





# **BIOLOGY**

# **NEET & AIIMS**

# **TEST 6**



**1.** Immunity which is not acquired after birth and is birth right of all individuals in a particular species is known as

- A. Cell mediated immunity
- B. Humoral immunity
- C. Acquired immunity
- D. Innate immunity

#### Answer:



2. The two key concepts of Darwinian theory of

evolution are

- A. Analogy and homology
- B. Dvergent and convergent evolution
- C. Convergence and adaptive radiation
- D. Branching descent and natural selection

#### **Answer:**

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## 3. Select the mismatch

A. Skin and mucous membrane - Physical

barriers

B. HCI in stomach - Physiological barrier

C. Macrophages - Cellular barier

D. Natural killer cells- Cytokine barrier

Answer:

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4. Black water fever is caused by:

A. Nitrate pollution in water

B. Infection of Leishrmiania donovani

C. Infection by sporozoan Plasmodium

D. Infection of Yersinia pestis

**Answer:** 

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5. The wood is actually a.....

A. Secondary xylem

B. Secondary phloem

C. Primary xylem

D. Primary phloem

#### Answer:

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6. Metaxylem

A. Is first formed xylem

B. Comprises of larger and borader vessels

#### C. Is made up of smaller and narrower

vessels

D. Has vessels without wall thickenings

#### Answer:

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**7.** Read the following statements and choose the correct option. A.In maize stem, endodermis is present between general cortex and pericycle. B.Bundle seath present around the vascular bundles of a monocot stem

consists of sclerenchymatous cells.

A. Only A is correct

B. Only B is correct

C. Both A and B are correct

D. Both A and B are incorrect

Answer:

8. Which of the following is a part of periderm? a. Cork b. Secondary phloem c. Intrafascicular cambium d. Primary xylem

A. Only a

- B. Both a and b
- C. Only c
- D. Both c and d



**9.** heart wood differs from sapwood in

A. Being lighter in colour

B. Being actively involved in conduction of

water

C. Providing mechanical support to the

stem and in not conducting water

D. Having lignified cell walls of tracheids

Answer:

10. In a monocot root

A. Formation of entire vascular cambium

takes place by the cells of pericycle

B. Hypodermis is absent

C. Pith is small or inconspicuous

D. Endodermis is not distinct

#### Answer:

11. Starch sheath is the innermost layer of the

cortex in a

A. Dicot root

B. Monocot stem

C. Monocot root

D. Dicot stem

#### Answer:

**12.** The parenchymatous cells which lie between the xylem and phloem, seen in a section of dicot root are called

A. Medullary rays

B. Bast fibres

C. Conjuctive tissues

D. Secondary tissues

#### Answer:

13. In a dorsiventral leaf, the vascular bundle is

A. Radial and closed

B. Conjoint and closed

C. Conjoint and open

D. Radial and open

Answer:

**14.** Select the odd one w.r.t. ground tissue system is

A. Epidermis

B. Pith

C. Pericycle

D. Cortex

Answer:

**15.** In most of the monocotyledons

A. Companion cells are non-nucleated

B. Phloem parenchyma is absent

C. The cell wall of phloem fibres is thin

D. Vessels are absent

Answer:

**16.** Read the following statement and choose the correct option. A. The vessel cells are devoid of protoplasm. B. Vessel members are interconnected through perforations in their common walls.

- A. Only A is correct
- B. Only B is correct
- C. Both A and B are correct
- D. Both A and B are incorrect



## 17. Which of the following tissues is made up

of thin walled cells?

A. Sclerenchyma

B. Parenchyma

C. Sclereid

D. Xylem fibre





**18.** Meristematic tissue responsible for increase in girth of tree trunk is

A. Partly primary and partly secondary in origin

- B. Apical meristem
- C. Completely secondary
- D. Intercalary meristem



# **19.** Vascular bundles are scattered and closed in

A. Barley root

B. Barley stem

C. Wheat root

D. Gram stem





20. The only dead element of phloem is

A. Sieve tube element

B. Companion cell

C. Bast fibre

D. Phloem oarenchyme

#### Answer:

**21.** The epidermis of an isobilateral leaf,a)Provide protection,b)Performs gaseous exchange,c) Is made up of parenchymatous cells,d)Possesses stomata only on adaxial surface

A. only a is correct

B. only a and c is correct

C. only b is correct

D. only d is correct



- 22. Identify the incorrectly matched pair
  - A. Tyloses:Heartwood
  - B. Lenticels:Exchange of gases
  - C. Bulliform cells:Colourful and small
  - D. Pith:Medulla



**23.** Which of the following functions is not performed by xylem?

A. To help in the storage of food

B. To provide mechanical strength

C. Conduction of water and minerals

D. Transportation of food to all parts of the

plant

Answer:

**24.** Most of the algae show haplontic life cycle pattern and Polysiphonia shows

A. Haplo-diplontic life cycle

B. Diplontic life cycle

C. Haplontic life cycle

D. One haploid stage throughout its life

cycle





**25.** An event unique to angiosperms involves syngamy and triple fusion. The total number of haploid nuclei involved in double fertilization is

A. Two

B. Three

C. Four

D. Five





### 26. Marchantia possesses

A. Archegoniophore

- B. Gemma cup
- C. Free living sporophyte
- D. Both (1) & (2)



27. Archegonia are female sex organs ofa)Amphibians of plant kingdom,b)Sequoia,c)Equisetum,d)Angiosperms

A. only a and c

B. only b and c

C. only a and d

D. only a,b and c





**28.** \_\_\_\_\_ is a major source of agar that is obtained from its cell wall.Complete the sentence by choosing the correct option.

A. Porphyra

B. Gelidium

C. Sphagnum

D. Ulothrix





## 29. A fresh water colonial green alga is

A. Chlamydomonas

B. Volvox

C. Fucus

D. Laminaria

**Answer:** 

**30.** Green algae differ from brown algae in having

A. Cellulose in their cell wall

B. Chlorophyll'a'

C. Pyrenoids

D. Motile stage

#### Answer:

**31.** Select the features which are not seen inalgae.a)Variableshapesofchloroplasts,b)Embryoformation,c)Vascularsystem,d)Non-jacketed sex organsA. a and bB. b and c

C. c and d

D. a and d

#### Answer:

**32.** In embryo sac of flowering plants,egg aparatus is found which consist of

A. one egg+two synergids cells

B. one oosphere+two synergids

C. one antipodal+two polar nuclei

D. one secondary nucleus+two synergids

Answer:

**33.** all of the following characteristics are essential for the formation of seeds except A. formation of dependent female gametophyte B. Heterospory C. requirement of water for fertilisation D. retention of megaphone in until embryo megasporangium development

#### Answer:



**34.** read the given statement. " sporophyte is a parasite over gametophyte". Above statement is true

- A. selaginella
- B. cycas
- C. polytrichum
- D. lycopodium

#### Answer:



**35.** Homospory is a condition where all the spores are of similar kind these statements implies for a. some bryophytes, b. all pteridophytes, c. All bryophytes, d. majority of the pteridophytes

A. a and b

B. b and c

C. c and d

D. a and d

## **Answer:**



**36.** read the following statement and choose the correct option. A. microspore and megaspores are produced in the same lax in gymnosperm. B. Lax represents compact strobillus which bears both microsporophylls

and megasporophytis together

A. only A is correct

B. only B is correct

C. both A & B are incorrect

D. Both A & B are correct

Answer:

37. select the plant which has vascular tissues

but lacks seeds

A. pteris

B. Riccia

C. Cycas

D. Cedrus

## **Answer:**

38. match the following columns and choose the correct optionColumn I (a) smallest flowering plant, (b) tallest gymnosperma, (c) sargassum, (d)
Selaginella
Column II (i) microphylls (ii) chlorophyll c (iii)

wolfia (iv) sequoia

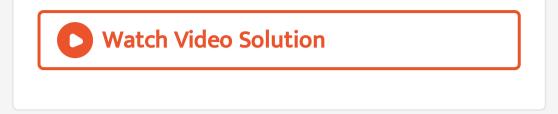
A. a(iv) b(iii) c(i) d(ii)

B. a(iii) b(iv) c(ii) d( i)

C. a(ii) b( iv) c(i) d(iii)

D. a(i) b( ii) c(iii) d(iv)

## Answer:



**39.** fill in the blanks by choosing the correct option. The sporophyte in \_\_\_\_A\_\_\_ is more development than of in \_\_\_B\_\_\_

A. A. Ricca B. Funaria

B. A. Marchantia B. Polytrichum

C. A. polytrichum B. Ricca

D. A. Porella B. Polytrichum





# **40.** the male gametophyte is not independent in

A. mustard

B. marchantia

C. ginkgo

D. Both (1) and (3)

## Answer:



**41.** protonema is a mosses and prothallus for ferns resembles with each other in

A. bearing diploid sex organs

- B. Being photosynthetic
- C. producing haploid sports

D. Bing flamentors and without rhizoides

## Answer:



**42.** read the following statement and choose the correct. a.conifers are adopted to tolerate extreme environmental conditions because of thick cuticle. b. male gamets are Flagellated in polysiphonia. c. Sphangnum is related to peat formation. d. Filamentous algae multiply by fragmentation. A. a,b and c b,c and d

B. b,c and d

C. only a and c

D. a, c and d

#### **Answer:**

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**43.** all of the following differences between gymnosperms and angiosperms are correct, except

A. Gymnosperms- ovals and naked, Angiosperms- evils remained enclosed within the ovary wall B. Gymnosperms- the endosperm is formed before fertilization, Angiospermsendosperm is formed after fertilization C. Gymnosperms- they are call softwood spermatophytes Angiospems- they are known as hard wood spermatophytes

D. Gymnosperms- They lack combium and

xylem fibres, Angiosperms- they lack

thick walled tracheids and phloem fibrea

Answer:

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44. which one of the following pairs is wrongly

matched?

A. pinus: Monoecious

B. Salvinia : cord moss

C. Funaria : cord moss

D. Ginkgo: Archegonia

## Answer:

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45. Chlamydomonas shows both isogamous as

well as anisogamous type of reproduction and

Fucus exhibits

A. Only oogamy

B. Only isogamy

C. Both isogamy and oogamy

D. Isogamy as well as anjsogamy

Answer:

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46. Anisogametes can differ in a. Structure, b.

size, c. Behaviour or function

A. Only a

B. Only b

C. Only a and c

D. All a,b and c

## **Answer:**

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47. select the incorrect match

A. simple goitre- deficiency of iodine in diet

B. Thymosin- training school of T

lymphocytes

C. Exopthalmic goitre- Grave's disease

D. Myoxedema- Hyperthyroidism during

childhood in males

**Answer:** 

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48. which of the following is mismatched?

A. vitreous humour- present between lens

and retina

B. Rhodopsin- ' visual purple' found in roda

C. Scala media- filled with endolymph

D. middle ear cavity- connected with scalar

vestibuli through round window

Answer:

**49.** select the incorrect statement w.r.t full contraction muscle fibre.

A. length of sarcomere become equal to

the length of a band

B. increase in overlap zone is seen

C. length of H zone and I band increases

D. length of actin and myosin filaments

remains unchanged





**50.** Pathway travelled by an impulse in a reflex action is known as reflex arc represented by a flow chart by which option?

A. sensory neuron-receptor-motor neuron--

**CNS-effector** 

B. receptor - sensory neuron-CNS-motor

neuron-effector

C. receptor -sensory neuron-motor neuron-

**CNS** -effector

D. effector -sensory neuron-CNS -motor

neuron - receptor

#### Answer:

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51. read the following sentences carefully and

select the incorrect statement

A. water soluble hormones p	roduces
secondary messengers and ac	celerate
biochemical reactions in the cell	
B. reactors for fat soluble hormones are	
intracellular in location	
C. thyroxine hormone with	specific
intracellular receptor regulates the gene	
expression	
D. cGMP is secondary messeng	er for
adrenaline that interact	with

## intracellular or nuclear receptors

## Answer:

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## **52.** Motor speech area called Broca's area is suitable in with which lobe of cerebrum?

A. frontal

B. parietal

C. Temporal

## D. Occipital

## Answer:

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## **53.** select the correct match

A. A- band- presence of myosin filament only

B. sarcomere- region between two 'H' zones

C. I band- structural unit of muscle fibres

D.m line- divides a band into two equal

halves

## **Answer:**



54. which of the following are considered as

chemoreceptors in humans?

A. gustatoreceptors present on tongue

B. olfactory receptors present in gut

C. organ of corti in internal ear

D. Meissners's Corpuscles present in skill

## **Answer:**



**55.** Underproduction of hormones by adrenal cortex alters carbohydrate metabolism causing acute weakness and fatique leading to a disease called

- A. addison's disease
- B. custhing's syndrome
- C. Conn's syndrome
- D. Adrenal virilism

## **Answer:**



56. select the odd one wrt hormones of fight

or flight

A. piloerection

- B. pupillary dilation
- C. decrease in heart rate
- D. increase in respiratory rate

## **Answer:**

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57. glucagon is considered a hyperglycemic

hormone because of all expect

A. performs glycogenolysis

B. stimulates glyconeogenesis

C. inhibits cellular uptake of glucose

D. acts synergistically to insulin

Answer:

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58. select in correct match wrt hormone of

gastro intestinal tract

A. GIP- stimulates gastric juice section

- B. CCK- target both pancreas and gall bladder
- C. gastrin- stimulates HCI and Pepsinogen secretion
- D. Secretin- Stimulates secretions from

exocrine part of pancreas

## Answer:

59. Which of the following structure does not

participate in hearing?

A. pinna

B. cochlea

C. cristae

D. organ of corti

## Answer:

**60.** in electrical synapse, impulse from presynaptic membrane reaches post-synaptic membrane through

A. Neurotransmitter released in synapticc cleft

B. Through gap junctions present between

two synaptic membranes

C. Electrons that jump directly from presynaptic membrane to post-synaptic

membrane

D. Opening of  $K^+$  channels in post -

synaptic membrane

## **Answer:**



**61.** Read the following statements Statement-A: Muscle fibres exhibit special properties like excitability, contractibility, extensibility and elasticity. Statement-B: All striated muscle fibres are voluntary in nature. Select the correct option

A. Both statements A and B are correct.

B. both statements A and B are incorrect

C. Statement A is correct but Statement B

is incorrect.

D. Statement B is correct but Statement A

is incorrect.

Answer:

**62.** A type of neuron with one axon and one dendrite is found in the human in

A. Embryonic stages

B. Retina of eye

C. Cerebral cortex

D. Dorsal root ganglion of spinal cord

## Answer:

**63.** In relation with movement and locomotion, which of the following statement is incorrect?

A. In Paramecium, cilia are responsible for
both movement of food and locomotion
B. With the help of tentacles, Hydra can
capture its prey and locomotes from one
place to another.

C. All movements are locomotion but all locomotions are not movement.



movement.

## **Answer:**

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64. Cortisol can perform all the following

functions except

A. Lipolysis and proteolysis

B. Gluconeogenesis



and

stimulates erythropoiesis

D. Inflammatory response

**Answer:** 

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**65.** Opening of which of the following type of channels is responsible for repolarisation of an axonal membrane?

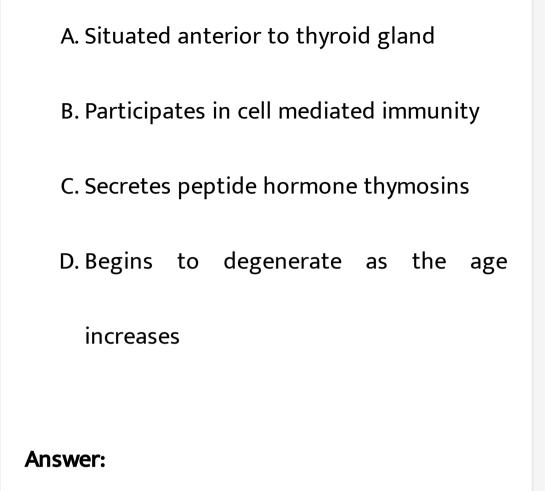
A.  $Na^+$  leaky channels

- B.  $K^+$  leaky channels
- C. Voltage gated  $Na^+$  channels
- D. Voltage gated  $K^+$  channels

### **Answer:**

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**66.** Choose the incorrect statement w. r. t. thymus gland.



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67. Select the mismatch.

A. Pivot joint - Between atlas and axis

vertebrae

B. Hinge joint - Between phalanges

C. Ball and socket joint - Between femur

and acetabulum

D. Suture- Between adjacent vertebrae

Answer:

**68.** Muscularis externa of alimentary canal is characterised by

A. Striated, branched, involuntary muscle

B. Non-Striated, involuntary, fusiform

shaped muscle fibres

C. Non-Striated, multinucleated, voluntary

muscle fibres

D. striated, voluntary, branched muscle

fibres

### **Answer:**



**69.** Match Column A with Column B and select correct choice in the following given option: (a) yellow spot(Col- A) (i) olfaction(Col -B). (b) vestibular apparatus (Col-A) (ii) Shock absorber(Col-B). (c) CSF (Col-A) (iii)Balance(ColB). (d) Scheneiderian membrane(Col- A) (iv)

Contains only cones for vision.

