



## BIOLOGY

### NTA MOCK TESTS ENGLISH

### NTA NEET SET 38

#### Biology

1. In oocytes of some vertebrates, \_\_\_\_\_ can last for months or years.

A. Leptotene

B. Zygotene

C. Pachytene

D. Diplotene

**Answer: D**



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**2. Which of the following has stringing capsule or nematocytes ?**

A. Aurelia

B. Taenia

C. Pleurobrachia

D. Ascaris

**Answer: A**



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3. Which of the phylum contains exclusively marine, radially symmetrical , diploblastic organisms with the tissue level organization ?

A. Platyhelminthes

B. Ctenophora

C. Arthropoda

D. Annelida

**Answer: B**



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4. Select incorrect statements.

1. Diplotene stage is not recognized by the dissolution of the synaptonemal complex.

2. Recombination nodules contain a recombinase enzyme.
- 3 . Interkinesis is generally short - lived .
4. In anaphase II separation of homologous chromosomes ( bivalents ) separate to opposite poles.

A. 1 and 2

B. 2 and 3

C. 1 and 4

D. 1 and 3

**Answer: C**



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5. The structure of the human eye having there layers of cells are

A. Cornea

B. Ciliary body

C. Sclera

D. Retina

**Answer: D**



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6. Both centrioles in a centrosome lie .... ( i ) .... to each other and each of them contains..... ( ii ) ..... Peripheral fibril with .... ( iii ) .... arrangement of microtubules.

A. (i) parallel (ii) triplet (iii) 9+0

B. (i) Perpendicular (ii) doublet (iii) 9+2

C. (i) parallel (ii) doublet (iii) 9+0

D. (i) Perpendicular (ii) triplet (iii) 9+0

**Answer: D**



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7. Which is not a symptom of exophthalmic goitre?

- A. Degenerating sex organs
- B. Protrusion of eyeball
- C. Frightened look to the patient
- D. Hyperthyroidism

**Answer: A**



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8. Formation of acrosome is the function of

A. Lysosome

B. ER

C. Ribosome

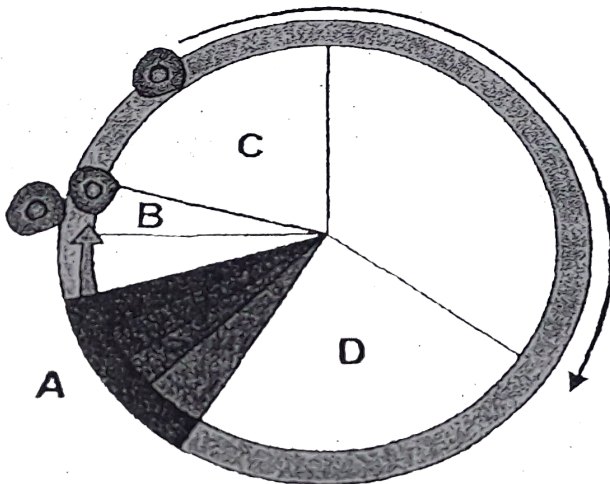
D. Golgi complex

**Answer: D**



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**9. Identify the mismatched pair**



A. A - troponin , C - tropomyosin

B. A - actin , C - troponin

C. B - tropomyosin , A - actin

D. A - troponin , C - actin

**Answer: D**



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**10. Nuclear membrane is absent in**

A. Penicillium

B. Agaricus

C. Volvox

D. Nostoc



**Answer: D**



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**11.** In a dorsiventral leaf protoxylem and meaxylem are located, respectively, on

- A. face towards the abaxial surface
- B. face towards the adaxial surface
- C. are scattered in the middle
- D. are surrounded by the metaxylem

**Answer: A**



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12. The U - shaped and C - shaped structures are

- A. Hyoid bone and duodenum
- B. Sternum bone and jejunum
- C. Hyoid bone and ileum
- D. Hyoid bone and colon

**Answer: A**



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13. Collenchyma differs from sclerenchyma in

- A. Having thick walls
- B. Retaining protoplasm at maturity
- C. Being meristematic

D. Having a wide lumen

**Answer: B**



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14. Which is a communicating junction which allows the cells to contact as a unit in the heart ?

