Cytoplasmic filaments

(B) Plasmodesmata

(C) Internal tubule

(D) Cytoplasmic bridge

115) Name the plant shows adventive embryonic cells.

(A) Citrus and Mango

(B) Sunflower and Mango

(C) Lemon and Maize

(D) Lemon and Palms

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116) During respiration \_\_\_\_\_.

- (A) 2 PGAL during glycolysis and 4 Pyruvic acid are produced in Kreb's cycle
- (B) 2 PGAL during glycolysis and none of the PGAL produced in Kreb's cycle
- (C) 2 PGAL during glycolysis and 2 Pyruvic acid are produced in Kreb's cycle
- (D) PGAL is not produced during respiratory events

117) Which of the following function is performed by collecting tubule of kidney?

- (A) In the maintenance of pH and ionic balance of blood by the secretion of  $H^+$  and  $K^+$  ions  $\gamma$
- (B) Maintenance of pH of blood and removal of  $Na^+$  and  $K^+$  ions
- (C) Absorption of glucose and ammonia from the blood
- (D) None of above

118) A - Nerve fibre can become excited through touch, smell, pressure and chemical changes and there is a change in polarity.

R - It is called active potential.

- (A) A and R both are correct but A is not correct explanation of R.
- (B) A and R both are correct and A is correct explanation of R.
- (C) A is correct and R is wrong
- (D) A is wrong and R is correct

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119) Select proper option, by matching column I, II and III.

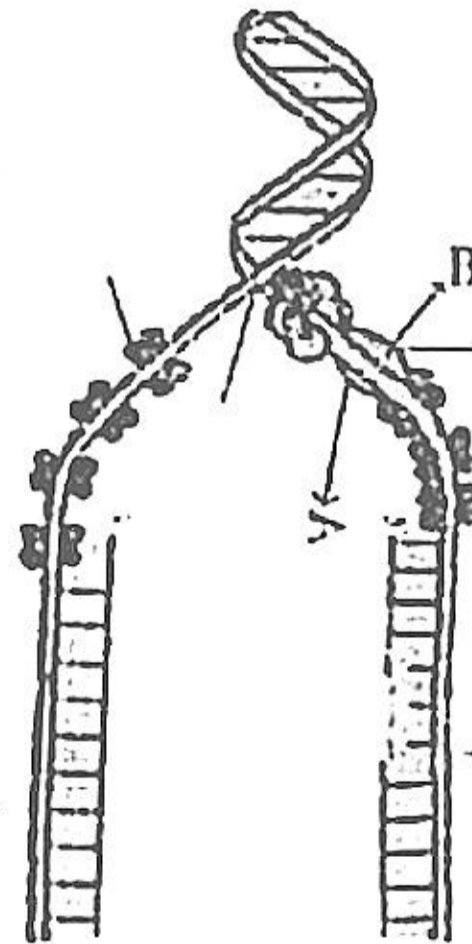
Column I (Common Name)	Column II (Roman Numerical Designation)	Column III (Activation product)
P) Prothrombin	x) I	i) Convertin
Q) Proconvertin	y) V	ii) Fibrin
R) Fibrinogen	z) II	iii) Thrombin
S) Proaccelerin	w) VII	iv) Accelerin

~~(A) (P - w - ii) (Q - z - iii) (R - y - iv) (S - x - i)~~  
 (B) (P - z - iii) (Q - w - i) (R - y - ii) (S - x - iv)  
~~(C) (P - z - iii) (Q - w - ii) (R - x - iv) (S - y - i)~~  
 (D) (P - z - iii) (Q - w - i) (R - x - ii) (S - y - iv)

120) What is "A" and "B" in given diagram?

- (A) A = RNA Primer  
B = DNA Helicase
- (B) A = RNA Primer  
B = RNA Helicase

- (C) A = Single strand Binding Protein  
B = DNA Helicase
- (D) A = Lagging strand  
B = Movement of Helicase



(Space for Rough Work)