A. a(i), b(ii), c(iii), d(iv)

B. a(iv), b(iii), c(ii), d(i)

C. a(iii), b(iv), c(ii), d(i)

D. a(i), b(ii), c(iv), d(iii)

Answer:

**70.** Scapula is a large triangular flat bone, situated in the A part of the thorax between the B and C ribs. Select the option which fill the blank A,B and C correctly:

A. Dorsal, Second and Fifth

B. Ventral, First and Seventh

C. Ventral, Second and Sixth

D. Dorsal, Second and Seventh

#### Answer:





71. Select the Mismatch.

A. ANF - Maintains blood Volume

B. Parathormone - Hypercalcemic hormone

C. Thyrocalcitonin - Hypocalcemic hormone

D. Progesterone - Follicular growth

Answer:

**72.** Select the correct match w.r.t same number of bones.

A. Cranial bones - Facial bones

B. Carpals of one limb - Tarsals of one limb

C. Cranial bones - Carpals of one wrist

D. Vertebrae - Skull bones

## Answer:

**73.** Select the correct option with hormones which are poured into veins.

A. Insulin, glucagon, growth hormone

B. Vasopressin, insulin, prolactin

C. Oxytocin, vasopressin, insulin

D. GnRH, PRH and TRH

## Answer:

**74.** Hypothalamus contains a number of centres and control all of the following except

A. Urge for eating

B. Body temperature

C. Sexual drive

D. Conversion of short term to long term

memory

Answer:

75. Select the odd one w.r.t cranial bone

A. Parietal

**B.** Palatine

C. Sphenoid

D. Frontal

**Answer:** 



76. A motor neuron along with muscle fibres

connected to it constitutes a

A. Motor-end plate

B. Motor unit

C. Neuromuscular junction

D. Synaptic Cleft

## Answer:

77. All of the following are parts of brain stem

except

A. Hypothalamus

B. Midbrain

C. Pons

D. Medulla Oblongata

## Answer:

**78.** All of the following are functions of medula

oblongata except

A. Serve as vomiting reflex centre

B. Act as cardiovascular reflex centre

C. To regulate respiratory rhythm

D. Centre for safety

## Answer:

**79.** a growing baby is characterized by stunted growth, mental retardation, low intelligence quotient, abnormal skin, deaf-mutism etc. it is caused due to

A. deficiency of  $I_2$  and thyroxine in adulthood

B. hypothyroidism during pregnancy

C. deficiency of growth hormone in growing baby

## D. deficiency of growth hormone in during

pregnancy

## **Answer:**



80. select endocrine gland which stores and

release its hormone in active form

A. adrenal gland

B. anterior pituitary

C. neurohypophysis of pituitary

D. thyroid gland

## Answer:



81. which of the following is correct statement

for skeletal muscle?

A. tropomyosin cannot cover myosin

binding site on actin

B. tropomyosin is a contractile protein

C. are complex protein troponin is

composed of four different subunit

D. the globular head of meromyosin acts as

enzyme ATPase

Answer:

82. a globular head and short arm of each

meromyosin together constitutes

A. LMM

B. cross arm

C. cross bridge

D. tail

## Answer:

83. select the incorrect statement

A. autonomous nervous system is a part of

CNS

B. automatic nervous system is a part of PNS

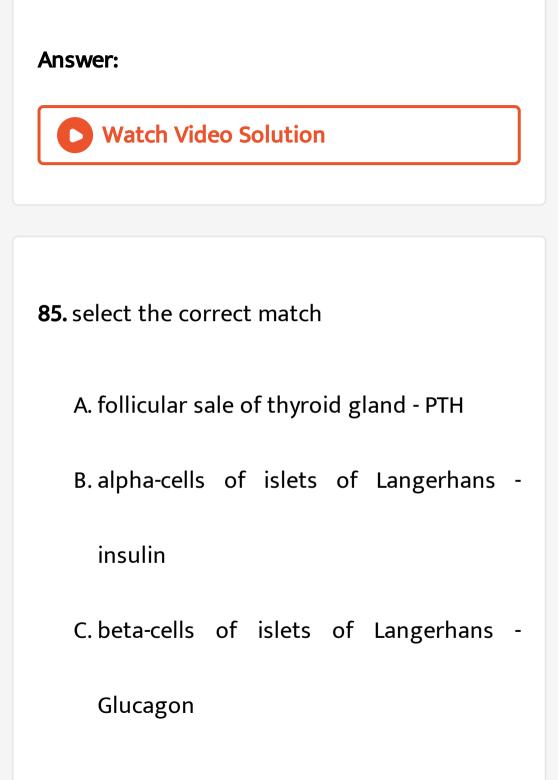
C. somatic nervous system relays impulsesfrom CNS two skeletal muscleD. sensory impulses enter spinal cordthrough dorsal root ganglia

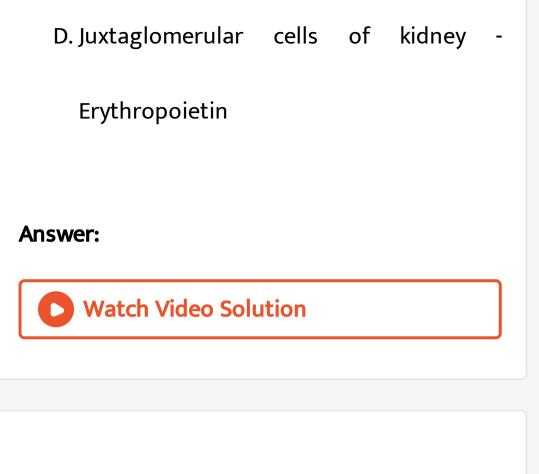




- 84. neurons are responsible for
  - A. formation of myelin sheath in CNS
  - B. transmission of subthreshold stimulus
  - C. responding to subthreshold stimulus
  - D. Depolarisation upon receiving threshold

stimulus





86. which of the following is considered as

anatomical unit of muscle?

A. sarcomere

B. Fasciculus

C. Muscle fibre

D. Fascia

## **Answer:**



87. biomolecules considered as an intracellular

messenger is

A. DNA

B. mRNA

## C. Hormone

D. Enzyme

## **Answer:**



## 88. select the hormone which controls the

diunal rhythm of our body

A. melanin

B. melatonin

C. MSH

D. Cortisol

## **Answer:**



# **89.** in comparison to red muscle fibre, white muscle fibres

A. contain more mitochondria in number

B. have more blood capillaries

C. possess more sarcoplasmic reticular

D. contain high content of red coloured

oxygen storing pigment

Answer:

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90. Activated sludge contains

A. Aerobic bacteria only

**B.** Flocs

C. Anaerobic bacteria only

D. Anaerobic fungi and bacteria only

## Answer:



**91.** The greater BOD ( biochemical oxygen

demand) of waste water indicates.

A. It's less pollution level

B. It's more pollution level

## C. Less amount of organic matter present

in it

D. High level of dissolved oxygen in it

## Answer:

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**92.** Read the following statements and choose the correct option. Statement A: Trichoderma spaces are free living fungi that are very common in root ecosystems. Statement B: trichoderma spaces are effective biocontrol

agent of several plants pathogens.

A. Only statement A is correct

B. Only statement B is correct

C. Both statements are correct

D. Both Statement are incorrect

Answer:

**93.** Which of the following microbes are used in biological treatment of sewage? (a) Autotrophic bacteria (b) Aerobic bacteria (c) Fungi (d)Heterotrophic bacteria

A. only (a)and (b)

B. only (b) and (c)

C. only (b),(c)and (d)

D. only (a) ,(b) and (c)

### Answer:





**94.** Mark the incorrect statement about Nucleopoly hedroviruses.

A. They are species specific

B. They have narrow spectrum insecticidal

application

C. They are nucleoprotein particles

D. They have negative impacts on plants,

mammals, fishes and on non targeted

insects also

## Answer:

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# **95.** all of the following can be biofertilizer expect

A. Viruses

B. Azotobacter

C. glomus

D. Cyanobacteria

## Answer:

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## **96.** An autotrophic microbe which can fix nitrogen is

A. Oscillatoria

B. Rhizobium

C. Frankia

## D. Clostridium

## Answer:

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**97.** Toddy is a traditional drink of some parts of South India and is made by fermenting sap from

A. Abelmoschus manihotland

B. Palm trees

C. Caryota urens

D. Calotropis

## Answer:

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# 98. For commercial production of Ethanol,

&\_\_\_\_is used

A. Saccharomyces

B. Candida Lipolytica

C. Streptococcus

D. Aspergillus niger

## Answer:

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99. Select the Incorrect statement.

A. Triticale was the first man made cereal

crop

B. Crop plants grown in monoculture are

## highly prone to pests

C. A wheat variety 'Himgiri' is resistant

against prone to pests

D. Mutations can be induced by infrared

radiation

Answer:

100. During transcription, the binding of RNA

polymerase to the DNA is the prerequisite for

the process to start.

In prokaryotes this site,

(a) Consists of 6 nucleotide bases,

(b) Is TATAAT,

(c) Is located 10 bp upstream from the start

point.

(d) Is present in promoter region

A. only (a)and (b)are correct

B. only (b)and (c)are correct

C. only (c) and (b) are correct

D. all (a) (b) (c)and (d) are correct

#### **Answer:**



**101.** Griffith performed an experiment where mice were killed when injected with a mixture of heat killed S-trained and live R-string of Streptococcus, but mice were alive when the

strains were injected separately. mice were killed because

A. Proteins from heat killed S strain made R

strength virulent

B. RNA from heat killed S strain made R

strain virulent

C. Both DNA and RNA from heat killed

strain transformed the R strain and

made it Pathogenic

# D. DNA from heat killed S strain transform

the R strain and made it virulent

## **Answer:**

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# 102. match the columns and choose the

correct option

a. helicase

b.DNA ligase

c. Primase

d. aminoacyl t-RNA synthetase

i.joins DNA fragment ii.synthesis of RNA iii.unwinds DNA helix iv. Activation of amino acid

A. a(iii), b(iv), c(ii), d(i)

B. a(iii), b(i), c(iv), d(ii)

C. a(iii), b(i), c(ii), d(iv)

D. a(iv), b(iii), c(ii), d(i)

Answer:



**103.** Bacteria which are utilised to produce gobar gas are

A. Aerobic and heterotrophic

B. aerobic and chemoautotrophic

C. Anaerobic and chemoautotrophic

D. Anaerobic and heterotrophic

Answer:

**104.** Biogas produced in anaerobic sludge digester is a mixture of

A. Methane and carbon dioxide only

B. Hydrogen sulfide and methane only

C. Methane, carbon dioxide and hydrogen

sulphide

D. Carbon dioxide, methane and oxygen

Answer:

# **105.** An immumosuppressive agent

cyclosporine A is produced

A. Bacterium

B. Fungus

C. Virus

D. Lichens

#### Answer:

**106.** Lactobacillus bacteria convert milk into curd select the correct statement(s)about this bacterium (a)It is heterotrophic (b)it increases the content of of vitamin  $B_{12}$  in curd. (c) It fixes nitrogen in leguminous plants.

A. Only (a)

B. Only (b)

C. Both (a) and (b)

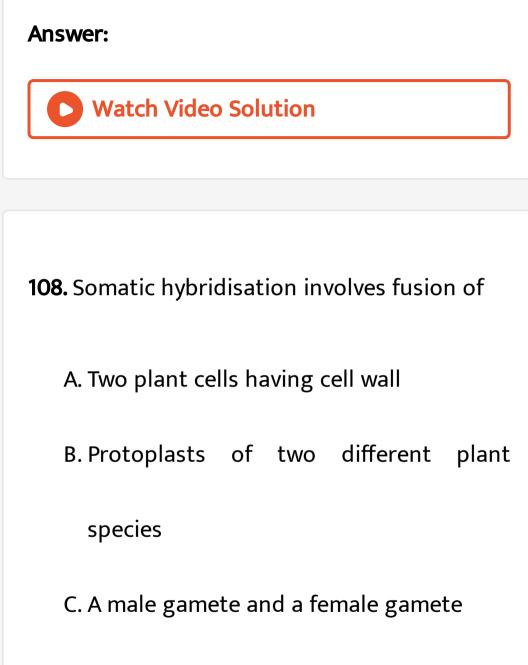
D. Both (b) and (c)

## **Answer:**



**107.** Select the option which correctly fills the blanks. Association of fungi with roots of higher plants is called \_\_\_\_A\_\_\_ in which fungal partner majorily provides \_\_\_\_B\_\_\_ to the plants.

- A. Lichen (A) Calcium (B)
- B. Mycorrhiza(A) Zinc (B)
- C. Lichen(A) Phosphorus(B)
- D. Mycorrhiza(A) Phosphorus (B)



D. A female gamete with a somatic cell





# **109.** Which of the following parts of a diseased plant is used to obtain healthy plants?

A. Meristem

B. Embryo

C. Leaves

D. branch

## Answer:



**110.** The nutrient medium used for tissue culture does not contain (a) carbon source (b) Inorganic salts (c) plant growth regulators (d) Enzymes (e) vitamins and amino acid

A. only (b), (d) and (e)

B. only (b) and (c)

C. only (d)

# D. only a)

## Answer:

Watch Video Solution

111. tropical sugarcanes grown in south India

A. had poor sugar content

B. had thicker stems and higher sugar

content

C. were originally grown in north india

D. had poor yield

## Answer:

Watch Video Solution

**112.** High yielding and disease resistant wheat varieties which were introduced all over the wheat growing belt of india are

A. jaya and Ranta

B. jaya and kalyan sona

C. sonalika and kalyan sona

D. sonalika and ratna

## **Answer:**

Watch Video Solution

**113.** Read the following statements and select the correct ones. A. M.S. Swaminathan is considered as father of white revolution. B. Genetic variability is the root of any breeding programme. C. cross hybridisation is a very

time consuming and tedious process.

A. Only A and B

B. only B and C

C. only B

D. All A,B and C

Answer:

**114.** HIV

A. does not follow the central dogma of

molecular biology

B. has ds-RNA as its genetic material

C. contains thymine in its genetic material

D. has equal proportions of purines and

pyrimidines

Answer:

115. Satellite DNA

A. codes for proteins which are needed in

the choloplast

B. codes enzymes for krebs cycle

C. does not code for proteins

D. form a little portion of human genome

#### Answer:

**116.** polymorphism in DNA sequence is the basis of which of the following? (a) genetic mapping of human genome (b) DNA fingerprinting (c) similarities among human beings

- A. only (a)
- B. only (b)
- C. only (a) and (b)
- D. only (b) and (c)

#### Answer:



**117.** The chromosomes which contain maximun and minimun number of genes in human genome are

A. an autosome and an allosome

respectively

B. an allosome and autosome respectively

C. both autosomes

D. both allosomes

## Answer:



**118.** Mutation in a gene which codes for RNA polymerase III makes it non functional which further affects the synthesis of

A. 18S rRNA

B. hn RNA

C. 5S rRNA

D. 5.8S rRNA

## Answer:



**119.** select true (T) or false (F) for the following statements and choose the correct option. A. QB bacteriophage has RNA as genetic material. B. Free 2'OH of RNA makes it more labile and easily degradable. C. The experiment of Hershey and chase gave unequivocal proof that DNA is the genetic meterial.

A. A (T) B(F) C (T)

# B. A (F) B (F) C(T)

C. A (T) B(T) C ( T)

D. A(T) B(T) C(T)

#### **Answer:**

Watch Video Solution

**120.** Heterochoromatin is (a) darkly stained region (b) loosely packed chromatin (c) transcriptionally inactive

A. only (a)

B. only(a) and (b)

C. only (b) and (c)

D. only(a) and(c)

#### **Answer:**

Watch Video Solution

**121.** select the correct match.

A. transformation- Watson and Crick

B. ribozyme - nucleic acid (RNA)

# C. HIV - DNA containing virus

D. spliceosimes - translation process

## Answer:

Watch Video Solution

**122.** The experimental proof for semiconservative replication of DNA was first shown in a A. meselson and stahi

B. hershey and chase

C. jacob and monod

D. alec jeffreys

#### Answer:

Watch Video Solution

**123.** in prokaryotic translation, the formation of peptide bond between two amino acide is catalysed by a

A. proteinaceous enzyme

B. lysozyme

C. RNA catalyst

D. ribonuclease

### **Answer:**

Watch Video Solution

**124.** mark the wrong statement.

A. in prokaryotes, transcription and translation occur in the different compartments B. in eukaryotes, usually structural gene of transcription unit is monocistronic C. in prokaryotes , the mRNA is produced in the cytoplasm D. in eukaryotes , the primary transcript undergoes splicing

Answer:



**125.** the lac operonof E. coli gets switchedon when

A. repressor binds to the operator

B. lactose binds to the RNA polymerase

C. lactose binds to the repressor protein

D. inducer binds to the operator

## Answer:





**126.** if the anticodon sequence in tRNA is 3' AAA 5', the amino acid carried by it , is

A. serine

B. valine

C. phenylalanine

D. glutamic acid

## Answer:

**127.** if the sequence of nitrogenous bases of the coding strand of DNA in a transcription unit is 5' ATGHCCAT 3' then the sequence of bases in its RNA transcript would be

A. 3' - AUGGCCAU-5'

B. 3'- UACCGGUA-5'

C. 5'-AUGGCCAU-3'

D. 5'-UACCGGUA-3'

#### Answer:

**128.** While analysing the DNA of an organism, different proportions of bases were obtained as given below Adenine = 28% Guanine = 22% Thymine = 28% Cytosine = 22% . From the above informations it can be generalised that

A. it is a single stranded DNA

B. it is a double stranded DNA and follows

chargaff's rule

C. it is a double stranded DNA but does not

follows chargaff's rule

D. it is single stranded RNA

Answer:

Watch Video Solution

**129.** Identify the correct function(s) of RNA. (a) it carries amino acids to ribosomes (b) it us a constituent if ribosomes (c) it carries genetic information from DNA for synthesis of

proteins (d) it plays catalytic role during

proteins synthesis

A. only (a)

B. only(a) and (c)

C. only (b) and (d)

D. all (a), (b) , (c) and (d)

Answer:

130. On one strand of DNA , its discontinuous

synthesis is seen, because

A. it is more efficient process

B. DNA polymerase catalyses

polymerisation only in one direction i.e.