A. Intercalated disc

B. Gap junction

C. Desmosome

D. Intercellular bridges

**Answer: B**



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15. As we go from species to kingdom in a taxonomic hierarchy, the number of common characteristics

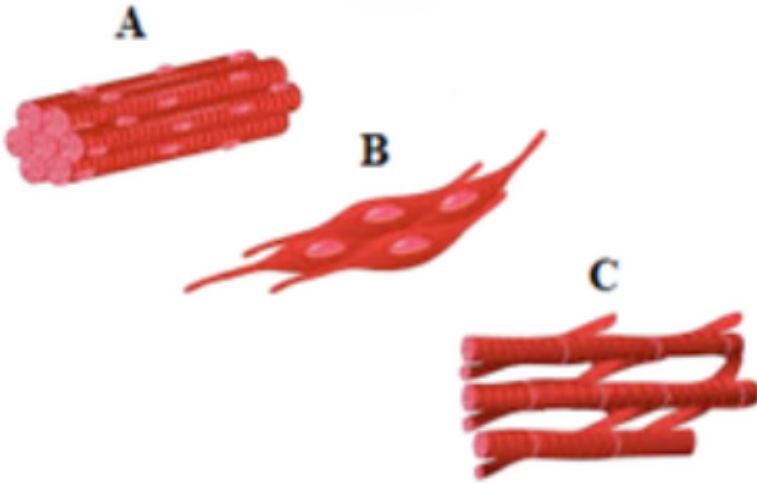
- A. will increase
- B. will decrease
- C. remains the same
- D. may increase or decrease

**Answer: B**



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16. Identify the type of muscle shown in the picture given below .



- A. Skeletal muscle , striated muscle and cardiac muscle
- B. Striated muscle , skeletal muscle and cardiac muscle
- C. Skeletal muscle , smooth muscle and cardiac muscle
- D. Cardiac muscle , smooth muscle and skeletal muscle

**Answer: C**



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17. A micronutrient is one which

- A. More important than any major elements and are boron (B) , chlorine (Cl) . Copper (Cu) , iron (Fe) , manganese (Mn), magnesium (Mg) , molybdenum (Mo) , and zinc (Zn) .
- B. Less important than major elements and are boron (B) , chlorine (Cl) . Copper (Cu) , iron (Fe) , manganese (Mn), magnesium (Mg) , molybdenum (Mo) , and zinc (Zn) and phosphorous.
- C. Needed in small quantity but is as important as a major element and are boron (B), chlorine (Cl) , copper (Cu) , iron (Fe) , manganese (Mn) , molybdenum (Mo) , and zinc (Zn)
- D. Found small quantities in the soil and are boron (B), chlorine (Cl) , copper (Cu) , iron (Fe) , magnesium (Mg) ,

molybdenum (Mo) , and zinc (Zn) and Calcium (Ca)

**Answer: C**



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**18.** Branching descent and natural selection are the two key concepts of Darwinian Theory of Evolution. Explain each concept with the help of a suitable example

- A. Natural selection and branching descent
- B. Branching descent and competition
- C. Mimicry and natural selection
- D. Variation and competition

**Answer: A**



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**19.** Term " virion " is used for

- A. mycoplasma colony
- B. single virus
- C. group of viruses
- D. cancerous cells

**Answer: B**



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**20.** The basic components of a PCR Reaction includes

- A. amplifier , primers , dNTP's , Taq polymerase and a buffer
- B. amplifier , template DNA , primers , dNTP's and a buffer



C. template DNA , primers , Taq polymerase , amplifier and a buffer

D. template DNA , primers, dNTP's Taq polymerase and a buffer

**Answer: D**



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**21. Which of the following is not example of adaptive radiation ?**

A. Darwin finches

B. Australian marsupials

C. Cichlid fishes

D. All of the above

**Answer: D**





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22. Kangaroo and desert rat that live in conditions of water scarcity are capable of meeting all their water requirements by

- A. Internal fat oxidation
- B. Ability to concentrate its urine
- C. Are insensitive to heat
- D. Both A and B

**Answer: D**



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23. Which of the following human was first to start cave paintings and domestication of animals ?

