

BIOLOGY

- 81) Which of the following disease shows the blockage of kidney tubules and causes severe back pain?
- (A) Renal calculi
 - (B) Kidney failure
 - (C) Uremia
 - (D) Nephritis
- 82) During photorespiration which compounds are formed having 2C and 3C respectively in Peroxisome?
- (A) Glycolate, Glycine
 - (B) Glycine, Glycerate
 - (C) Serine, Glycine
 - (D) Phosphoglycerate, Glycolate
- 83) During rainy season wooden doors and windows are not properly closed. Why?
- (A) Plasmolysis
 - (B) Diffusion
 - (C) Osmosis
 - (D) Imbibition

(Space for Rough Work)

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

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

(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)

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

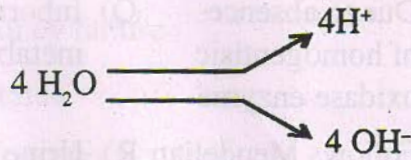
- (A) Watery stools containing blood and mucus
- (B) Difficulty in swallowing
- (C) Loss of appetite
- (D) Eyes turn yellow

(Space for Rough Work)

86) Which one is not cranial bone?

- (A) Frontal (B) Zygomatic
(C) Temporal (D) Sphenoid

87)



In this process which of the following play important role?

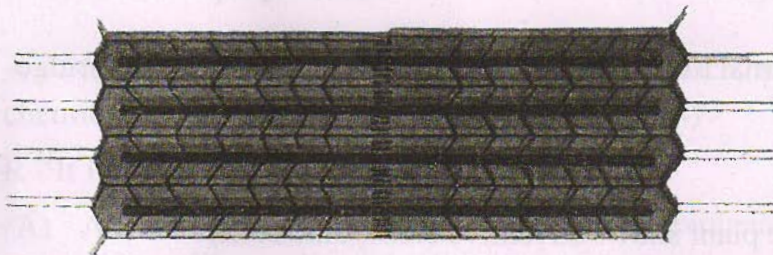
- (A) Chlorophyll (B) Light energy
(C) Ca^{++} , Mn^{++} , Cl^- (D) All of the above

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

- (A) Phytoplankton \rightarrow Rooted submerged \rightarrow Reed swamp \rightarrow Sedge medow .
(B) Phytoplankton \rightarrow Reed swamp \rightarrow Rooted submerged \rightarrow Sedge medow
(C) Phytoplankton \rightarrow Sedge medow \rightarrow Reed swamp \rightarrow Root submerged
(D) Rooted submerged \rightarrow Phytoplankton \rightarrow Reed swamp \rightarrow Sedge medow

(Space for Rough Work)

- 89) On which surface of cell Donnan equilibrium occur?
- (A) Cell wall (B) Tonoplast
(C) Plasma membrane (D) Nuclear membrane
- 90) Which type of gene regulate sex-determination in Spinach plant?
- (A) Homozygous genes (B) Heterozygous genes
(C) Single gene (D) Multiple genes
- 91) 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
- 92) State the condition of muscle contraction in following diagram.



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

(Space for Rough Work)

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

- (A) 52000 years (B) 1,87,500,000 years
(C) 3,25,000 years (D) 1,90,000 years

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



- (A) Plasmodesmata (B) Cytoplasmic filaments
(C) Internal tubule (D) Cytoplasmic bridge

95) Name the plant shows adventive embryonic cells.

- (A) Sunflower and Mango (B) Citrus and Mango
(C) Lemon and Maize (D) Lemon and Palms

(Space for Rough Work)

- 96) During respiration _____.
- (A) 2 PGAL during glycolysis and none of the PGAL produced in Kreb's cycle
 - (B) 2 PGAL during glycolysis and 4 Pyruvic acid are 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
- 97) 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
 - (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
- 98) 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 and A is correct explanation of R.
 - (B) A and R both are correct but A is not correct explanation of R.
 - (C) A is correct and R is wrong
 - (D) A is wrong and R is correct

(Space for Rough Work)

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

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

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

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

(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)