5'rarr3'

C. it is energy independent process

D. DNA molecule is very long to be synthesized in a continuous fashion



**131.** Select the true statement(s) for AUG. A. It codes for an amino acid methionine B. It is an initiation codon C. It is a non-degenerate codon

A. Only A

B. Only A and B

C. Only B and C

D. All A, B and C

### Answer:

Watch Video Solution

# 132. Adenosine differs from a nucleotide as it

lacks

A. Base

B. Sugar

C. N-glycosidic bond

D. Phosphate group

### Answer:

Watch Video Solution

**133.** All of the following statements are true for genetic code, except

A. It is unambiguous

B. Codons in mRNA are read in a non-

contiguous fashion

C. It is nearly universal

D. It is non-overlapping

### Answer:



134. Black water fever is caused due to

A. Nitrate pollution in water

B. Infection of Leishmania donovani

C. Infection by sporozoan Plasmodium

D. Infection of Yersinia pestis

## Answer:

Watch Video Solution

**135.** Select the mismatch.

A. Skin and mucous membrane-Physical

barriers

B. HCI in stomach-Physiological barrier

C. Macrophages- Cellular barrier

D. Natural killer cells Cytokine barrier

## Answer:

Watch Video Solution

**136.** The two key concepts of Darwinian theory of evolution are

A. Analogy and homology

B. Divergent and convergent evolution

C. Convergence and adaptive radiation

# D. Branching descent and natural selection

## Answer:

Watch Video Solution

**137.** Immunity which is not acquired after birth and is birth right of all individuals in a particular species is known as

A. Cell mediated immunity

B. Humoral immunity

C. Acquired immunity

D. Innate immunity

## Answer:



# 138. Which amongst the following is the most

recent ancestor of existing mammals?

A. Thecodonts

**B.** Saurapsids

C. Synapsids

D. Therapsids

# Answer:



139. Which of the following fossil is considered

as missing link between reptiles and birds?

A. Hyracotherium

B. Pteranodon

C. Sphenodon

D. Archaeopteryx

## Answer:

Watch Video Solution

**140.** Introduction of larvivorous fish in stagnant water can prevent the spread of all given diseases except

A. Dengue

B. Diptheria

C. Chikungunya

D. Filariasis

# Answer:

Watch Video Solution

# 141. The forelimbs of human, tiger, whale and

bat represent

A. Homologous structures

B. Analogous structures

C. Vestigial structures

D. Functional similarity

### Answer:

Watch Video Solution

**142.** Which of the following event of organic evolution was a turning point that changed the nature of atmosphere of primitive earth?

A. Respiration

- B. Chemosynthesis
- C. Anoxygenic photosynthesis
- D. Oxygenic photosynthesis

Answer:

Watch Video Solution

143. Presence of tooth buds during embryonic

development of birds is an example of

A. Atavism

**B.** Mutation

C. Ontogeny repeats phylogeny

D. Genetic drift

Answer:

Watch Video Solution

144. Select the correct option w.r.t. increasing

cranial capacity suggested by hominid fossils

A. Homo erectus to Homo habilis to Homo
sapiens sapiens to Homo sapiens fossilis
B. Homo habilis to Homo erectus to Homo
sapiens fossils to Homo sapiens sapiens
C. Homo erectus to Homo sapiens
neanderthalensis to Homo habilis to
Homo sapiens fossilis
D. Homo habilis to Homo sapiens sapiens
to Homo erectus to Homo sapiens
fossilis



**145.** Cycads and dicotyledons arose from common ancestor called 'A' that existed on earth during period 'B'. Choose the option which fill the blanks 'A'and 'B'correctly.

A. Zosterophyllum and Triassic

B. Chlorophyta and Silurian

C. Seed ferns and Carboniferous

# D. Herbaceous lycopods and Cretaceous

### Answer:

Watch Video Solution

**146.** Find the incorrect match.

A. Named after fossils found in Australia-

Australopithecines

B. Cave paintings and fossils found in

Europe-CroMagnon man

C. Buried his dead with flowers and tools

and lived in Central Asia-Neanderthal

man

D. First use fire and fossils were found in

Java -Homo erectus

Answer:

147. Populations of peppered moth Biston betularia of England underwent directional selection during and after industrialisation. The selective agent causing the change was/were

A. Man

B. Lichens

C. Toxins from industrial smoke

D. Birds

Answer:



**148.** Gene pool of a large population tends to remain stable i.e. in genetic equilibrium in presence of

- A. Random mating
- B. Genetic drift
- C. Large scale migration
- D. Natural selection





**149.** If the frequency of an allele 'a' in a given large unevolving population is 0.64 then, find out frequency of the other allele 'b' in the same population.

A. 0.64

B. 0.8

C. 0.48

D. 0.36



# **150.** Complete the analogy Anteater : Lemur ::

Numbat :\_\_\_\_Choose the correct option.

A. Mole

- B. Spotted cuscus
- C. Flying squirrel
- D. Bobcat



**151.** Read the following statements. Statement A: Jurassic period of Mesozoic era is characterised by gymnosperms as dominant plants and dinosaurs as dominant animals.Statement B: The geological history of earth closely correlates with the biological history of earth.

- A. Bolh slalements are incorrect
- B. Both statements are correct
- C. Statement A is incorrect
- D. Statement B is incorrect

Watch Video Solution

**152.** Select incorrect option given below in relation to cancer.

A. Cell division and differentiation in cancer cells is not regulated by contact inhibition B. They starve normal cells by competing for vital nutrients C. Malignant tumors causing cancer are invasive and undergo metastasis D. lonizing radiations like 'X'-rays and y-rays are responsible for transformation of

oncogenes into proto-oncogenes.



**153.** Select true (T) and false (F) in following given statements and choose the correct option given below.(a) Receptors for cannabinoids are present on cardiovascular system of the body (b) Cocaine causes hallucinations in large dosage by stimulating CNS (c)Diacetylmorphinis commonly known as

smack (d) Heroin is a CNS stimulant and

# increases body functions

A. T(a) F(b) T(c) F(d)

B. F(a) T(b) T(c) F(d)

C. F(a) T(b) F(c) T(d)

D. T(a) T(b) F(c) T(d)

Answer:

**154.** Match column-A with column and select the correct option. a.IgG(Column-A) (i) Secretory antibody(Column-B) b. IgA(Column-A) (ii) Largest in size(Column-B) c.IgM(Column-A)(iii) Passes through placenta(Column-B) d. IgE(Column-A) (iv) Allergic response(Column-B)

A. a(i), b(ii), c(ii), d(iv)

B. a(ii) b(i), c(ii), d(iv)

C. a(iv), b(iii), c(ii), d(i)

D. a(i), b(ii), c(i), d(iv)



**155.** Select the correct statement from options given below.

A. AIDS is a congenital disease caused by

enveloped virus

B. Chewing of tobacco stimulate adrenal

gland to increases blood pressure

C. Use of contaminated needles for boring

## ear pinna cannot spread HIV infection

D. Death from HIV infection can be

completely prevented by use of anti-

retroviral drugs

Answer:

156. Cigarette smoking may cause all of the

following except

A. Emphysema

B. Gastric ulcer

C. Carcinoma of urinary bladder

D. Atelectasis

Answer:

**157.** All of the following are side effects of anabolic steroids in male except

A. Increased aggression

B. Enhanced spermatogenesis

C. Premature baldness

D. Breast enlargement

Answer:

**158.** Modern horse, whose fossils are associated with Plestocene epoch, is

A. Mesohippus

B. Merichippus

C. Equas

D. Pliohippus

Answer:

**159.** Bat and insects have no common ancestry but both have functional wings for fight. This adaptation for aerial life indicates

A. Advance Radiation

B. Divergent Evolution

C. Convergent Evolution

D. Microevolution

## Answer:

**160.** Lymphocytes which may be considered as connecting link between antibody medicated immunity and cell medicated immunity are

A. Killer T-cells

- B. Subpresser T-cells
- C. Helper T-cells
- D. B lymphocytes

# Answer:



**161.** Substance which is not used as an antiallergen is

A. Epinephrine

B. Glucocorticoid

C. Adrenaline

D. Histamine

# Answer:

**162.** Children in metro cities of India suffer from allergies and asthma because they are more sensitive to allergens and have low immunity due to

A. Vaccination in early stage

B. Sufficient supply of chemicals like

Serotonin

C. Use of different types soaps and

shampoos

# D. Protected environment provided early in

life

#### Answer:



**163.** Occurrence of similar type of biomolecules in different it group of organisms is called molecular homology. Which of the folowing example does not show molecular homology? A. RuBisCo in different plants

B. Enzymes of different Krebs cycle in

organisms

C. Blood proteins in apes and human

D. Tendril of Pisum and Tendril of Cucurbita

Answer:

**164.** According to modern synthetic theory of evolution proposed by Dobzhansky ,all of the following are causes of genetic variability except

A. Gene Mutations

B. Genetic Recombination

C. Changes in chromosome number

D. Natural Selection

Answer:





165. Mutation theory does not explain :

A. Theory of Panspermia

**B. Variations** 

C. Evolution

D. Specialization

#### Answer:

**166.** According to Hugo de Vries, mutations play an important role in specialiation although they are random and directionless.These mutations were termed

A. Saltation

**B.** Founder Effects

C. Bottle neck effects

D. Variations

Answer:

**167.** According to Darwin, two different areas within a continent have different species because they have different

A. Evolutionary mechanism

B. Ancestors

C. Environments

D. Evolutionary times

# Answer:



**168.** Principle of immunisation is based on which property of immune system ?

A. Specialty

B. Diversity

C. Discrimination

D. Memory

Answer:

**169.** Lanmark's concept of 'Inheritence of acquired characters" was disapproved by

A. Essay on population by Malthus

B. Germplasm theory of Weismann

C. Mutation theory by hugo de Vreis

D. Darwin's theory of Natural selection

#### **Answer:**

**170.** Which theory of origin of ife is based on fact thar life was created by supematurai power?

A. Cosmozoic theory

B. Theory of spontaneous generation

C. Theory of Special creation

D. Theory of catastrophism

## Answer:

**171.** Evolutionary biology is defined as

- A. Study of history of life forms on earth
- B. Ontogeny recapitulates Phylogeny
- C. Developmental history of embryo
- D. Evolutionary history of an organism

Answer:

**172.** Select the odd one w.rt. pathogenic ringworms.

A. Microsporum

B. Trichosporum

C. Epidomorphyton

D. Ascaris

# Answer:

**173.** Mucosa associated lymphoid tissue (MALT) consititues nearly what percentage of total lymphoid tissue present in our body?

A. 0.1

B. 0.3

C. 0.5

D. 0.2

## Answer:

**174.** Enzyme which can synthesize DNA from RNA is

A. Heverse transcriptase

B. DNA polymerase

C. Protease

D. Integrese

Answer:

175. Elephantiasis is caused by a worm, known

as

A. Ancelostoma duodenale

B. Entamoeba histolytica

C. Wuchereria bancrofti

D. Treponema pallidum

## Answer:

176. All of the following are common infectious

disease except

A. Common cold

B. Hepatitis B

C. Cancer

D. Ringworm

# Answer:

**177.** Internal bleeding, muscular pain, fever, anaemia and blockage of the intestinal passage are the common symptoms of

A. Amoebiasis

B. Malaria

C. Ascariasis

D. Typhoid

# Answer:

**178.** All of the following statements are true for genetic code, except

A. It is unambiguous

B. Codons in mRNA are read in a non-

contiguous fashion

C. It is nearly universal

D. It is non-overlapping

Answer:

**179.** Adenosine differs from a nucleotide as it lacks

A. Base

B. Sugar

C. N-glycosidic bond

D. Posphate group

Answer:

**180.** Select the true statement (s) for AUG. A. It codes for an amino acid methionine. B. It is an initiation codon . C. It is a non-degenerate codon

A. Only A

B. Only A and B

C. Only B and C

D. All A, B and C

#### Answer:



**181.** On one strand of DNA, its discontinuous synthesis is seen, because

A. It is more efficient process

B. DNA polymerase catalyses

polymerisation only in one direction i.e.

5' - 3'

C. It is energy independent process

synthes7ed in a continuous fashion

#### **Answer:**



**182.** Identify the correct function(s) of RNA.(a) It carries amino acids to ribosomes (b) It is a constituent of ribosomes (c) It carries genetic information from DNA for synthesis of proteins (d) It plays catalytic role during proteins synthesis.

A. Only (a)

B. Only (a) and (c)

C. Only (b) and (d)

D. All (a), (b), (c) and (d)

Answer:

**183.** While analysing the DNA of an organism, different proportions of bases were obtained as given below Adenine = 28% Guanine = 22% Thymine = 28% Cytosine = 22% . From the above informations it can be generalised that

A. It is a single stranded DNA

B. It is a double stranded DNA and follows

Chargaff's rule

C. It is a double stranded DNA but does not

follows Chargaff's rule

D. It is single stranded RNA

#### Answer:

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**184.** If the sequence of nitrogenous bases of the coding strand of DNA in a transcription unit is 5' ATGGCCAT 3' then the sequence of bases in its RNA transcript would be

A. 3'— AUGGCCAU — 5'

D. 5'— UACCGGUA — 3'

#### Answer:

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# **185.** if the anticodon sequence in tRNA is 3'

AAA 5', the amino acid carried by it , is

A. Serine

B. Valine

C. Phenylalanine

D. Glutamic acid

Answer:

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186. The Lac operon gets switched on when

A. Repressor binds to the operator

B. Lactose binds to the RNA polymerase

C. Lactose binds to the repressor protein

D. Inducer binds to the operator

Answer:

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**187.** Mark the wrong statement.

A. In prokaryotes, transcription and

translation occur in the different

compartments

B. In eukaryotes, usually structural gene of

transcription unit is monocistronic

C. In prokaryotes, the mRNA is produced in

the cytoplasm

D. In eukaryotes, the primary transcript

undergoes splicing

Answer:

**188.** In prokaryotic translation, the formation of peptide bond between two amino acids is catalysed by a

A. Proteinaceous enzyme

B. Lysozyme

C. RNA catalyst

D. Ribonuclease

Answer:

**189.** The experimental proof for semiconservative mode of DNA replication was first shown in a bacterium, by

A. Meselson and Stahl

B. Hershey and Chase

C. Jacob and Monod

D. Alec Jeffreys

# Answer:

**190.** Select the correct match.

A. Transformation — Watson and Crick

B. Ribozyme — Nucleic acid (RNA)

C. HIV — DNA containing virus

D. Spliceosomes — Translation process

Answer:

**191.** Heterochromatin is (a) Darkly stained region (b) Loosely packed chromatin (c) Transcriptionally inactive

A. Only (a)

B. Only (a) and (b)

C. Only (b) and (c)

D. Only (a) and (c)

## Answer:

**192.** Select true (T) or false (F) for the following statements and choose the correct option. A. QB bacteriophage has RNA as is material. B. Free 2'OH of RNA makes it more labile and easily degradable. C. The experiment of Hershey and Chase gave unequivocal proof that DNA is the genetic material. A B C

A. T F T

B. F F T

#### C. T T T

#### D. T F F

#### Answer:

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**193.** Mutation in a gene which codes for RNA polymerase III makes it non functional which further affects the synthesis of

A. 18S rRNA

B. hn RNA

C. 5S rRNA

D. 5.8S rRNA

#### **Answer:**

**Watch Video Solution** 

**194.** The chromosomes which contain maximum and minimum number of genes in human genome are

A. An	autosome	and	an	allosome
respectively				
B. An	allosome	and	an	autosome
respectively				
C. Both autosomes				
D. Both allosomes				



**195.** polymorphism in DNA sequence is the basis of which of the following? (a) genetic mapping of human genome (b) DNA fingerprinting (c) similarities among human beings

- A. Only (a)
- B. (Only (b)
- C. Only (a) and (b)
- D. Only (b) and (c)



# 196. Satellite DNA

A. Codes for proteins which are needed in

the chloroplast

- B. Codes enzymes for Krebs' cycle
- C. Does not code for proteins
- D. Form a little portion of human genome





## **197.** HIV

A. Does not follow the central dogma of

molecular biology

- B. Has ds-RNA as its genetic material
- C. Contains thymine in its genetic material
- D. Has equal proportions of purines and

pyrimidines 111

#### Answer:



**198.** Read the following statements and select the correct ones. A. M.S. Swaminathan is considered as father of white revolution. B. Genetic variability is the root of any breeding programme. C. Cross hybridisation is a very time consuming and tedious process.

A. Only A and B

B. Only B and C

C. Only B

D. All A, B and C

#### Answer:

Watch Video Solution

**199.** High yielding and disease resistant wheat varieties which were introduced all over the wheat growing belt of india are

A. Jaya and Ratna

B. Jaya and Kalyan sona

C. Sonalika and Kalyan sona

D. Sonalika and Ratna

Answer:

Watch Video Solution

200. Tropical sugarcanes grown in South India

A. Had poor sugar content

B. Had thicker stems and higher sugar

content

C. Were originally grown in North India

D. Had poor yield

#### Answer:

Watch Video Solution

**201.** The nutrient medium used for tissue culture does not contain (a) carbon source (b)

Inorganic salts (c) plant growth regulators (d)

## Enzymes (e) vitamins and amino acid

A. Only (b). (d) and (e)

B. Only (b) and (c)

C. Only (d)

D. Only (a)

Answer:

202. Which of the following parts of a diseased

plant is used to obtain healthy plants?