- A. Homo erectus
- B. Australopithecus
- C. Cro - magnon man
- D. Heidelberg man

**Answer: C**



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**24.** Soil erosion and desertification is due to human activity like

- A. Overcultivation
- B. Unrestricted grazing
- C. Increased urbanisation
- D. All of the above

**Answer: D**



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**25. Which antibody titer rises during allergy ?**

A. Immunoglobulin A

B. Immunoglobulin G

C. Immunoglobulin M

D. Immunoglobulin E

**Answer: D**



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**26.** Select the correct statement among the following .

I. Euryhaline can tolerate a wide rang of salinity

II. The productivity and distribution of plants are heavily dependent on water

III. Many freshwater animals cannot live for long in seawater but sea animals can live in freshwater for a long time because of osmotic balance

A. All are correct

B. All are false

C. Only III is incorrect

D. I and II are incorrect

**Answer: C**



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27. Why is Mary Mallon famous ?

- A. Typhoid
- B. AIDS
- C. Herpes
- D. Ascariasis

**Answer: A**



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28. Write the relationship between productivity, gross primary productivity, net primary productivity, net primary productivity and secondary productivity.

- A. Rate of increase in the biomass of autotrophs
- B. Rate of increase in biomass of heterotrophs

C. The rate at which the organic molecules are formed in an autotrophs

D. The rate at which the organic molecules are used in an autotrophs

**Answer: B**



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**29.** Most animals that live in deep oceanic waters are

A. Primary consumers

B. Secondary consumers

C. Tertiary consumers

D. Detritivores

**Answer: D**



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**30. During an autoimmune disorder**

- A. the immune system has the ability to differentiate between foreign antigens from self - antigens .
- B. the immune system loses the ability to differentiate between foreign antigens from self - antigens
- C. the immune system attacks self - cells and causes damage to them .
- D. Both (B) and (C)

**Answer: D**



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31. An inverted pyramid of ..... May be observed in ..... Communities .

A. Energy, grassland

B. Energy , forest

C. Biomass , marine

D. Biomass , forest

**Answer: C**



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32. When a viral DNA is incorporated inside the host DNA, it is known as :

A. Phycophages

B. Cyanophages

C. prophage

D. Vegphage

**Answer: C**



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**33.** Which of the following contraceptive pills has been manufactured by CDRI Lucknow ?

A. Saheli

B. Copper T

C. Norplant

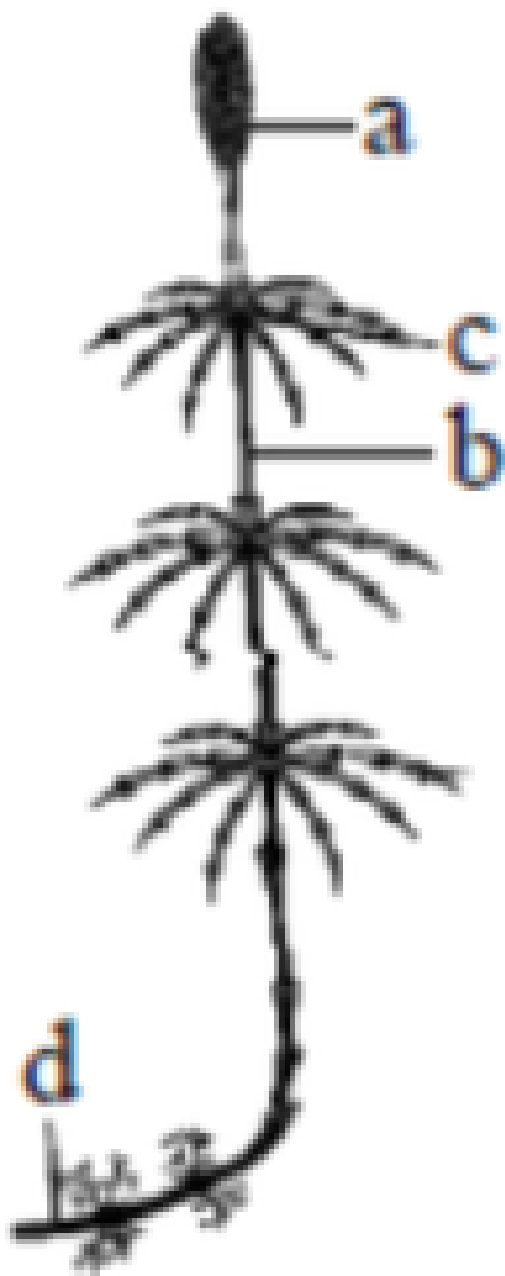
D. All of the above

**Answer: A**



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34. In the below diagram , identify the a,b,c and d