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

(A) A = RNA Primer

B = RNA Helicase

(B) A = RNA Primer

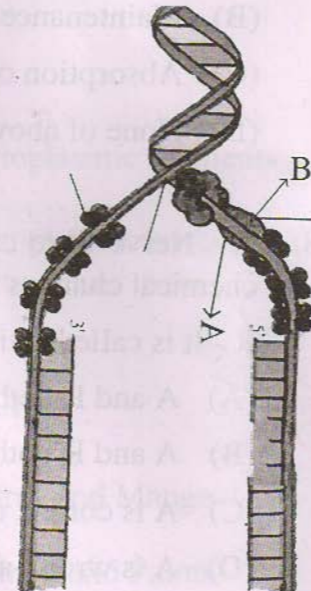
B = DNA Helicase

(C) A = Single strand Binding Protein

B = DNA Helicase

(D) A = Lagging strand

B = Movement of Helicase



(Space for Rough Work)

101) In which field application of biotechnology occurs?

- (A) Bio-medicine
- (B) Agriculture
- (C) Environmental field
- (D) All of the above

102) _____ shows anti-allergic and anti-inflammatory effect.

- (A) Mineralocorticoids
- (B) Glucocorticoids
- (C) Sexcorticoids
- (D) Noradrenaline

103) During the process of decomposition in which stage complex organic matter convert into inorganic ions and salts by fungi?

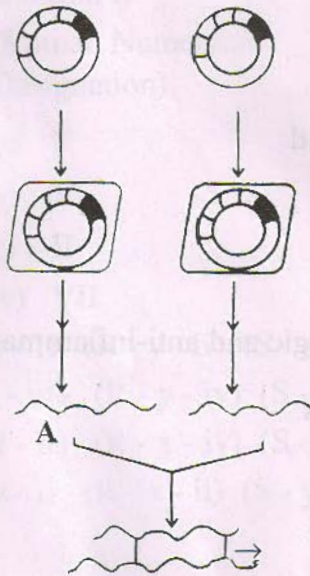
- (A) Mineralization
- (B) Catabolism
- (C) Fragmentation
- (D) All of the above

104) How much amount of volume of air is in lungs FRC?

- (A) 1500 ml to 1600 ml
- (B) 2100 ml to 2500 ml
- (C) 2500 ml to 3000 ml
- (D) 1600 ml to 2100 ml

(Space for Rough Work)

105) What indicated "A" in given figure?



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

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

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

107) Which amino acid determines by four genetic codes?

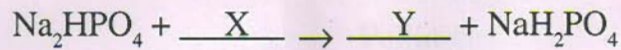
- (A) Leucine (Leu)
(B) Proline (Pro)
(C) Serine (Ser)
(D) Tyrosine (Tyr)

(Space for Rough Work)

108) Which is the inhibitory hormone of GH?

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

109) Complete and balanced the following reaction.



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

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

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

(Space for Rough Work)

111) 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 Huntigton's disease, Alzheimer's and Sickle cell anemia.

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

112) Which part is not included in Cochlear duct?

- (A) Reissner's membrane (B) Macula of Utricle
(C) Scala Media (D) Tectorial membrane

113) Which is Gynandromorph type of animal?

- (A) Drosophilla (B) Beetles
(C) Silk worms (D) All of the above

114) DNA polymerase enzyme is isolated from which bacteria?

- (A) E.Coli (B) Thermus aquaticus
(C) Bacillus thuringiensis (D) Agrobacterium

(Space for Rough Work)

115) 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

y) Inflammation and

gonorrhoeae

itching in and around

vagina

R) Gonorrhoea

iii) Treponema

z) Patchy hair loss

Pallidum

S) Genital herpes

iv) Trichomonas

w) Feeling of uneasiness

Vaginalis

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

(B) (P - iv - y) (Q - i - z) (R - ii - x) (S - iii - 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)

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

(A) 7.5 cm, 650 gram

(B) 7.5 cm, 14 gram

(C) 42 cm, 1800 gram

(D) 32 cm, 650 gram

(Space for Rough Work)

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

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

(Space for Rough Work)

119) Write the correct sequence of genetic diversity.

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

120) 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 | R | Q |
| (B) | S | T | P | Q | R |
| (C) | S | T | R | Q | P |
| (D) | Q | P | S | T | R |

(Space for Rough Work)