A. Meristem

B. Embryo

C. Leaves

D. Pollen grains

#### Answer:

203. Somatic hybridisation involves fusion of

A. Two plant cells having cell wall

B. Protoplasts of two diferent plant species

C. A male gamete and a female gamete

D. A female gamete with a somatic cell

Answer:

**204.** Select the option which correctly fills the blanks. Association of fungi with roots of higher plants is called <u>A</u> in which fungal partner majorily provides <u>B</u> to the plants.

- A. Lichen (A), Calcium (B)
- B. Mycorthiza (A), Zinc (B)
- C. Lichen (A), Phosphorus (B)
- D. Mitochondria (A), Phosphorus (B)



**205.** Lactobacillus bacteria convert milk into curd select the correct statement(s)about this bacterium (a)It is heterotrophic (b)it increases the content of of vitamin  $B_{12}$  in curd. (c) It fixes nitrogen in leguminous plants.

A. Only (a)

B. Only (b)

C. Only (a) and (b)

D. Only (b) and (c)

#### Answer:

Watch Video Solution

**206.** Cyclosporine A, which is used as an immunosuppressive, agent, is produced by:

A. Bacterium

B. Fungus

C. Virus

# D. Lichens

#### Answer:

Watch Video Solution

# **207.** Biogas produced in anaerobic sludge digester is a mixture of

A. Methane and carbon dioxide only

B. Hydrogen, sulphide and methane only

C. Methane, carbon dioxide and hydrogen

sulphide

D. Carbon dioxide, methane and oxygen

Answer:

Watch Video Solution

208. Bacteria which are utilized to produce

gobar gas are

A. Aerobic and heterotrophic

B. Aerobic and chemoautotrophic

# C. Anaerobic and chemoautotrophic

D. Anaerobic and heterotrophic

#### Answer:

Watch Video Solution

**209.** Griffth performed an experiment where mice were killed when injected with a mixture of heat killed S-strain and live R-strain of Streptococcus, but mice were alive when these

strains were injected separately. Mice were killed because

A. Proteins from heat killed S strain made R

strain virulent

B. RNA from heat killed S strain made R strain virulent

C. Both DNA and RNA from heat killed

strain transformed the R strain and

made it pathogenic

transformed the R strain and made it

virulent

Answer:

Watch Video Solution

210. During transcription, the binding of RNA

polymerase to the DNA is the prerequisite for

the process to start.

In prokaryotes this site,

(a) Consists of 6 nucleotide bases,

(b) Is TATAAT,

(c) Is located 10 bp upstream from the start point.

(d) Is present in promoter region

A. only(a) and (b) are correct

B. only(b) and (c) are correct

C. only(c) and (d) are correct

D. All a,b,c,d are correct





**211.** Select the incorrect statement.

A. Triticale was the first man made cereal

crop

B. Crop plants grown in monoculture are

highly prone to pesis

C. A wheat variety 'Himgir is resistant

against rust pathogens "

D. JMutations can be induced by infrared

radiation

#### Answer:

Watch Video Solution

# **212.** For commercial production of ethanol, Used.

A. Saccharomyces cerevisiae

B. Candida lipolytica

C. Stroptococcus

D. Aspergillus niger

#### Answer:



213. Toddy is a traditional drink of some parts

of South India and is made by fermenting sap

from

A. Abelmoschus manihotland

### B. Sesbania

C. Caryota urens

D. Calotropis

#### Answer:

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**214.** Fill in the given blanks by choosing correct option for A and B. Streptokinase is produced from a which is .

A. Bacterium (A), Streptococcus (B)

B. Bacterium (A), Acetobacter (B)

C. Yeast (A), Clostridium (B)

D. Yeast (A), Streptococcus (B)

Answer:

Watch Video Solution

215. All of the following can be biofertilisers,

except

A. Viruses

- B. Azotobacter
- C. Glomus
- D. Cyanobacteria

#### **Answer:**



**216.** Mark the incorrect statement about Nucleopoly hedroviruses.

- A. They are species specific
- B. They have narrow spectrum insectigfdal

applications

- C. They are nucleoprotein particle
- D. They have negative impacts onplants,

mammals, fishes and on non targeea

insects also

Answer:

217. Which of the following microbes are used
in biological treatment of sewage? (a)
Autotrophic bacteria (b) Aerobic bacteria (c)
Fungi (d)Heterotrophic bacteria

A. Only (a) and (b)

B. Only (b) and (c)

C. Only (b), (c) and (d)

D. Only (a), (b) and (c)

#### Answer:

**218.** Read the following statements and choose the correct option. Statement A: Trichoderma spaces are free living fungi that are very common in root ecosystems. Statement B: trichoderma spaces are effective biocontrol agent of several plants pathogens.

A. Only statement A is correct

B. Only statement B is correct

C. Both statements are correct

D. Both statements are incorrect

#### Answer:

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# 219. The greater BOD (Biochemical Oxygen

#### Demand) of waste water indicates

A. Its less pollution level

B. Its more pollution level

## C. Less amount of organic matter present

in it

D. High level of dissolved oxygen in it

Answer:

Watch Video Solution

220. Activated sludge contains

A. Aerobic bacteria only

**B.** Flocs

C. Anaerobic bacteria only

D. Anaerobic fungi and bacteria only

#### **Answer:**



**221.** Internal bleeding, muscular pain, fever, anaemia and blockage of the intestinal passage are the common symptoms of

A. Malaria

B. Amoebiasis

C. Ascariasis

D. Typhoid

#### Answer:

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# 222. All of the following are common

infectious disease except

A. Common cold

B. Hepatitis-B

C. Cancer

D. Ringworm

Answer:

Watch Video Solution

# 223. Elephantiasis is caused by a worm, known

as

A. Ancylostoma duodenale

- B. Entamoeba histolytica
- C. Wuchereria bancrofti
- D. Treponema pallidum

### Answer:

Watch Video Solution

# 224. Enzyme which can synthesize DNA from

**RNA** is

A. Reverse transcriptase

B. DNA polymerase

C. Protease

D. Integrase

### Answer:

Watch Video Solution

**225.** Mucosa associated lymphoid tissue (MALT) constitutes nearly what percentage of total lymphoid tissue present in our body?

A. 0.3

B. 0.1

C. 0.5

D. 0.2

### **Answer:**



# **226.** Select the odd one w.rt. pathogenic ringworms.

- A. Microsporum
- B. Thichophyton
- C. Ascaris
- D. Epidemophyton

### Answer:

Watch Video Solution

**227.** Evolutionary biology is defined as

A. Study of history of life forms on earth

B. Ontogeny recapitulates Phylogeny

# C. Developmental history of embryo

D. Evolutionary history of an organism

### Answer:

Watch Video Solution

**228.** Which theory of origin of ife is based on fact thar life was created by supematurai power?

- A. Cosmozoic theory
- B. Theory of spontaneous generation
- C. Theory of special creation
- D. Theory of catastrophism

### **Answer:**

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**229.** Lanmark's concept of 'Inheritence of acquired characters" was disapproved by

- A. Essay on population by Malthus
- B. Germplasm theory of Weissmann
- C. Mutation theory by Hugo de Vries
- D. Darwin's theory of natural selection

### Answer:

Watch Video Solution

230. Principle of immunisation is based on

which property of immune system ?

# A. Specificity

B. Diversity

C. Discrimination

D. Memory

### Answer:



**231.** According to Darwin, two different areas within a continent have different species because they have different

- A. Evolutionary mechanisms
- B. Ancestors
- C. Evironments
- D. Evolutionary times

### Answer:



**232.** According to Hugo de Vries, mutations play an important role in speciation aithough

they are random and girectionless. These

mutations were termed

A. Saltations

B. Founder effect

C. Bottle neck effect

D. Variations

Answer:

Watch Video Solution

233. Mutation theory does not explain :

A. Theory of panspemia

**B.** Variations

C. Evolution

D. Speciation

Answer:

Watch Video Solution

**234.** According to modern synthetic theory of evolution proposed by Dobzhansky, all of the following are causes of genetic variability except

(a) Gene mutations

(b) Genetic recombination

(c) Changes in chromosome number

(d) Natural selection

A. Gene mutations

B. Genetic recombination

C. Changes in chromosume number

D. Natural selection

### Answer:

Watch Video Solution

235. Occurrence of similar type of biomolecules in different it group of organisms is called molecular homology. Which of the folowing example does not show molecular homology?

A. RuBisCO in different plants

B. Enzymes of Krebs' cycle in organisms

## C. Blood proteins in apes and human

D. Tendril of Pisum and tendrils of

Cucurbita

#### Answer:

Watch Video Solution

**236.** Children in metro cities of India sutfer from allergies and asthma because they are

more sensitive allergens and have low immunity due to A. Vaccination in early stage B. Sufficient supply of chemicals like

serotonin

C. Use of ditorent types of soaps and

shampoo

D. Protected environment provided early in

lite



# **237.** Substance which is not used as an antiallergen is

A. Epinephine

B. Glucocorticoids

C. Histamine

D. Adrenaline





**238.** Lymphocytes which may be considered as connecting link between antibody medicated immunity and cell medicated immunity are

A. Killer T- cells

- B. Suppressor T- cells
- C. Helper T-cells
- D. lymphocytes





**239.** Bat and insects have no common ancestry but both have functional wings for flight. This adaptation for aerial life indicates

- A. Adaptive radiation
- B. Divergent evolution
- C. Convergent evolution
- D. Microevolution



**240.** Modem horse, whose fossils are associated with Pleis

A. Mesohippus

B. Merychippus

C. Equus

D. Pliohippu





**241.** All of the following are side effects of anabolic steroids in male except

A. Increased aggression

B. Enhanced spermatogenesis

C. Premature baldness

D. Breast enlargement

### Answer:

Watch Video Solution

**242.** Cigarette smoking may cause all of the following except

A. Emphysema

B. Gastric ulcer

C. Carcinoma of urinary bladder

D. Atelectasis

Answer:

Watch Video Solution

**243.** Select the correct statement from options

given below.

A. AIDS is a congenital disease caused by enveloped vinus
B. Chewing of tobacco increases blood pressure to release of catecholamines from adrenal medulla

C. Use of contaminated needles for boring

ear pinna cannot spread HiV infection

D. Death from HIV infection can be

completely prevented by use of anti-

retroviral drugs

Answer:

Watch Video Solution

**244.** Select true (T) and false (F) in following given statements and choose the correct option given below.(a) Receptors for cannabinoids are present on cardiovascular

system of the body (b) Cocaine causes hallucinations in large dosage by stimulating CNS (c)Diacetylmorphinis commonly known as smack (d) Heroin is a CNS stimulant and increases body functions

A. a(T),b(F),c(T),d(F)

B. a(F),b(T),c(T),d(F)

C. a(F),b(T),c(F),d(T)

D. a(T),b(T),c(F),d(T)





**245.** Select incorrect option given below in relation to cancer.

A. Cell division and differentiation in cancer

cells is not regulated by contact

inhibition

B. They starve normal cells by competing

for vital nuthents

C. Malignant tumors causing cancer are

invasive and undergo metastasis

D. Jonizing radiations like X-rays and rrays

are responsible for transfomation of

oncogenes into proto-oncogenes.

Answer:

Watch Video Solution

**246.** Read the following statements. Statement A: Jurassic period of Mesozoic era is characterised by gymnosperms as dominant plants and dinosaurs as dominant animals.Statement B: The geological history of earth closely correlates with the biological history of earth.

- A. Both statements are incorrect
- B. Both statements are correct
- C. Statement A is incorrect

D. Statement B is incorrect

### Answer:

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**247.** Complete the analogy Anteater : Lemur ::

Numbat :\_\_\_\_Choose the correct option.

A. Mole

B. Spoted cuscus

C. Flying squirrel

## D. Bobcat

### Answer:

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**248.** If the frequency of an ailele 'a' in a given large unevolving population is 0.64 then, find out frequency of the other allele b' in the same populaton.

### A. 0.64

B. 0.8

C. 0.48

D. 0.36

### Answer:

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**249.** Gene pool of a large population tends to remain stable i.e. in genetic equilibrium in presence of

- A. Random mating
- B. Genetic drit
- C. Large scale migration
- D. Natural selection

### **Answer:**



**250.** Which type of natural selection is depicted in the diagram given below?

- A. Disruptive selection
- B. Stabilizing selection
- C. Balancing selection
- D. Directional selection

### Answer:



**251.** Population of dark biston betularia increased greatly in england from 1848-1898. The selective agent causing the change was

A. Man

**B.** Lichens

C. Toxins from industrial smoke

D. Birds

### Answer:

Watch Video Solution

**252.** Find the incorrect match.

A. Named after fossils found in Australia-Australopithecines B. Cave paintings and fossils found in Europe-Cro-Magnon man C. Buried his dead with flowers and tools and lived in Central Asia-Neanderthal man D. First use fire and fossils were found in

Java-Homo erectus

**253.** Cycads and dicotyledons arose from common ancestor called 'A' that existed on earth during period 'B'. Choose the option which fill the blanks 'A'and 'B'correctly.

- A. Zosterophyllum and Triassic
- B. Chlorophyta and Slurian
- C. ASNSeed ferns and Carbobilerous
- D. Herbaceous lycopods and Cretaceous



# **254.** Presence of tooth buds during embryonic development of birds is an example of

A. Atavism

**B.** Mutation

C. Ontogeny repeats phylogeny

D. Genetic drift



**255.** Which of the following event of organic evolution was a turning point that changed the nature of atmosphere of primitive earth?

A. Respiration

- B. Chemosynthesis
- C. Anoxygenic photosynthesis
- D. oxygenic photosynthesis



**256.** The forelimbs of human, tiger, whale and bat represent

A. Fiomologous structures

B. Analogous structures

C. Vestigial structures

D. Functional similarity



**257.** Introduction of larvivorous fish in stagnant water can prevent the spread of all given diseases except

A. Dengue

B. Diptheria

C. Chikungunya

D. Filariasis



# **258.** Which of the following fossil is considered as missing link between reptiles and birds?

A. Hyracotherium

B. Pteranodon

- C. Archaeopteryx
- D. Sphenodon





# **259.** Which amongst the following is the most

# recent ancestor of existing mammals?

A. Thecodonts

- B. Saurapsids
- C. Synapsids
- D. Therapsids



**260.** Immunity which is not acquired after birth and is birth right of all individuals in a particular species is known as

A. Cell mediated immunity

B. Humoral immunity

C. Acquired immunity

D. Ininate immunity



**261.** The two key concepts of Darwinian theory of evolution are

A. Analogy and homology

B. Dvergent and convergent evolution

C. Convergence and adaptive radiation

D. Branching descent and natural selection





# 262. Select the mismatch

A. Skin and mucous membrane - Physical

barriers

- B. HCI in stomach Physiological barrier
- C. Macrophages Cellular barier
- D. Natural killer cells- Cytokine barrier





**263.** Black water fever is caused by:

- A. Nitrate pollution in water
- B. Infection of Leishrmiania donovani
- C. Infection by sporozoan Plasmodium
- D. Infection of Yersinia pestis





# 264. The most important biofertiliser in rice

field is

A. Azotobacter

B. Rhizobium

C. Aulosira

D. Beijerinckia





**265.** Which of the following organisms can increase nitrogen content of the soil?

A. Frankia ana Azotobactor

B. Boletus and Glomus

C. Rhizobium and Glomus

D. Bacilum anthracis and Salmonella

Answer:

**266.** Trichoderma species are potentially useful as

# A. For control of aphids and stem borer

# B. For control of klamath weed

- C. To control several root borne pathogens
- D. To control prickly pear

# Answer:

267. Biogas formation is

A. Microbial process

B. Involves obligate anaerobes in its

ultimate step

C. Three steped microbial process

D. More than one option is correct

#### **Answer:**

268. The organic acid which is used as a source

of calcium for infants is

A. Acetic acid

B. Fumaric acid

C. Gluconic acid

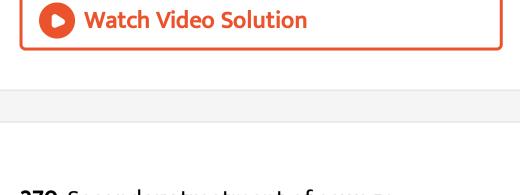
D. Butyric acid

#### Answer:

269. Select the correctly matched pair

A. Geotrichum candidum-Commercial source of protease B. Shakti and Protina-Lysine rich rice varieties cheese-Propionibacterium C. Cottage sharmanii

D. HD1553 variety- Sonalika



- 270. Secondary treatment of sewage
  - A. Leads to the separation of primary sludge
  - B. Involves process like seqential filtration
    - and sedimentation
  - C. Is physico-chemical process
  - D. Involves formation of activated sludge





# **271.** Blood cholesterol lowering statins are obtained from

A. Candida lipolytica

- B. Trichoderma polysporum
- C. Monascus purpureus
- D. Aspergilus flavus



**272.** In plant breeding, superior recombinant are\_\_\_\_for several generations till reach a state of homozygosity so that the charecters will\_\_\_\_in the progeny.