A. a - Strobilus , b - Node , c - Internode , d - Rhizoids

B. a - Cone , b - Stem , c - Leaves , d - Rhizods

C. a - Strobilus , b - Leaves , c - Stem , d - Rhizome

D. a - Strobilus, b - Internode , c - Node , d - Rhizome

**Answer: D**



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**35.** In Assisted Reproductive technoloty, the method in which a sperm is directly injected into ovum is called

A. GIFT

B. IUI

C. ICSI

D. AI

**Answer: C**



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**36.** One of the free-living, anaerobic nitrogenfixer is

A. Rhizobium

B. Streptococcus

C. Azotobacter

D. Clostridium

**Answer: D**



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**37.** Which of the following secretes the hormone responsible for relaxing pubic symphysis during the childbirth ?

- A. Pineal gland
- B. Macula
- C. Corpus albicans
- D. Placenta

**Answer: D**



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**38.** Chemosynthetic autotrophic bacteria produce ATP by

- A. oxidising various organic substances.
- B. oxidising various inorganic substances .

C. reducing various inorganic substances.

D. recycling various organic substances.

**Answer: B**



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**39.** Which of the following structures is responsible for the release of sperm in the lumen of seminiferous tubules ?

A. Sertoli cells

B. Spermatogonia

C. Leydig cell

D. Oogonial cells

**Answer: A**



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40. Chlorophyll common between phaeophyceae and bacillariophyceae but absent in rhodophyceae is

- A. Chlorophyll a
- B. Chlorophyll c
- C. Chlorophyll b
- D. Chlorophyll e

**Answer: B**



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41. Mark the correct statement for Selaginella .

- A. Macrophylls are a characteristic feature of Selaginella.

- B. The spores germinate to give rise free - living , multicellular thalloid gametophytes.
- C. The sporophytes bear sporangia , which produce spores mitotically in the spore mother cells.
- D. It is a homosporous plant , meaning it can produce only one type of spores.

**Answer: B**



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**42.** Arrange the formation of the following cells in the ovary the sequential order :

i) Ovum

ii) Primary follicle

iii) Primary oocytes

iv) Graffian follicle

A. ii) , i) , iv) , iii)

B. iii) , ii) , i) , iv)

C. iii) , ii) , iv) , i)

D. i) , ii) , iii) , iv)

**Answer: C**



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**43.** Unbranched stems and pinnate leaves are characteristic features of

(a) Pinus

(b) Sequoia

(c) Cycas

(d) Cedrus

A. Pinus

B. Sequoia

C. Cycas

D. Cedrus

**Answer: C**



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**44.** Near the tips of grass blades there is water loss in the form of liquid droplet around special openings of veins. This occurs due to

A. negative root pressure due to water accumulation in vein endings .

B. Positive root pressure due to water accumulation in vein endings.

C. Positive root pressure due to release of water in vein endings.

D. negative root pressure due to release of water in vein endings.

**Answer: B**



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**45.** Which of the following methods are used to carry out controlled breeding experiments ?