A. Cross polinated, not segregate

B. Self polinated, not segregate

C. Self-polinated,segregate

D. Cross-polinated, segregate

# Answer:

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**273.** The microbe used in the preparation of butyric acid ,is

A. Aspergilus niger

B. Clostridium butylicum

C. Acetobacter aceti

# D. Penicilium notatum

# Answer:

Watch Video Solution

# **274.** The root of plant breeding programme is

- A. Cross hybridisation
- B. Commercialisation of new cultivars
- C. Collection of germplasm
- D. Selection of superior recombinants





# 275. Resistance of wheat to stem saw fly is due

to

A. smooth leaves

B. high aspartic acid

C. solid stem

D. hairy stem



276. Select mismatched pair

- A. Triticale- polyploid breeding
- B. pomato -sexual hybridization
- C. Parbhani Kranti-variety of bhindi
- D. Kalyan Sona- wheat variety



# **277.** The capacity to generate a whole plant

from any cell/explant is called:

A. Micropropagation

**B. Hybridisation** 

C. Regeneration

D. Tolipotency





**278.** which varieties of wheat were brought to India from Mexico and modified by Gamma radiation?

A. Lerma Rojo-64 and Sonara-64

B. Ganga and Ranjit

C. Jaya and Ratna

D. Pusa Lerma and Sharbati sonora





**279.** Eleven membered cyclic obligopeptide which acts as immunosuppressive agent is produced by

A. Penicillin

B. Clostridium butylicum

C. Fusarium monoliforme

D. Trichoderma polysporum



**280.** Select the mismatched pair:

A. Biodiesel - Jatropha

B. Statins - Streptococcus

C. SCP - Methylophilus

D. Energy crop - Maize

**Answer:** 

**281.** Biofortification includes improvement in all, except

A. Oil content and quality

B. vitamin content and quality

C. micronutrient content

D. protein content

# Answer:

**282.** Select incorrect statement

A. conventional plant breeding techniques

dates back to 9,000 - 11,000 years ago

B. green revolution was dependent to a

large extent on plant breeding

techniques

C. crops varieties like Pusa Gaurav and Pusa

A-4 bred by hybridization and selection

D. Pusa Sadabahar is a disease resistant

variety of cowpea

#### **Answer:**



283. The protoplasts of two plants are brought

in contact and made to fuse by means of

A. 2,4-D

B. sodium nitrate

C. polyethylene glycol

D. Both (2) & (3)

# Answer:



284. Heterochromatin is said to be

A. light strained region

B. transcriptionally active DNA

C. loosely packed DNA

# D. transcriptionally inactive DNA

# Answer:

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# 285. Mark correct option (w.r. t. Reverse Central

Dogma)

A.  $\phi \times 174$ 

#### B. TMV

C. RSV

# D. $\lambda$ - phage

# Answer:

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**286.** Consider the following statements:

(a) DNA is a long polymer of ribonucleotides

(b) only one strand of DNA acts as a template

for the synthesis of a new strand of DNA

during replication

(c) tRNA is also called adaptor molecule

(d) DNA performs both autocatalytic and heterocatalytic functions. Which of the given statements are correct?

A. (a) & (b)

B. (c) &(d)

C. (a), (c) & (d)

D. (b) , (c) & (d)

# Answer:

287. Mark odd one w.r. t. Chargaff rule

A. purine guanine is equimolar with

pyrimidine cytosine

B. base ratio  $\frac{A+T}{C+G}$  is unity for all species C.  $\frac{A+T}{C+G}$ =1

D. sugar deoxyribose and phosphate

Residues occur in equal number

#### Answer:

288. Select wrongly matched pair

A. gene regulation in E. coli - splicing of

hnRNA

B. UGA - opal

C. tertiary structure of tRNA- inverted L

shaped

D. 23SrRNA-ribozyme in bacteria

Answer:

289. In a transcription unit

A.  $\rho$  factor is required for chain termination and release of RNA chain B. structural sequences usually code for monocristronic RNA in bacteria C. promoter is located towards 3' and (downstream) of structural gene D.  $\sigma$  factors bind to Terminator site



**290.** Read the following statement (A) AUG has dual functions (B) any reference while defining a transcription unit is made with polarity of coding strand

A. only (A) is correct

B. only (B) is correct

C. both the statements are correct

## D. both the statements are incorrect

#### Answer:

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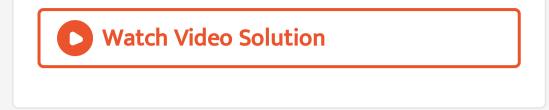
## **291.** In E.coli, lac operon is induced by

A. lactose

B. constitutive gene

C.  $\beta$ - galactosidase

D. repressor protein



292. Isotopes used for proving semiconservative replication of DNA by Meselson and Stahl are A.  $N^{14}$  and  $N^{15}$ 

B.  $O^{18}$  and Radioactive thymidine

C.  $P^{32}$  and  $S^{35}$ 

D.  $C^{14}$  and  $O^{18}$ 



**293.** If the length of a double helical DNA if 1.7 meters then the number of base pairs present in the DNA is

- A.  $4.6 imes10^{6}$  bp
- B.  $5 imes 10^9~{
  m bp}$
- C.  $1.9 imes 10^9$  bp
- D.  $3.4 imes10^9$  bp





**294.** Wobble hypothesis explain

- A. gene regulation in eukaryotes
- B. reverse transcription
- C. degeneracy of genetic code
- D. transcription

Answer:



## 295. Translocation factor in bacteria during

## translation is

A. EF-Tu

- B. EF -G
- $\mathsf{C}.\,IF_2$
- D. eEF-2

#### Answer:





**296.** Transcription and translation can be coupled in bacteria because

A. there is clear cut division of labour due

to presence of three types of RNA

polymerases

B. mRNA requires processing to become active

C. chain elongation is catalyzed by core

enzyme

D. transcription and translation occur in

same compartment

**Answer:** 

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**297.** How many amino acids can be coded by the sequence if the  $14^{th}$  base of given mRNA converts to G? 5' AUG UUU CUC UAG CCG 3'

A. four

B. two

C. three

D. five

#### **Answer:**



**298.** The triplet nature of genetic code was suggested by

A. Hargobind Khorana

B. Watson and Crick

C. nirenberg and matthaei

D. George gamow

#### **Answer:**

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299. RNA polymerase III can catalyse the

synthesis of all, except

A. SnRNA

B. tRNA

C. hnRNA

D. 5SrRNA

Answer:

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300. The DNA sequence that provides binding

site for RNA polymerase in eukaryotes is

## A. TATA box

- B. Terminator Sequence
- C. Shine Dalgarno sequence
- D. Pribnow box

#### **Answer:**

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301. DNA is preferred for storage of genetic

information because it

## A. Can replicate

## B. Has a structural and catalytic role

C. Has 5-methyl uracil which confers it

stability

D. Is dependent on RNA for translation

Answer:

**302.** One codon codes for only one amino acid. This is called (a) nature of genetic code. An exception to the above feature of genetic code is (b) codon.

A. (a)-Ambiguous, (b)-CUC

B. (a)-Unambiguous, (b)-GUG

C. (a)-Degeneracy, (b)-AUG

D. (a)-Universal, (b)-UUU

#### Answer:





303. The process which represents dominance

of RNA world is

A. Transcription

**B. DNA replication** 

C. Transduction

D. Splicing

Answer:

**304.** Select the mismatched pair

A. Ligases - Joining of Okazaki fragments

B. Hershey and Chase experiment -

Unequivocal proof that DNA is genetic

material

C. QB Bacteriophage - DNA as genetic material

D. DNase - Inhibit transformation



**305.** Complete the following statement. Widal test in \_\_A\_\_ of man suggest the infection of \_\_B\_\_.

A. A-Faeces, B-Entamoeba histolytica

B. A- Faeces, B-Mycobacterium tuberculosis

C. A-Sputum, B-Rhino virus

D. A-Blood, B-Salmonella typhi





**306.** Ronald Ross is assosiated with discovery of

A. Causative agent of cholera

B. Oocyst of Plasmodium in stomach wall of

female Anopheles

## C. Gametocytes of Plsmodium in RBC of

man

D. Causative agent of tuberculosis

#### Answer:

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**307.** Oparin's coacervates fail to fulfill the requirement as a candidate of probable precursors of life because

A. They do not exhibit simple form of

metabolism

B. They do not have lipid cuter membrane

C. They cannot reproduce

D. Both (2) & (3)

#### Answer:

**308.** Sting of honey bee and scorpion exemplify

A. Divergent evolution

B. Vestigeal organ

C. Homologous organ

D. Analogous organ

#### Answer:

**309.** All of the following are examples of atavism in humans except

A. Nipples in male

B. Exceptionally long dense hair

C. Tail in new born human baby

D. Greatly developed canine teeth

## Answer:

**310.** Dinosaursad toothed birds became extinct in

A. Beginning of cretaceous period of mesozoic era

B. End of permian period of palaeozoic era

C. End of triassic period of mesozoic era

D. Begining of jurassic period of mesozoic

era







**311.** Name the first one-toed horse.

A. Merychippus

B. Pliohippus

C. Eohippus

D. Mesohippus

Answer:

312. Which of the following is an incorrect match w.r.t. theory and its proposer/supporter?
A. Germ theory of - Edward Jenner disease and immunology

B. Mutation Theory - Hugo de Vries

C. Theory of continuity of - A. Weismann

Germplasm

D. Arrificial Selection - Charles Darwin

Theory



**313.** Which one the following factors does not affect the Hardy-Weinberg law of genetic equilibrium ?

- A. Gene migration
- **B.** Natural selection
- C. Gene recombination
- D. Tandom mating



**314.** Industrial melanism is one of the most striking example which demonstrates natural selection. After industrial revolution the black coloured form of the peppered moth increased as compared to dull grey or white moth. The black coloured form developed as a result of A. Deposition of smoke over white moth

B. Genetic drift

C. Dominant mutation

D. Recessive mutation

#### Answer:

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315. The allelic frequency of recessive allele is

0.3. Find out the number of heterozygous and

individuals in a population of 200

A. 21

**B.** 18

 $\mathsf{C.}\,42$ 

D.84

#### Answer:



# **316.** All of the following plants have been evolved from psilophyton except

- A. Bryophytes
- B. Sphenopsids
- C. Ferms
- D. Conifers



## **317.** Which of the following took place 10,000

years ago?

- A. Beginning of human settlement
- B. Development of agriculture
- C. Use of fire for hunting, cooking and

defense

D. More than one option is correct

Answer:

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**318.** Find out the incorrect statement.

A. The first human-like being the hominid was Homo habilis with cranial capacity 650-800cc B. Homo erectus existed about 1.5mya and probably ate meat C. In evolution of modern man there is parallel evolution of human brain and language D. The fossile of Ramapithecus has been

discovered in Ethiopia and Tanzania



**319.** Which of the following statement is correct w.r.t. Neanderthal man?

A. They had a cranial capacity of 1400 cc

and used hides to protect their body

and buried their dead

B. They had orthognathous face

C. Nanderthal man lived near east and central Africa between 1,00,000-40,000 years back D. During ice age about 75, 000 – 10, 000

years ago they gave rise to modern man

Answer:

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320. Find out the incorrect match.

A. Sibling species - Morphologically

dentical, but reproductively isolated

B. Convergent evolution - Darwin's finches

C. Directional selection - Evolution of

giraffe

D. Balancing selection - Sickle cell anaemia

Answer:

321. Mule and Hinnh are examples of

A. Hybrid breakdown

B. Gametic isolation

C. Hybrid inviality

D. Hybrid sterility

Answer:

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322. The book "An Essay on Principles of

Population " was written by

A. Alfred Wallace

**B.** Thomas Robert Malthus

C. Sewall wright

D. G L Stebbins

#### **Answer:**

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**323.** Which of the following is correct w.r.t. Lamarckism?

A. A change in environment brings about

changes in organism

B. An organ can develop further or

degenerate only due to continuous

variations

C. Only those variations are passed on to

the offspring which affect germ cells

D. Appetncy does not play any role in

evolution

#### **Answer:**



**324.** The ratio of ammonia,methane and hydrogen gas in the spark chamber of Miller's experimental set-up was

A. 2:2:1

B. 3: 3: 4

C.2:1:2

D. 1:2:2

#### **Answer:**

Watch Video Solution

#### 325. Read the statement given below and find

the incorrect statement

A. On the primeval earth, organic compounds got degraded due to free oxygen B. Arrhenius suggested that primitive form of life called panspermia consisted of spores or seeds which existed throughout universe and produced different forms of life on this earth C. Life appeared 500 million years after the formation of earth i.e almost four billion

years ago

D. Louis Pasteur by careful experimentation

demonstration that life comes only from

pre-existing life, by using pre-sterilized

flasks and killed yeast

Answer:

Watch Video Solution

**326.** Which of the following is an example of artificial selection?

A. Development of retractile claws in

carnivorous mammals

B. Development of cabbage, cauliflower and

broccoli

C. Development of short legged ancon sheep

D. Cactus ground finches and insectivorous

tree finches on Galapagos islands

developed from seed eating finche.

#### Answer:

Watch Video Solution

#### 327. Drosophila pseuddobscura and

Drosophila Persimilis represent.

A. Sibling species

- B. Anagenesis
- C. Paraspecies
- D. Geographical isolation

Watch Video Solution

**328.** Stratum comeum prevents the entry of bacteria and viruses in human body. It is a part of non specific innate immunity to which also belongs.

- A. Plasma cells and Antibodies
- B. Mucous Membrane
- C. Tears and Saliva
- D. Neutrophils and Monocytes

Watch Video Solution

329. Which of the drugs are used for quick

relief from symptoms of allergy?

- A. Anti Histamine
- B. Adrenaline
- C. Prednisolone
- D. More than one option is correct



330. The light and heavy chains is an antibody

molecule are linked to each other mainly by

- A. Disulphide bonds
- B. Peptide bonds
- C. Iconic bonds
- D. Hydrogen bonds



331. Secondary immune response differs from

primary immune response in that it

A. Declines repidly

B. Is feeble

C. Is due to memory cells

D. Takes long time to establish.

#### **Answer:**

Watch Video Solution

332. The gense for MHC in humans is present

on

A. chromosome 10

B. chromosome 21

C. Chromosome 3

D. Chromosome 6

#### **Answer:**

Watch Video Solution

**333.** Which of the following class of proteins is represented by antigen presenting cells to express antigenic peptide to T helper cells?

A. MHC1

#### B. HLA1

C. MHC11

D. Both (1) and (2)

#### **Answer:**

Watch Video Solution

**334.** Which of the following is an incorrect match w.r.t lifecycle of plasmodium vivax

A. Fertilisation-Intenstine of phi Anopheles

B. Schizogony- Stomach wall of phi

Anopheles

C. Infective stage for man- Sporozoite wall

of phi Anopheles

D. Onset-Liberation erythrocytic merozoites

from RBC

Answer:

Watch Video Solution

**335.** Mark the in correct match w.r.t diseases and diagnostic test

A. Diphtheria- Mantoux test

B. Leprosy- Lepromin test

C. Hepatitis B-Australian antigen

D. Dengue- Touriquet

#### Answer:

Watch Video Solution

**336.** Which of the following diseases is correctly matched with its symptoms/ description

A. Pertussis- Repeated bouts of violent cough which end in a whoop vomiting B. Rabies- Attack of paralysis beings with high fever headache, chilliness and pain all over the body inflammation of nervous system

C. Amoebiasis- Abscesses in small

intestines

D. Leprosy--Blood, containing, sputum, bubo

in groin and armpit

#### **Answer:**

Watch Video Solution

337. Which of the following immunoglobulins

is found as dimer and has a recretory J - chain

A. lgM

B. lgE

C. lgA

D. lgG

#### **Answer:**

Watch Video Solution

338. Anaphylactic shock is characterised by

A. Use of adrenaline to neutralize histamine produced, thereby, reducing lowering of BP B. Reddening of skin followed by appearance of minute blisters as a result of allergic reaction towards particular fabric C. Marked dilation of al arteries and drastic

fall in blood pressure

D. Swollen, reddened running eyes and nose as a result of allergy towards pollen

#### Answer:

Watch Video Solution

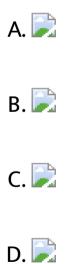
**339.** Consider the following four Statements and select whether they are true (T) or false(F). (A) The person suffering from SCID lacks both B-cells and T-cells (B) Multiple sclerosis is an autoimmune

disease

(C) Gamma globulins are synthesised in lymph

nodes

(D) Tetanus toxoid provides artificial passive immunity







340. Oral polio vaccine(OPV) was discovered by

A. Jonas Salk

B. Albert Bruce Sabin

C. Edward Jenner

D. Louis Pasteur

Answer:

Watch Video Solution

**341.** Which of the following statement is incorrect w.r.t. MALT?

A. It is the site of proliferation and differentiation of B-lymphocytes and Tlymphocytes B. It is located within the lining of digestive, respiratory and urinogenital tracts

C. It is the primary lymphoid organ

D. It is constitutes about 50% of the

lymphoid tissue in human body

#### **Answer:**

Watch Video Solution

#### 342. A thymectomized individual will

A. Show reduced ability to reject on

allograft

B. Show reduced B cell maturation

C. Strongly reject an allograft

D. Show proper development/maturation

of T cells

Answer:

Watch Video Solution

343. Which of the following statement is

incorrect w.r.t. natural killer cells?

A. NK cells release chemicals called perforins which cause cytolysis of microbe B. NK cells release tumour necrosis factors which kills target cells C. NK cells lack antigen receptors unlike B

cells and T cells

D. NK cells are formed in bone marrow and

mature in thymus



# **344.** Which of the following is not a phagocytic cellular barrier? (a) Histiocytes (b) Kupffer cells (c) Clasmatocytes (d) Mast cells

A. c & d

B. d only

C. a & b

D. b & d





**345.** The infective stage for secondary host(female Anopheles) in the life cycle of Plasmodium is

A. Trophozoite

- B. Cryptozoite
- C. Sporozoite
- D. Gametocytes





### **346.** Gaseous movement within the plant body

is due to

A. Diffusion and sometimes by active

transport

B. Active transport and sometimes by

diffusion facilitated diffusion

- C. Active transport only
- D. Diffusion only



## **347.** Water potential for pure water at atmospheric pressure

A. Maximum

B. Minimum

C. Zero

D. More than one option is correct





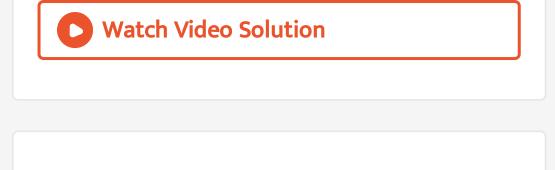
348. When a cell is fully turgid, its

A. OP = DPD

B. OP = Zero

C. DPD = Zero

 $\mathsf{D}.\,TP=Zero$ 



- 349. Choose the correct role of iron in plant
  - A. Splitting of water to liberate oxygen

during photosynthesis

- B. Helps in synthesis of coenzyme-A
- C. Helps in the formation of chlorophyll
- D. Helps in the formation of mitotic spindle





**350.** During transport, when sugar moved out of the sieve tube then the osmotic pressure at unloading end

A. Decrease

B. Increase

C. Partially increases then decreases

D. No change



**351.** Which of following will show toxicity if their concentration becomes slightly above the critical concentration?

A. Iron, Manganese

B. Calcium, Copper

C. Sulphur, Magnesium

D. Potassium, Phosphorous



**352.** Element found in plant growing near nuclear test site is

A. Radioactive selenium

B. Radioactive strontium

C. Radioactive sodium

D. Radioactive silicon





353. On the basis of diverse function, essential

elements are grouped into how many catagories?

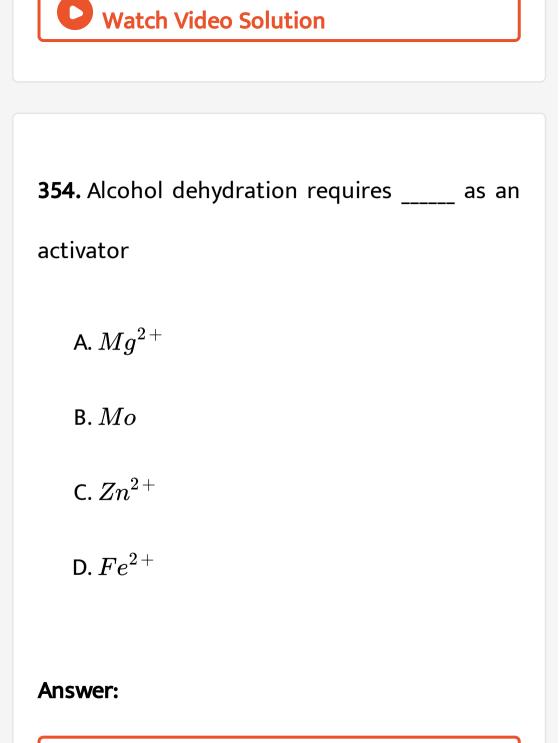
A. Two

B. Seventeen

C. Four

D. Fourteen





**355.** Select the incorrect match

- A. Potassium Protein synthesis
- B. Calcium Functioning of cell membrane
- C. Zinc Synthesis of gibberellin
- D. Chlorine Leads to evolution of oxygen

during photosynthesis

Answer:

**356.** Delay in flowering plants is due to the \_\_(A)\_\_ concentration of \_\_(B)\_\_

A. A B High N, K, S

B. A B Low N, S, Mo

C. A B High Ca, Cu, K

D. A B Low Ca, Cu, Mo

#### Answer:

**357.** Manganese toxicity

A. Stimulates calcium translocation in

shoot apex

B. Causes chlorosis and necrosis

C. Increases binding of Mg with enzyme

D. Delay in flowering and increases iron

uptake

Answer:

**358.** Nitrite is further oxidised to nitrate by the activity of

A. Nitrobacter

B. Nitrococcus

C. Pseudomonas

D. Anabaena

#### Answer:

**359.** Root nodules are formed by the division of

A. Epidermal cells

B. Endodermal cells

C. Cortical cells only

D. Cortical and pericyclic cells

#### Answer:

360. Who showed that only the green part of

the plants release oxygen?

A. T.W Engelmann

B. Julius von Sachs

C. Priestley

D. Jan Ingenhousz

#### Answer:

361. PS-II does not have

A. Chlorophyll a in reaction centre

B. Chlorophyll a with absorption peak at

700 nm

C. Antenna molecule

D. Pigment molecules bound to proteins

#### Answer:

**362.** In chloroplast, NADP reductase enzyme is locked

A. In stroma in the soluble form

B. On the stroma side of the thylakoid

membrane

C. Inside the lumen

D. Inner surface of thylakoid membrane

Answer:

**363.** Carbon reduction pathway in  $C_4$  - plants is carried out by the activity of

A. PEPCase in mesophyll cytoplasm

B. *RuBisCO* in mesophyll chloroplast

C. RuBisCO in bundle sheath chloroplast

D. Pepco in mesophyll chloroplast

#### Answer:

**364.** Find the correct statement

A. Dark reaction is affected by temperature but not directly dependent on light B.  $CO_2$  is required in all major steps of Calvin cycle C. Sugarcane is more efficient in  $CO_2$ fixation than maize D. Agranal chloroplast is found in mesophyll cell of  $C_4$  plants

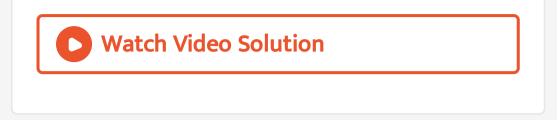
#### Answer:



**365.** Compititive binding of  $O_2$  and  $CO_2$ , is shown by which of the following enzymes in chloroplast?

- A. PEP carboxylase
- B. *RuBisCO* in mesophyll chloroplast
- C. ATP synthetase
- D. More than one option is correct

#### Answer:



**366.** Choose the correct one w.r.t. photorespiration

A. Rate of photorespiration is high in

bright light nad high CO\_2

B. Oxidation chloroplast and  $CO_2$  fixation

occurs at the same time

C. Does not utilise ATP

D. Decarboxylation occurs in mitochondria

#### **Answer:**



### **367.** At $CO_2$ compensation point

A. The rate of photosynthesis is equal to

the rate of respiration

B. Photosynthesis stops and repiration

becomes slow

C. Rate of photosynthesis anad respiration

is high

D. Rate of photosynthesis is decreased but

respiration is not affected

Answer:

368. T.W Engelmann experimented on

A. Chemosynthetic bacteria

B. Cladophora

C. Hydrilla

D. Photosynthetic bacteria

Answer:

369. Site of decarboxylation during complete

oxidation of food in eukaryotic cells is

A. Cytoplasm

B. Mitochondrial matrix

C. Perimitochondrial space

D. Mitochondrial membrane

#### Answer:

370.	Two	redox	equivalents	are	removed
during EMP pathway in					
A. Formation of PGAL					
B. Conservation of PEP					
C.	C. Formation of BPGA				
D.	Break	down	of	fruct	ose-1-6
	biphc	osphate			

**Answer:** 

**371.** The main splitting enzyme in glycolysis

A. PFK

B. Aldolase

C. Hexokinase

D. Transphosphorylase

Answer:

372. Aerobic respiration completes in

A. Mitochondrial matrix only

B. Mitochondrial matrix and inner

mitochondrial membrane

C. Two process is, one in cytoplasm and

another in mitochondrial matrix

D. One process of complete oxidation in

mitochondrial membrane





# **373.** Second decarboxylation in TCA cycle

occurs at

A. Citric acid

B. Malic acid

C. alpha-Ketoglutaric acid

D. Isocitric acid

Answer:



374. Last electron donor in ETC is

A. 
$$\left(\frac{1}{2}\right)O_2$$
 in mitochondria matrix  
B.  $\left(\frac{1}{2}\right)O_2$  associated with inner

mitochondrial membrane

- C. Two Cu-centre in complex-IV
- D. Two Cu-centre in mobile protein Cyt-c



# **375.** How many ATPs are gained from one PEP molecule in its complete oxidation?

**A**. 15

**B**. 16

**C**. 31

 $\mathsf{D}.\,32$ 

#### Answer:

**376.** Which of the respiratory substrates consumes more  $O_2$  for oxidation by releasing less  $CO_2$ 

A. OAA

B. Malic acid

C. Palmitic acid

D. Sucrose

#### Answer:

**377.** Select incorrect sttement w.r.t dark reaction in maize plant.

A. More efficient  $CO_2$  fixation mechanism

B. Dimorphic chloroplast

C. Expense of  $18\ {\rm ATP}$  in Calvin cycle for

production of one glucose

D. Photolysis of water is concerned with

bundle sheath chloroplast







## 378. Cytokinin is known for

- A. Respiratory climactic effect
- B. Antiageing
- C. Stoppage of cambial activity
- D. Substitution of cold treatment

#### Answer:

379. Choose odd one out w.r.t developmental

plasticity

A. Cotton

B. Coriander

C. Buttercup

D. Larkspur

**Answer:** 

380. Which of the following is responsible for

thinning of cotton and cherry?

A. Ethylene

B. GA

C. ABA

D. Auxin



**381.** Which one of the following hormone plays an important role in seed development, maturation and dormancy?

A. GA

 $\mathsf{B.}\, C_2 H_4$ 

C. ABA

D. Cytokinin

#### Answer:

382. PGR with terpene composition is

- A. Synthesised from acetylcoenzyme A
- B. Methionine derivative
- C. Widely used in agriculture
- D. Strong weedicide

Answer:

383. Nutrient mobilisation in plants and \_\_\_\_ in

leaf senescence are the role of\_\_\_\_

A. Delay, Auxin

B. Promotes, GA

C. Delay, Cytokinin

D. Promotes, auxin

#### Answer:

384. Xylem differentiation is stimulated by

A. Auxin

B. Ethylene

C. ABA

D. Cytokinin

Answer:



385. Select incorrectly matched pair

A. LDP \_\_ Flowering below critical

photoperiod

B. SDP \_\_\_ Soyabean

C. DNP \_\_ Flowering throughout the year

D. Low temperature stimulus \_\_\_ Perceived

by mature shoot apex

Answer:

**386.** Among bony fishes, shark, land snails, aquatic amphibians, crocodiles in water, birds, aquatic insects, earthworm during rainy season, liver flukes and rabbit, how many of them are ammonotelic?

A. Seven

B. Five

C. Six

D. Eight





### **387.** Proximal convoluted tubule differs from distal convoluted tubule of nephron in

A. Bearing epithelial cells containing

numerous microvilli

- B. Facultative water reabsorbtion
- C. Reabsorbing almost all glucose passively
- D. More than one option is correct



**388.** All of the following factors during regulation of renal function decrease GFR, except

- A. Increased activity of sympathetic nerves
- B. Myogenic mechanism
- C. Angiotensin II
- D. Atrial natriuretic factor



**389.** Blood test of a person shows glucose level to be 130mgper100 ml of blood. The urine of this person will

A. Show the presense of glucose

B. Not show the presense of glucose

C. Not show Ketone bodies at all

D. Be hypotonic or isotonic



**390.** Which of the following is an incorrect match w.r.t. animal and its excretory structure?

A. Taenia - Flame cells

B. Palaeomon - Green glands

C. Nerels - Organ of Bojanus

D. Periplaneta - Malpighian tubules



**391.** Which of the following statement is incorrect?

A. Majority of the nephrons in human

kidney are cortical nephrons

B. Vasa recta is highly reduced or absent in

juxtamedullary nephron

C. In juxtamedullary nephron, the loop of
Henle is very long and runs deep into
the medulla
D. The efferent arteriole emerging from
glomerulus forms peritubular capilliaries

Answer:

Watch Video Solution

392. Joint between atlas and axis is

A. Saddle joint

B. Pivot joint

C. Ball and socket joint

D. Hinge joint

#### **Answer:**

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393. Tetanus differs from tetany in having

A. Low calcium in body fluid

- B. Low calcium in sarcoplasm
- C. Rapid spasms in muscles due to low

 $Ca^+2$  in body fluid

D. Sustained contraction in muscles due to

high  $Ca^+2$  in sarcoplasm

#### **Answer:**

**394.** Which of the following is correct match w.r.t. bone and its total number in human body?

A. Ribs-12

B. Patella-1

C. Floating ribs -4

D. Cervical vertebrae

#### Answer:

**395.** All the following are unpaired cranical

bones of skull in human , except

A. Occipital

B. Mandible

C. Frontal

D. Spheniod

Answer:

**396.** Which of the following human bone is incorrectly matched with its description? A. Scapula - Large triangular flat bone situated in the ventral part of the thorax between the second and seventh ribs B. Sternum- Dagger shaped flat bone on the ventral midline of thorax C. Hyoid- U-shaped bone present at the base of buccal cavity , does not articulate with any other bone of body

D. Femur - Thigh bone, longest bone of

body which articulates with tibia

forming hinge joint

Answer:

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**397.** Which of the following statement is incorrect w.r.t. ribs?

A. A rib has two articulation surfaces on its dorsal end and is hence called bicephalic B. True ribs are first seven pairs attached drsally to thoracic vertebrae and ventrally to sternum with the help of hyaline cartilage C. The 8th,9th and 10th pair of ribs are false ribs, do not articulate directly with the sternum but join the seventh rib with the help of calcified cartilage

D. Floating ribs are 11th abd 12th pair not

connected ventrally with sternum

#### **Answer:**



398. Unipolar type of neuron is usually found

in the

A. Cerebral cortex

B. Retina

C. Embryonic stage

D. Dorsal root ganglia

#### Answer:

Watch Video Solution

# **399.** Which of the following is a correct difference between electrical and chemical synapse?

A. Synaptic cleft - Electrical synapse(larger)				
- Chemical synapse(smaller)				
B. Impulse t	8. Impulse transmission -			Electrical
synapse(slower) -				chemical
synapse(faster)				
C. Direction	of	impulse	<u>)</u>	Electrical
synapse(unidirectional) -				Chemical
synapse(Bidirectional)				
D. Abundance	in	body	-	Electrical
synapse(less	or	rare)	-	chemical

synapse(more)

#### Answer:

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**400.** Aqueduct of sylvius connects

- A. Paracoel with diocoel
- B. Diocoel with metacoel

C. Metacoel with central canal of spinal

D. Paracoel with rhinocoel

#### Answer:

Watch Video Solution

**401.** Visual reflex involves control and coordination movements of head and eyes to fix and focus on an object.Such reflexes is controlled by

A. Fore brain

B. Mid brain

C. Hind brain

D. All of these

Answer:

Watch Video Solution

#### 402. Which of the following is a conditioned

reflex action?

A. Salivation on taste of food

B. Pupiliary constriction in new born baby

C. Knee jerk reflex

D. Playing a guitar

#### Answer:

Watch Video Solution

**403.** Vestibular apparatus of the internal ear includes - (a) crista ampullaris and macula , (b) Semicircular canals , (c) otolith organ , (d) Saccule and utricle

A. b & c

B. a & d

C. b, c,& d

D. a ,b ,c & d

#### Answer:

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**404.** Which of the following is an incorrect

function of the hormone in human body?

A. Melatonins- Maintain normal rhythms of sleep wake cycle, body temperature, influences menstrual cycle B. Thyroxin- Regulates basal metabolic rate, erythropoiesis and maintenance of water and electrolyte balance C. Thymosin- Differentiation of B lymphocytes which provide cell mediated immunity

D. Cortisol- Inhibits cellular uptake and utilisation of amino acids,maintain cardio-vascular system as well as the kidney funcfions

**Answer:** 

Watch Video Solution

**405.** All of the following disorders are due to under secretion of the hormones in human body except

A. Gull's disease

B. Addision's disease

C. Diabetes insipidus

D. Grave's disease

#### **Answer:**

Watch Video Solution

406. Whuch of the following is not correct of

peptide hormones?

A. Insulin,glucagen,melatonin

B. Thymosin, ald osteron, somatotrophic

hormone

C. Thyroxin, somatostatin, FSH

D. parathormone, glucagon,thymosin

Answer:

**407.** Which of the following is correct set of function of catecholamines?

A. Bradycardia, Piloerection, Glycogenolysis

B. Lipolysis, Tachycardia, Pupiliary

constriction

C. Piloerection, Pupiliary dilation

D. Sweating, Tachypnea, Lipogenesis

Answer:



408. Allergic symptoms in the human body can

be overcome by administration of

A. Insulin

B. Testosterone

C. Histamine

D. Cortisol

**Answer:** 

**409.** Which of the following hormone acts on pancreas and gall bladder and stimulates secretion of pancreatic enzymes and release of bile juice , respectively?

A. Gastrin

B. Cholecystokinin

C. Secretin

D. Gastric inhibitory peptide

#### Answer:

**410.** Which of the following cranial nerve helps in accommodation along with movement of the eyeball in orbit?

A. IV(Trochlear)

B. III ( Occulomotor)

C. VI ( Abducens)

D. All of these

#### Answer:





**411.** Which of the following statement is correct w.r.t. fovea centralis?

A. Fovea is the point of maximum resolution and is highly vascular

B. It is thinned out portion of retina where

rods and cons are densely packed

C. The ratio of cone, bipolar cell and

ganglion cell is 1:1:1 at fovea

D. Fovea is the point on ratina where

resolution is the least

#### **Answer:**



412. Which of the following neural disorder is

caused by destruction of dopamine secreting

neurons of basal nuclei?