A. Cross - breeding

B. Artificial insemination

C. Interspecific hybridization

D. Out - crossing

**Answer: B**



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**46.** One of the most resistant biological material present in the exine of pollen grain is

A. hemicellulose

B. lignin

C. sporopollenin

D. lignocelluloses

**Answer: C**



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47. Hilsa and mackerel are varieties of

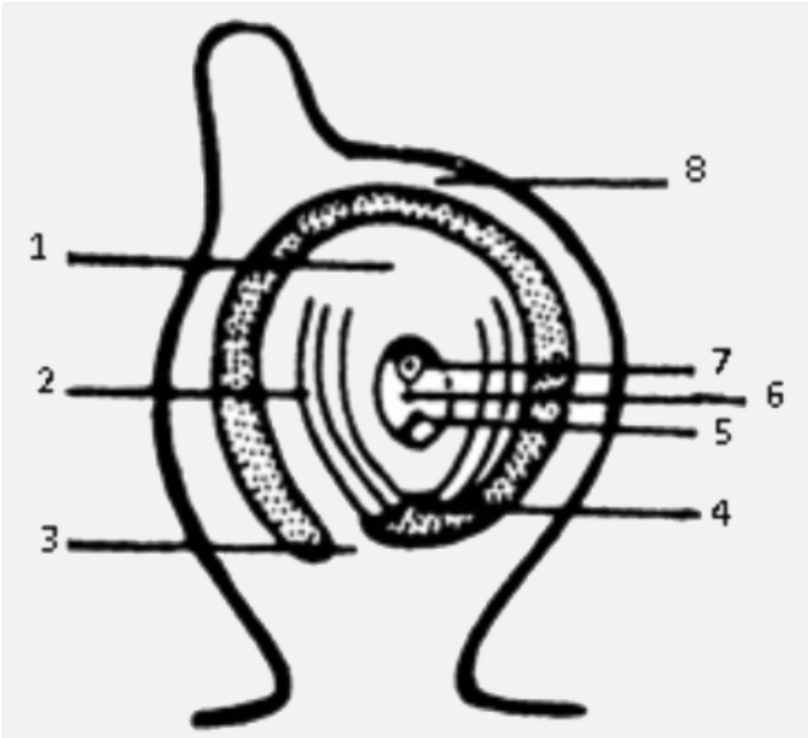
- A. Edible marine fish
- B. Edible freshwater fish
- C. Inedible marine fish
- D. Inedible cartilaginous fish

**Answer: A**



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48. The diagram below shows a fertilised ovule and carpel .



Mark the correct set of numbers which represent the structures that will become:

- (i) The future embryo
- (ii) The future testa
- (iii) The future micropyle region

A. 

<i>i</i>	<i>ii</i>	<i>iii</i>
5	3	7



- i*   *ii*   *iii*  
B. 7   8   4
- i*   *ii*   *iii*  
C. 6   3   7
- i*   *ii*   *iii*  
D. 5   2   4

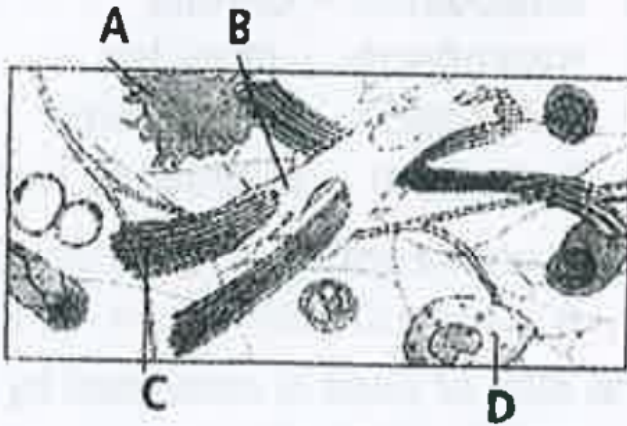
**Answer: D**



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**49.** Given below is the diagrammatic sketch of a certain type of connective tissue. Identify the parts labelled A, B, C and D and select the

right option about them



A. A - Macrophage , B - Fibroblast , C - Collagen fibers , D - Mast cell

B. A - Mast cell , B - Collagen fibers , C - Fibroblast , D - Macrophage

C. A - Macrophage , B - Collagen fibers , C - Fibroblast , D - Mast cell

D. A - Mast cell , B - Collagen fibers , C - Fibroblast , D - Macrophage

**Answer: A**



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**50.** If the endosperm of an angiosperm has 24 chromosomes, what would be the number of chromosomes in the megaspore mother cell of the same plant ?

A. 8

B. 16

C. 24

D. 32

**Answer: B**



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**51.** The cardiac pacemaker in a patient fails to function normally.