A. Parkinson's disease

B. Huntington's chorea

C. Alzheimer's disease

D. Broca's aphasia

#### Answer:

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## **413.** Which of the following is an incorrect match w.r.t. endocrine gland and its location?

A. Pituitary gland - Sella tursica of sphenoid

bone

B. Pineal gland - Attached to epithalamus

C. Parathyroid - Back side of thyroid gland

D. Adrenal gland - Posterior part of each

kidney

Answer:

**414.** Which of the following hormone is correctly matched with its source and target organ?

A. Insulin - α-cells of pancreas - Liver

B. Testosterone - Sertoli cells of

seminiferous tubules - Bones

C. Prolactin - Anterior lobe of pituitary

gland - Mammary gland

D. Gastrin - Pyloric stomach - Oesophagus



- 415. Which of the following are related to the posterior pituitary?(a) Hassll's corpuscles(b) Neurohypophysis
- (c) Herring bodies
- (d) Phaeochromocytes

A. (a) & (b)

B. (b) & (c)

C. (c) & (d)

D. (a) & (b)

## Answer:

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**416.** A child is physically stunted and mentally retarded. He is suffering from hypothermia, low heart rate ad low blood pressure, pot belly, pigeon chest and protruding tongue is

also observed. This could be a result of

hyposecretion of

A. Growth Hormone (Dwarfism)

B. Thyroxine (Cretinism)

C. Aldosterone (Conn's syndrome)

D. Cortisol (Cushing's syndrome)

Answer:

**417.** Calcium binding protein in the sarcoplasmic reticulum of skeletal muscle fibre is

A. Dystrophin

B. Titin

C. Calsequestrin

D. Calmodulin

## Answer:

418. During muscle contraction

- (a) A band remains of length same
- (b) O band increases
- (c) H zone and M line disappear
- (d) I band increases
- € Membrane of Krause comes closer
- (f) Sarcomere lengthens

A. (a), (b), (c) & (e)

B. (a), (b), (c), (d), (e) & (f)

C. (d) & (f)

D. (a), (c) & (e)

#### Answer:

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**419.** White muscle fibres differ from red muscle fibres in being/having (a) Poor in mitochondria (b) Abundant in myoglobin (c) Faster in rate of contraction (d) Less diameter (e) Well developed sorcoplasmic reticulum

A. (a), (c) & (e)

B. (b) & (d)

C. (a), (b), (c), (d) & (e)

D. (c) & (e)

#### Answer:

Watch Video Solution

420. In cardiac muscle

A. Troponin is absent

B. Gap junctions are absent

C. Autorhythmicity is absent

D. Capacity for regenration is absent

## Answer:



## **421.** The osmolarity of filterate in PCT is

A. Half of the osmolarity of filterate in hair

pin loop

B. One-fourth of the osmolarity of filterate

in hair pin loop

C. One-sixth of the osmolarity of filterate in

collecting duct of inner medullary region

D. Half of the osmolarity of filterate in

collecting duct of inner medullary region

Answer:

422. Renal calculi is a result of

A. Hypertension

B. Calcium oxalate and calcium phosphate

crystals

C. Excess of nucleic acid metabolism

D. Both (2) & (3)

#### Answer:

423. In short day plants flowering

A. Needs photo period longer than the critical day length B. Can be induced in non-inductive periods by the use of GAs C. occurs only if the skotoperiod is less than a critical period D. Is inhabited by interruption of darkness

do red light wavelength

## Answer:



# **424.** The most widely used hormone in agriculture

A. Promotes root growth

B. helps breaking seed dormancy

C. promote senescence and abscission of

leaves and flowers

D. More than one option is correct

## Answer:

Watch Video Solution

**425.** Hastening the maturity period in confires does leading to Ireceived production can be observed by spring

A. Abscisic acid

B. Ethylene

C. Auxins

D. Gibberellins

## **Answer:**



**426.** Plant hormone promoting abscission in senescent parts but preventing this in premature organs of plant is

A. Not associated with apical dominance

B. not associated with xylem differentiation

and cell division

C. Derivative of indole compounds

D. Synthesised naturally in shoot apex only

**Answer:** 

Watch Video Solution

**427.** Formation of meristerms like cambium and cork cambium from parenchyma cells is

- A. dedifferentiation
- **B. Differentiation**
- C. Redufferentiation
- D. more than one option is correct

## Answer:

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**428.** Elongation phase of plant growth is characterized by all except

- A. Deposition off new cell wall
- B. Divisions and protoplasmic modification
- C. Increased vacuolation
- D. Cell enlargement

#### **Answer:**

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**429.** Which intermediate of TAC cycle is withdrawn for synthesis of chlorophyll

A. alpha-KGA

B. Succinic acid

C. Succinyl CoA

D. Acetyl CoA

#### **Answer:**

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430. Choose incorrect statement w.r.t. ETS in

mitochondria

A. Cyc.c is a small protein attached to outer

surface of the inner membrane

B. The ETS consist of two mobile electron carries

C. Ubiquinone receives redox equivalence from NADH+H  $^+$  and  $FADH_2$  both

D. Reduce ubiquinone is oxidised with the

transfer of electrons to cyt.c via complex

## Answer:



## 431. RQ of germinating fatty seeds is

A. more than one

B. infinite

C. Less than one

D. Unity

#### **Answer:**

**432.** Synthesis of ATP inhibited when proton movement from outer surface to matrix of mitochondria complex v does not occur due to

A. Oligomycin

B. Rotenone

C. Cyanide

D. Antimycin A

## Answer:

433. Substrate entrant in TCA cycle is

- A. A tricarboxylic acid having six carbon
- B. Acetyl CoA produced from pyruvic acid in

presence of enzyme pyruvate kinase

- C. 3-C compound formed in cytoplasm
- D. Formed in Matrix of mitochondria troll

oxidative decarboxylation of pyruvic acid

#### Answer:



**434.** Select incorrect for the process of fermentation by Yeasts

A. Redox equivalents formed in glycolysis is used in coversion of pyruvic acid to acetaldehyde

B. only two molecules of ATP is net gain per

C. only less than 7% of the energy is

glucose is released

## D. The process is hazardous to yeasts due

to its product

## **Answer:**



**435.** Net yield of APT when two molecules of fructose -1,6- beast for Speed is oxidized 2 pyruvic acid through glycolytic way in absence of  $O_2$  is

A. 16

B. 20

C. 8

D. 6

## **Answer:**



436. respiratory pathway invariably present in

all living organisms

A. involve special breakdown of glucose into two molecules of pyruvate without yielding the redox equivalents B. utilises sucrose directly as respiratory substrate C. occurs in cell cytoplasm even in presence of  $O_2$ D. cannot form ATP by substrate level phosphorylation

Answer:



## **437.** What is not related to cellular respiration?

- A. Energy is released in a series of slow
  - stepwise reaction in presence of
  - enzymes
- B. The energy released by breakdown of C-C
  - bonds is not used directly for cell
  - metabolism

C. breaking of C-C bonds of complex compounds through reduction in absence of  $O_2$ D. all the energy content in respiratory

substance is not released free into cell

Answer:

**438.** Currently availability of  $CO_2$  levels in atmosphere is limiting to all except

A. Wheat and tomato

B. Maize and sugarcane

C. Wheat and rice

D. Tomato and bell pepper

## Answer:

**439.** The primary acceptor of  $CO_2$  in sugarcane plant is

A. 3-C compound regenerated in mesophyll

cells with the help of enzyme pyruvate

dikinase

B. 3-PEP present in bundle sheath cell cytoplasm

C. located in chloroplasts of bundle sheath cells

## D. PEPcase present in vacuole of mesophyll

cell

## **Answer:**



440. carotenes and xanthophylls in plants are

yellow to orange pigments and act as shield

pigments because

A. they are specialised proteins which
absorb light strongly in blue violet range
B. they prevent chlorophyll from
photooxidation
C. they absorb light and transfer it to
chlorophyll through inductive resonance
D. more than one option is correct

Answer:

441. the first step in photosynthesis is the

A. photoexcitation of chlorophyll and

emission of electron

B. reduction of  $NADP^+$ 

C. photophosphorylation

D. photolysis of water

#### Answer:

**442.** which of the following does not participate when light dependent phase yeilds only ATP as assimilitary power?

A. NADP reductase

B.  $P_{700}$ 

C. Plastoquinone

D. Cyt b-f complex

## Answer:

**443.** primary electron acceptor in noncyclic photophosphorylation in light phase is

A. pheophytin

B. plastocyanin

C. ferredoxin

D. cytochrome b

## Answer:

**444.** biennial plants like\_\_\_\_need to be exposed to low temperatures so as to Houston flowering later in life. This treatment is known as

A. cabbage,stratification

B. winter wheat varieties, springification

C. sugarbeet, Vernalisation

D. Both(2)&(3)

Answer:

**445.** Cladophora was placed in a suspension of aerobic bacteria and irradiated to monochromatic light wavelength. The bacteria were found to be accumulated mainly in the region of

A. violet and red wavelength

B. green and red wavelengths

C. blue and red wavelength

D. only in red wavelength

## Answer:



**446.** choose incorrect statement for symbiotic  $N_2$  fixation by Rhizobium in leguminous plant

A. differentiation of specialised  $N_2$  fixing

cells in root cortex occurs when bacteria

are released from infectious thread

B. the energy required for symbiotic  $N_2$ 

fixation is obtained from bacteria only

C. nitrogenous catalyzes the conversion of

atmospheric  $N_2$  ammonia

D. leghaemoglobin acts as  $O_2$  scavenger

Answer:

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**447.**  ${NH_4^+}$  ions present in the plant are

A. stored in cytoplasm and vacuoles

B. used to convert it to acid into amides by

transamination

C. converted to glutamic acid in presence

of alpha-ketoglutarate dehydrogenase

D. Subjected to reductive amination using

NADPH

Answer:

**448.** nitrogen fixing nodules on the roots of non leguminous plant Alnus harbours the microbe

A. Frankia

B. Nitrobacter

C. Nitrosomonas

D. Rhizobium

Answer:

449. All minerals cannot be passively absorbed

by the root because

A. minerals are present in soil as charged particles

B. concentration of minerals in soil are generally less than the concentration of minerals in the root

C. transport proteins of root endodermis

are control point where the quantity and

type of minerals are adjusted

D. more than one option is correct

#### **Answer:**

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**450.** Mn in higher concentration produces micronutrient toxicity and it can cause

A. the appearance of green spots

surrounded by necrotic veins

B. the deficiency of magnesium iron and

calcium

C. decrease in fresh weight of tissues by

about 10percent

D. inhibition of calcium translocation to

root apices only

Answer:

**451.** Group of elements when deficient in plant matter causing chlorosis inhibition of cell division and delay in flowering is

A. Mg,K,Si

B. Cu,Mo,Cl

C. S,Mo,B

D. N,S,Mo

#### Answer:



**452.** Match the following Column-I a.Zn b.Mo c.Mg d.Fe Column-II (i).RuBisCO (ii) Catalase (iii) Alcohol dehydrogenase (iv)Nitrogenase

A. a(iv),b(iii),c(i),d(ii)

B. a(i),b(iii),c(ii),d(iv)

C. a(iii),b(iv),c(i),d(ii)

D. a(iii),b(i),c(ii),d(iv)

## Answer:

**453.** Essential elements required for uptake and utilisation of  $Ca^{2+}$ ,cell differentiation and carbohydrate translocation

A. Is absorbed as  $B_4 O_3^{2-}$  from soil

B. Occurs in plant tissues in large amount

i.e., greater than 10 mmole/kg of dry

matter

C. Is not useful in membrane functioning

D. Helps in pollen germination and cell

elongation also





**454.** Mark the mismatched pair

- A. NAA- synthetic auxin
- B. ABA- derivative of chlorophylls
- C. Kinetin  $-N^6$  furfuryl amino purine
- D. Gibberellic acid- Terpenes

Answer:



**455.** Choose correct options w.r.t. Essential elements for plant nutrition.

(a) absolutely necessary for normal growth and reproduction.

(b) Indirectly involved in plant metabolism.

(c) All the essential elements are components of biomolecules.

(d) The requirement of element is specific and cannot be replaceable by another element.

A. a & c

B. b & c

C. a & d

D. b & d

#### **Answer:**

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**456.** Phloem transport differs from translocation of water and minerals in plants

A. Its direction and dependence from

transpiration pull

B. Being transported in bulk from sink to

source

C. Occurring through living tissues don the

turgor pressure gradient

D. Being a physical process purely

Answer:

**457.** Select incorrect statement w.r.t. guttation.

A. Guttated water has salts of cations and

anions

- B. Occurs through special structures at the vein endings in leaf
- C. Manifestation of negative presssure

developed in xylem vessels or tracheids

D. Due o positive pressure developed in

root

## Answer:



## **458.** The important determinants of movement of molecules in or out of the cell is

A. cell membrane

B. Tonoplast

C. Cell wall

D. More than one option is correct





459. Choose incorrect option w.r.t. Plasmolysis

A. Water is lost first from the vacuole and

then from cell cytoplasm

B. Completely plasmolysed cell cannot

regain its turgidity when placed in

hypotonic solution

C. External solution occupies the space

between shrunken protoplast and cell

wall

D. Water moves out of the cell through

diffusion

**Answer:** 

**460.** When water flows into the cell and out of the cell and are in equilibrium, the cells are said to be

A. Turgid

B. Plasmolysed

C. Flaccid

D. Neither flaccid nor turgid

Answer:

**461.** Which of these decreases in a plant cell when solute molecules are added in cell cytoplasm?

A. Osmotic pressure

B. Osmotic potential

C. Diffusion pressure

D. More than one option is correct

## Answer:

**462.** Substances that have a hydrophilic moiety can move across the cell

A. Actively but are non-specific w.r.t. The

carrier proteins

B. Using transport proteins nd are not

affected by protein inhibitors

C. With the help of a protein carrier

D. Along the concentration gradient using

ATP





463. Choose incorrect option

A. Chemical stimuli and PGRs sometime

show polarised movement

B. Transport of substances in plants is

complex but probably in a definite order

and are sychronised

C. Nutrients are withdrwan from younger leaves and transported to the senescent regions D. Substances move by diffusion, cyclosis and active transport over small distances **Answer:** 

**464.** Substances like water, mineral nutrients, organic nutrients and plant growth regulators in plants

- A. Can be over short or long distances
- B. Are essentially transported without the

use of cellular energy

C. Are always tarnsported through vascular

system

D. Have multidirectional transport only

## Answer:



**465.** Which of the following hormones are produced in the hypothalamus and stored in the posterior pituitary

A. FSH and LH

B. ACTH and ADH

C. Prolactin and oxytocin

D. Vasopressin and oxytocin





## 466. Steroid hormones are derived from

A. Amino acids

- B. Cholesterol
- C. Protein
- D. Fatty acids





## 467. Mammalian prolactin is secreted by

- A. Neurohypophysis
- B. Adenohypophysis
- C. Adrenal medulla
- D. Hypothalamus

## Answer:



**468.** Find the correct option.

A. Glucocorticoid hormone is used for

suppressing allergies, rheumatoid

arthritis and inflammation

B. Cholecystokinin is an enzyme which

catalyses chemical reactions of liver

C. Insulin helps in the conversion of

glycogen to glucose

hyperactivity of thyroid gland is called

Gull's disease

Answer:

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# **469.** Which of the following is called emergency gland of the body?

A. Testis

B. Ovary

C. Adrenal medulla

D. Thymus

## Answer:

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**470.** When both ovaries are removed in a female rabbit, which hormone is decreased in blood?

## A. Estrogen

## B. Gonadotropic releasing factor

C. Prolactin

D. Oxytocin

#### **Answer:**

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**471.** The hormones which respond to membrane bound receptors or extracellular receptor are

A. LH, estrogen, progesterone, thyroxine

B. Aldosterone, testosterone, FSH, LH

C. FSH, LH, glucagon, estrogen

D. FSH, LH, glucagon, insulin

**Answer:** 

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472. Which of the following hormones is/are

biogenic amines?

A. Epinephrine B. Dopamine C.Thyroxine D.

## Melatonin The correct option is

A. B, C & D

B. A, B, C & D

C. A, B & C

D. A & D

Answer:



473. Which of the following abnormalities of

the eye can lead to blindness?

A. Glaucoma

B. Presbyopia

C. Myopia

D. Astigmatism

## Answer:

474. The lens and cornea is not having blood

supply. So the nutrients are supplied by

A. Iris

B. Sclera

C. Vitreous humor

D. Aqueous humor

Answer:

475. Internal ear is filled with

A. Perilymph

B. Endolymph

C. Lymph

D. Both (1) & (2)

Answer:

476. Which of the cells in the retina help to

sharpen the contrast?