The doctors find that an artificial pacemaker is to be grafted in

him. It is likely that it will be grafted at the site of

(a) atrioventricular bundle

(b) purkinje system

(c) sinu-atrial node

(d) atrio-ventricular node

A. Atrioventricular bundle

B. Purkinje system

C. Sinuatrial node

D. Atrioventricular node

**Answer: C**



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## 52. Match the following

	Column I		Column II
A	<i>Lactobacillus</i>	(i)	Production of genetically-engineered clot busters
B	<i>Monascus purpureus</i>	(ii)	Production of citric acid
C	<i>Streptococcus</i>	(iii)	Conversion of milk into curd
D	<i>Aspergillus niger</i>	(iv)	Production of blood-cholesterol lowering agents

A. A - iv, B - iii, C - ii , D - i

B. A - iv, B - ii, C - i , D - iii

C. A - iii, B - i, C - iv , D - ii

D. A - iii, B - iv, C - i , D - ii

**Answer: D**



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**53.** The genus Nucleopolyhedroviruses are

- A. effective against disease - causing pathogens .
- B. effective against rodents
- C. broad spectrum insecticides .
- D. effective against insects and other arthropods.

**Answer: D**



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**54.** If due to some injury the chordae tendineae of the tricuspid valve of the human heart is partially non-functional, what will be the immediate effect ?

- A. The 'Pacemaker' will stop working .
- B. The flow of blood into the aorta will be slowed down.
- C. The blood will tend to flow back into the left atrium.

D. The flow of blood into the pulmonary artery will be reduced .

**Answer: D**

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**55.** Aestivation of petals in the flower of cotton is correctly shown in -

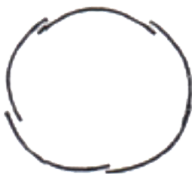


A.



B.

C.



D.



**Answer: D**



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**56.** Underground stem modified to store food and also acting as organs of perennation to tide over conditions unfavourable for growth is found in all except

A. Gourds

B. Bougainvillea

C. Colocasia



D. Opuntia

**Answer: C**



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**57.** Which of the following hormones plays a very important role in the regulation of diurnal rhythm of our body ?

A. Melatonin

B. ADH

C. Gonadotropin

D. Androgen

**Answer: A**



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**58.** Parietal placentation is observed in

- A. Dianthus
- B. Pisum
- C. Primrose
- D. Argemone

**Answer: D**



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**59.** Which of the following is a hyperglycemia hormone ?

- A. Glucagon
- B. Insulin
- C. Aldosterone

D. Androgen

**Answer: A**



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**60.** First step of an enzyme - catalyzed reaction is

- A. The enzyme breaks the chemical bond of the substrate .
- B. The enzyme releases the product of the reaction.
- C. The substrate binds to the active site of the enzyme.
- D. The binding site reacts with the substrate forming the enzyme product complex.

**Answer: C**



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61. Which of the following is related to the pituitary gland ?

- A. It is located in a depression created by bony cavity .
- B. The anterior pituitary is also called adenohypophysis .
- C. Pars intermedia secretes only one hormone.
- D. All of the above

**Answer: D**



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62. Which of the following  $\alpha$ -amino acids is not optically active?

- A. Alanine
- B. Serine
- C. Glycine

D. Lysine

**Answer: C**



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**63.** Vitamin  $B_{12}$  deficiency in the body cause megakaryocytic anemia. The secretion of which of the following cells is required for the absorption of  $B_{12}$  ?

A. Oxyntic cells

B. Neck cells

C. Chief cells

D. Crypts of Lieberkuhn

**Answer: A**



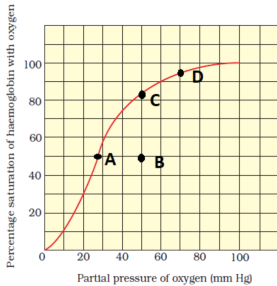
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64. Cellulose, the most important constituent of plant cell wall is made of

- A. Branched - chain of glucose molecules linked by  $\beta - 1, 4$  glycosidic bonds in a straight chain and  $\alpha - 1, 6$  glycosidic bond
- B. Unbranched chain of glucose molecules linked by  $\beta - 1, 4$  glycosidic bond
- C. Branched - chain of glucose molecules linked by  $\alpha - 1, 6$  glycosidic bonds at the site of branching
- D. Unbranched chain of glucose molecules linked by  $\alpha - 1, 4$  glycosidic bond

**Answer: B**

65. Which of the following point on the oxygen dissociation curve represent  $p_{50}$  of  $HbO_2$  in the graph give below ?



A. A

B. B

C. C

D. D

**Answer: A**

**66.** Frameshift insertion or deletion mutations proves that

- A. A codon is triplet
- B. A codon is read in a contiguous manner
- C. The genetic code is present on mRNA
- D. Both (A) and (B)

**Answer: D**



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**67.** In sea urchin DNA, which is double stranded, 17% of the bases were shown to be cytosine. The percentages of the other three bases expected to be present in this DNA are

- A.  $G34\%$  ,  $A24.5\%$  ,  $T24.5\%$



B.  $G17\%$  ,  $A16.5\%$  ,  $T32.5\%$

C.  $G17\%$  ,  $A33\%$  ,  $T33\%$

D.  $G8.5\%$  ,  $A50\%$  ,  $T24.5\%$

**Answer: C**



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**68.** Fill up the blanks in the following paragraph by selecting the correct option.

The movement of air into and out of the lungs is carried out by creating a (i).\_\_\_ between the lungs and the atmosphere.

Inspiration can occur if intra-pulmonary pressure is (ii).\_\_\_

Expiration takes place when the intra-pulmonary pressure is (iii).\_\_\_ than the atmospheric pressure. Expiration takes place

when the intra-inspiration is initiated by the (iv).\_\_\_ of diaphragm

which (v).\_\_\_the volume of thoracic chamber in the antero-posterior axis.

- A. Four
- B. Three
- C. Two
- D. One

**Answer: C**



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**69.** The lac operon consists of

- A. One inhibitor , one operator , 2 structural gene
- B. One inhibitor , one operator , 5 structural gene
- C. One inhibitor , one operator , 3 structural gene

D. One inhibitor , one operator , 1 structural gene

**Answer: C**



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**70.** How many plants in the given below are pollinated by water ?

Vallisneria , Zostera , water hyacinth , water lily , coconut , yucca ,  
Hydria , Ficus

A. 3

B. 5

C. 4

D. 6

**Answer: A**



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71. The efficiency of the cell to take up rDNA is increased by

- A. Monovalent cation
- B. Divalent cation
- C. Monovalent anion
- D. Divalent anion

**Answer: B**



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72. Elution is

The process of coating of DNA with micropellets of gold and tungsten

The process of precipitation of DNA using a suitable reagent

The process of insertion of DNA

The process of cutting out and extracting bands of DNA from gel.

- A. The process of coating of DNA with micropellets of gold and tungsten
- B. The process of precipitation of DNA using a suitable reagent
- C. The process of insertion of DNA
- D. The process of cutting out and extracting bands of DNA from gel.

**Answer: D**



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**73.** Restriction endonuclease HindII acts on a palindromic specific sequence of .....base pair.

A. 2

B. 4

C. 6

D. 8

**Answer: C**



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**74.** Turner syndrome is an example of

A. Structural chromosomal aberration - Due to non -  
disjunction

B. Numerical chromosomal aberration - Due to disjunction

C. Aneuploidy - Due to non - disjunction

D. Both (B) and (C)

**Answer: C**



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**75.** Holandric traits are

- A. Y chromosome linked traits
- B. X chromosome linked traits
- C. X and Y chromosome linked traits
- D. Autosomal linked trait.

**Answer: A**



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**76.** Skin colour in humans is an example of

- A. Polygenic inheritance
- B. Pleiotropy
- C. Quantitative traits
- D. More than one option is correct .

**Answer: A**



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**77.** Photosynthesis is

- A. an oxidative , an exergonic , and a catabolic process.
- B. a redox reaction , an endergonic , and an anabolic process.
- C. a reductive , an exergonic , and an anabolic process
- D. a reductive , an endergonic , and an catabolic process .



**Answer: B**

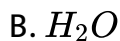
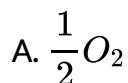


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**78.** During photophosphorylation in accordance with lysis of water the following reaction takes place:



where X is



**Answer: A**



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79. Two linked genes *a* and *b* show 20% recombination. The individuals of a dihybrid cross between  $++ / ++ \times ab / ab$  shall show gametes

A.  $++ 80 : ab : 20$

B.  $++ 50 : ab : 50$

C.  $++ 40 : ab 40 : a 10 : + b 10$

D.  $++ 30 : ab 30 : a 20 : + b 20$

**Answer: C**



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80. Vegetative propagation in *Pistia* occurs by

A. Stolon

B. Offset

C. Runner

D. Sucker

**Answer: B**



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**81.** Which of the following statement about the hotspot is incorrect?

A. Total area covered by hotspots is less than 2% of worlds land area

B. Total hotspots in world are 34

C. Hotspots had mega diversity and high degree of endemism

D. India has four hotspots

**Answer: B**



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**82.** Which of the following is not included in "Evil Quartet", with respect to the cause of biodiversity loss?

- A. Co - evolution
- B. Over - exploitation
- C. Alien species invasion
- D. Habitat loss and fragmentation

**Answer: A**



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**83.** Which of the following option represent extinct species?

- A. Dodo (Mauritius) , Quagga (Africa)
- B. Thylacine (Australia) , Stellar sea cow (Russia)
- C. Three subspecies of Tiger (Bali , Javan and Caspian)
- D. All of the above

**Answer: D**



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**84.** In 1983, Eli Lilly, an American company prepared two DNA sequences corresponding to A and B chains of human insulin and introduced them in plasmids of ..A.. to produce insulin chains. Chains A and B were produced separately extracted and combined by creating ...B... to form human insulin.

Choose the option which correctly fills the blank marked as A and B in the given paragraph

- A. *a* *b*  
E. coli Hydrogen bond
- B. *a* *b*  
E. coli Phosphodiester bond
- C. *a* *b*  
Ti plasmid Disulphide bonds
- D. *a* *b*  
E. coli Disulphide bonds

**Answer: D**



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**85.** Which of the following is correct about ZW - ZZ type of sex determination in birds?

- A. Males are heterogametic
- B. Females are heterogametic

C. Females are homogametic

D. Both males and females are homogametic

**Answer: B**



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**86.** Consider the following statements w.r.t transcription and select the right choice

(i) The promoter is said to be located towards the 5' - end of the coding strand.

(ii) The promoter is an RNA sequence that provides a binding site for RNA polymerase.

(iii) The terminator is located towards the 3' end of the coding strand.

(iv) The strand that has polarity  $3' \rightarrow 5'$  acts as a template strand.

A. I & iii are incorrect

B. I & iii are correct

C. Only ii is incorrect

D. Only ii is correct

**Answer: C**



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**87.** How many different types of gametes could be produced through the independent assortment by an individual with the genotype AaBBCcDdee?

A. 8

B. 4

C. 2



D. 1

**Answer: A**



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**88.** Respiratory quotient (R.Q.) is defined as the ratio of a volume of  $CO_2$  evolved to the volume of  $O_2$  taken in during the respiration process. Value of R.Q. depends on the nature of respiratory substrate and to the extent to which this substance is broken down into simpler products. Which of the following situation will give us the R.Q. value as infinity when alcohol is produced?

A. Fats used as substrate under aerobic conditions .

B. Organic acid is used as a substrate under aerobic conditions.

C. Carbohydrate substrate used under anaerobic conditions.

D. Any type to substrate used under aerobic conditions.

**Answer: C**



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**89.** EMP can produce a total of how many ATP under aerobic condition.

A. 6

B. 8

C. 24

D. 38 ATP

**Answer: B**



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90. Identify the correct sequence of phases in a sigmoid growth curve

- A.  $A$                        $B$      $C$   
Stationary    log    Lag
- B.  $A$      $B$                        $C$   
Lag    Stationary    log
- C.  $A$      $B$      $C$   
log    Lag    Stationary
- D.  $A$      $B$      $C$   
lag    log    Stationary

Answer: D



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