A. Ganglion cells

**B.** Horizontal cells

C. Rods and cones

D. Bipolar cells

### Answer:

## 477. Ora serrata is

A. A structure present in three semicircular

canals

B. A structure present in the utriculus of

ear

- C. Sensory posterior portion of the retina
- D. Non-sensory anterior portion of the

retina

Answer:





**478.** The receptors found in the muscles, tendons and joints are

A. Exteroreceptors

**B.** Proprioceptors

C. Messiner corpuscles

D. Telereceptors

Answer:

**479.** Which part of the eye controls the amount of light entering in it

or

The black pigment in the eye which reduces the internal reflection is located in

A. Choroid

**B.** Iris

C. Sclerotic

D. Comea

### Answer:



## 480. Deiter's clls occur in

A. Retina of eyes

- B. Organ of Corti
- C. Sebaceous glands
- D. Utriculus





# **481.** Autonomic nervous system regulates all,

except

A. Excretion

- B. Learning and memory
- C. Respiration
- D. Blood circulation

## Answer:





482. Which of the following is not an effect of

the sympathetic nervous system

A. Dilation of the pupil

B. Inhibition of peristalsis

C. Elevation of blood pressure

D. Stimulation of gastric juice

### Answer:

**483.** Vagus nerve is composed of parasympathetic fibres. The preganglionic fibres forms a network in the walls of the gut. This network is known as

A. Auerbach plexus

B. Choroid plexus

C. Nervous plexus

D. Brachial plexus

#### Answer:



484. During repolarization of nerve

A. Both  $Na^+$  and  $K^+$  gates remain open

B. Both  $Na^+$  and  $K^+$  gates are closed

C.  $Na^+$  channels are closed and  $K^+$ 

channels are open

D.  $Na^+$  gates open and  $K^+$  gates closed

#### **Answer:**



**485.** In after cutting through the dorsal root of a spinal nerve of a mammal, an associated receptor in the skin were simulated, the animal would

A. Show a fast response

B. Show no response

C. Still be able to feel the stimulus

D. Show a slow response





## **486.** Mark the odd from the following?

A. Pronator

- **B. Adductor**
- C. Ligament
- D. Supinator





# **487.** Structural and functional unit of contractile apparatus in striated muscle is

A. Sarcomere

B. Z-band

C. Cross bridge

D. A-band and Z-band

## Answer:





# 488. Which of the following yield ATP during

muscle contraction?

A. Creatine phosphate

B. Cholesterol

C. Fructose

D. Myoglobin

Answer:

**489.** Which term about functioning of muscles is wrong?

A. Fatigue - It is the inability of a muscle to

contract due to depletion of chemical

lactic acid

B. Thresold stimuli - Stimuli strong enough

to cause a response

C. Muscle twitch - A single muscle

contraction resulting from a single

stimulus

D. Tetanus - It is a continued in state of

contraction caused by rapid succession

of many stimuli

Answer:

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490. Which one of the following is an example

of immovable joints?

A. Sutures

- B. Gomphoses
- C. Shindylasis
- D. All of these

### **Answer:**



491. The bone common to cranium and face is

A. Temporal

## B. Sphenoid

C. Parietal

D. Frontal

## Answer:

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**492.** Find out incorrect match.

A. Flat bonus - Skull bones, Sternum,

Vertebrae

B. Sesamoid bones - Patella, Fabellae,

Pisciform

C. Long bones - Humerus, Radius, Ulna,

Femur

D. Short bones - Carpals and Tarsals

**Answer:** 

**493.** The coxal of the pelvic girdle is formed by

the fusion of

A. Illium,Scapula,Ischium

B. Clavicle, Scapula

C. Illium, Ischium and pubis

D. Illium, Scapula, Clavicle

## Answer:

**494.** Which one of the following pairs of structures is correctly matched with their correct description

A. Cartilage and Cornea(Structure) No

blood supply but do require for

respiratory need(Description)

B. Premolars and molars (Structure) All are

present in the three years old baby (Description) C. Tibia and Fibula (Structure) Both from parts of knee joint D. Tropomyosin and Myosin (Structure) Both are contractile protein (Description)

Answer:

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495. Select the correct statement

A. Myasthenia Gravis is an auto immune disorder which inhibits the sliding of myosin filaments B. Inflammation of joints occur due to extra deposition of calcium C. H zone is a skeleton muscle fibres is due to the central gap between myosin filaments in the A band D. A decrease level of progesterone causes osteoporosis in old woman

## Answer:



**496.** Find out the incorrect statement about red muscle fiber

A. Heme protein myoglobin is present

- B. Carry out aerobic contraction
- C. Red muscle fibres are thicker
- D. Slower in contraction rate





# **497.** Articulation of ulna with humerus at the elbow joint is

A. Pivot

B. Elipoid

C. Hinge

D. Ball and socket





# **498.** The effect of anti-diuretic hormone on the kidney is to

A. Decrease the excretion of k+

B. Increase the permeability of DCT to

water

C. Increase the excretion of Na+

## D. Increase the excretion of water to urine

## Answer:

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# **499.** Which of the following form uriniferous tubule?

A. Bowman's capsule and Glomerulus

B. PCT & DCT

C. Glomerulus only

## D. Nephron & collecting duct

## Answer:

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## 500. Which term is correct?

A. Ketonuria-presence of acetone bodies in

body

B. Azotaemia-accumulation of uric acid in

blood

C. Pyuria-WBCs or pus in the urine

## D. Urinary inconvenience-lack of voluntary

control over micturition

## Answer:

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# **501.** Angiotensin converting enzyme is secreted by

A. Blood capsules of lungs

B. Blood vessels

C. liver

D. Kidney

## Answer:

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502. Which of the following compounds are

not reabsorbed in PCT?

A.Glucose vitamin C B.Amino acids, sodium and

potassium ions C.Creatinine D.Bicarbonates

## A. C D & E

## B. A C & D

## C. A C & E

## D. Only C

#### **Answer:**

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503. Almost 1300ml of blood pressure through

the kidney per minute.Out of this, 125 ml,

fibrate is formed by glomeruli per minute.So

## the normal filtration fraction is

A. 0.22 or 22%

B. 0.25 or 25%

C. 0.17 or 17%

D. 0.19 or 19%

#### Answer:



**504.** The stage of ornithine cycle at which arginase enzyme is used?

A. CitrullinegtArginosuccinic acid

B. ArgininegtOrnithine

C. OrnithinegtUrea

D. OrnithinegtCitrulline

## Answer:

505. Find out incorrect statement

A. Maximum amount of urea is present in

hepatic vein

- B. In human beings, uric acid is formed by purine metabolism
- C. A person suffering from muscular dystrophy eliminates creatinine in large amount of urine
- D. Breaking down of amino acids is called

deamination which occurs in kidney

### Answer:



**506.** Match the columns w.r.t the process of translation (a) UTR (Column 1),(i) Catalyst (Column 2),(b) rRNA (Column 1),(ii) Template (Column 2), (c) mRNA (Column 1),(iii) reads the genetic code (Column 2),(d) tRNA (Column 1), (iv) For efficiency (Column 2)

A. a(i),b(ii),c(iii),d(iv)

B. a(iv),b(i),c(ii),d(iii)

C. a(iv),b(iii),c(ii),d(i)

D. a(ii),b(iii),c(iv),d(i)

## Answer:

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507. Consider the following statements,

(a.The most interesting molecule with autocatalytic and heterocatalytic functions in the living system,

b.Most abundant genetic material,

c.Functions as adaptor or structural molecule,

d.A long polymer of deoxyribonucleotides

A. a,b & d

B. a,c & d

C. b,c & d

D. a,b,c & d

#### Answer:

508. Select the incorrect statement

A. Cytosine the common purine for DNA and RNA

B. A nitrogenous base is linked to pentose
sugar through a N-glycosidic linkage to
form a nucleoside
C. Thymine is present in DNA
D. In RNA every nucleoside residue has an

additional OH group at 2'-position in

ribose

#### Answer:



**509.** Read the following statements-(A)- The base pairing confers a very unique property to the polynucleotide chains of DNA i.e complementarity,(B)- Each strand from a DNA acts as a template for synthesis of a new strand.

A. Only A is correct

B. A and B both are correct

C. A and B both are incorrect

D. Only B is incorrect

#### Answer:

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510. Mark the incorrect match

A. Friedrich Meischer - First identified DNA

as an acidic substance in nucleus

B. Watson and Crick - Proposed double

helix model of DNA

C. Frederick Griffith - Proved that DNA is

hereditary material

D. Francis Crick - Proposed the central

dogma

Answer:

**511.** Match items in Column I with Column II (a) Bioinformatics (Column I),(i) Non-coding DNA (Column II),(b) Satellite- DNA (Column I),(ii) Genes which expressed as RNA (Column II),(c) ETS (Column I),(iii) Coding and non-coding DNA sequencing (Column II),(d) Sequence annotation (Column I),(iv) Computational techniques for genome sequencing (Column II)

A. a(iv),b(i),c(iii),d(ii)

B. a(iv),b(iii),c(i),d(ii)

C. a(iii),b(iv),c(ii),d(i)

# D. a(iv),b(i),c(ii),d(iii)

#### Answer:

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# 512. Euchromatin said to be

# A. Transcriptionally inactive

- B. Densely packed
- C. Loosely packed
- D. Darkly stained

#### Answer:



513. Consider the following facts about the salient features of structure of DNA.
(a.Backbone constituted by sugar-phosphate,
b.Anti-parallel polarity,
c.chains coiled in right-handed fashion,
d.Pitch of helix is 34 nm,

e. Distance between a base pair in helix is  $0.34\,$  nm) Which of the above statements are correct?

A. a,b,c,e

B. a,b,d,e

C. a,b,d

D. b,c,d

#### Answer:



514. Chargaff's rule is correctly exemplified by

A. 
$$A+G=T+C$$

$$\mathsf{B}.\,A+T=T+G$$

$$\mathsf{C}.\,A+T=C+G$$

$$\mathsf{D}.\,A + C = G + U$$

#### **Answer:**

**515.** Reverse central dogma results in the formation of special type of DNA called

A. B - DNA

B. Z - DNA

C. c- DNA

D. r - DNA

**Answer:** 

**516.** The process of copying genetic information from DNA with the help of DNA dependent RNA polymerase is called

A. Translation

B. Transformation

C. Transduction

D. Transcription

#### Answer:

**517.** Select the odd one out w.r.t the process of DNA replication

A. In living cells, the process requires a set

of catalysts

B. The DNA polymerase initiates the

process on its own

C. The discontinuously synthesised

fragments are later joined by enzyme

DNA ligase

D. Any mistake during the process of

replication would result into mutations

#### **Answer:**



**518.** If the sequence of coding strand in the transcription unit is 5'-ACCACTCGGCCC-3',what will be the sequence of RNA transcribed?

A. 5'-ACCACUCGGCCC-3'

#### B. 3'-ACCACUCGGCCC-5'

#### C. 5'-UGGUCAGCCGGG-3'

#### D. 3'-UGGUCAGCCGGG-5'

#### Answer:

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519. Find the mismatch

A. Exons - coding sequence

Bacteria

C. hn RNA - Precursor of mRNA

D. Topoisomerase - Remove DNA supercoils

#### **Answer:**

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**520.** DNA in chromosomes replicates semiconservatively, this was proved by Taylor and Colleagues in 1958 by performing experiments

on Vicia faba using

A. Radioactive uridine

B. Radioactive thymidine

C. Non - radioactive 15\_N isotope

D. CsCl gradients and radioactive isotopes

of sulphur

**Answer:** 

521. Select the incorrect statement

- A. A gene codes for tRNA or rRNA
- B. Splicing represents the dominance of

**RNA** world

C. Split-gene arrangements probably

represents an advanced feature of

genome

D. Introns do not appear in mature RNA

**Answer:** 



**522.** Match Column - I with Column - II,(a) UGG(Column I),(i)Termination code(Column II), (b) GUG(Column I),(ii) Initiator codon(Column II),(c) UAA (Column I),(iii) Ambiguous codon(Column II),(d) AUG(Column I),(iv) Non degenerate codon(Column II)

A. a(iv),b(i),c(iii),d(ii)

B. a(iv),b(iii),c(i),d(ii)

C. a(i),b(ii),c(iii),d(iv)

# D. a(iv),b(iii),c(ii),d(i)

#### Answer:

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# **523.** Many times the translation can begin much before the mRNA is fully transcribed in

A. Chlorella and Drosophila

B. Chlorodium and Rhizobium

C. Chlamydomonas and Neurospora

# D. Garden pea and pink mould

#### Answer:

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# **524.** An unusual nucleotide is present in a.23S rRNA,b. 18S rRNA,c.t-RNA,d.m-RNA

A. c only

B. b & c

C. c & d

D. all a,b,c & d

#### Answer:

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#### 525. Select the incorrect statement w.r.t. HGP

A. Human genome contains 3164.7 million

nucleotide bases

B. 24 human chromosome, 22 autosomes

and X and Y were sequenced

C. Around five percent of the genome

codes for protein

D. Repeated sequence make up very large

portion of the human genome

**Answer:** 

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**526.** Consider the following statements regarding DNA fingerprint.

a)The technique was initially developed bt Alec

Jefferys,

b)Hybridisation using labelled VNTR probe. c)Sensitivity of the technique has been increased by the use of PCR, d)Sequences used for DNA fingerprinting generally code for many proteins, e)Monozygotic twins have identical DNA fingerprints

A. all statements are correct

B. only 'd' is incorrect

C. d & e are incorrect

#### D. a,c,d & e are correct

#### Answer:

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527. Select the mis-match w.r.t. the functions of

RNA polymerases in eukaryotes.

A. RNA pol-II transcribes precursor of Mrna

B. RNA pol-III transcribe all r-RNA

rRNAs

D. RNA pol-III transcribes tRNA , snRNAs

Answer:

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### 528. Polymorphism in DNA sequences

A. Arises due to variation at morphological

level

B. Are not used in genetic mapping

C. Nullifies evolution

D. Causes allelic sequence variaton

Answer:

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529. Classical plant breeding involves

A. Hybridisation of pure lines

**B.** Domestication

C. Tissue culture

D. Using molecular genetic tools

#### Answer:



530. The entire collection of plants or seeds

having all the driverse alleles for all genes in a

given crop is called

A. Gene collection

- B. Germplasm collection
- C. Pure line collection
- D. Variety collection

#### Answer:

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# **531.** Select the odd-one out w.r.t. causative agents of following disesases.

A. Black rot of crucifers

B. Late blight of potato

C. Red rot of sugarcane

D. Brown rust of wheat

#### Answer:

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**532.** Resistance to yellow mosaic virus in Abelmoschus esculentus was transferred from a wild species and a new variety was produced,which is called

A. Pusa sawani

B. Pusa A-4

C. Parbhani kranti

D. Himgiri

#### Answer:



533. High aspartic acid, low nitrogen and sugar

content in maize leads to resistance in maize

against

A. Aphids

- B. Stem borers
- C. Jassids
- D. Stem sawfly

#### **Answer:**



# 534. Select the incorrect statement w.r.t.Atlas

66.

### A. A wheat variety having high protein

content

B. Used as a donor for improving cultivated

wheat

- C. Is a variety of mexican dwarf wheat
- D. Has been used for biofortification

Answer:

535. Find the mis match

- A. Explant-plant part use for tissue culture
- B. Somaclones-varriation produced during

micropropagation

- C. Callus undifferentiated mass of cells
- D. Totipotency capacity of generate a

whole plant from any cell

#### Answer:

**536.** Select the incorrect statement w.r.t somatic hybridisation

A. First somatic hybrid was obtained in species of tobacco

B. PEG used to naked protoplast

C. Involves fusion of protoplast of two

plants belonging to different varities,

species and even genera

# D. Has been achieved in the formation of

pomato

#### Answer:



537. The cheese which is repened by growing a

specific fungi penicillium on them which gives

them a particular flavour is

A. Roquefort cheese

B. Swiss cheese

C. Chedar cheese

D. Hard cheese

#### Answer:

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**538.** The unopened spadices of palm Caryota urens are tapped and the sap is fermented to produce a traditional alcoholic beverage in some part of southern india called

A. Gin

B. Sake

C. Toddy

D. Ferny

Answer:

Watch Video Solution

539. Select the mis match

A. Monascus purpureus - Statins

B. Trichoderma polysporum - Cyclosporin A

# C. Clostridium butylicium - Citric acid

D. Streptococci - Streptokinase

### Answer:

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540. Consider the following statement, A-Major component of biogas is methane (50-70~%) which is highly inflammable, B-

Formation of biogas is complete an anaerobic

process

A. Both A and B are incorrect

B. Only A is correct

C. Both A and B are correct

D. Only B is correct

Answer:

**541.** Nucleopolyhedrovirus are

- A. Broad spectrum insecticides
- B. Effective against several plant

pathogens

- C. Harmful to non target insects
- D. Used as biological control agents

### **Answer:**

542. A microbial biocontrol agent that can be

used to control butterfly caterpillars is

A. Bacillus thuringiensis

B. Baculoviruses

C. Tricoderma

D. Dragon flies

### Answer:

543. select the incorrect match

A. Rotenone - from roots of Derris elliptica

B. Pyrethrum - From Crysanthemum

cinerarrifolium

C. Thuriocide - From Azadirachta indica

D. Nicotine - From tobacco plant

### Answer:

**544.** How many given practices or measures are used by organic farmer for magnetic the oest and pathogens? (Neutral, predators, chemical methods, biological methods, conventional farming practices)

A. Three

B. Two

C. Four

D. Five





# 545. Microbes used as a biofertilizer in the

aquatic environment are

- A. Glomus, Rhizobium
- B. Nostoc, Oscilatoria
- C. Azospirilium, Azotobacter
- D. Anabaena, Glomus



**546.** Which of the following does not affect Hardy-Weinberg equilibrium

A. Assortative mating

B. Random mating

C. Mutations

D. Gene migration

Answer:

**547.** Which of the following regarding evolution is true?

- A. Fitness is the end result of the ability to adapt
- B. Homology is based on convergent

evolution

C. Evolution of different species in a given

geographical area starting from a point

is adaptive convergence

### D. All of these

### Answer:

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**548.** A population of horses is split into two population by a new river bed that forms after a flood. After many generations,the river changes course and the population mix again. Which of the following indicates that the two population have formed two separate species?

A. The population refuse to cross the dry

river bed to interbreed

B. The population do not interbreed freely

in nature

C. One population has twice as many

horses with white spots as others

D. The horses interbreed, but the offsprings

are shorter either of the parents



# 549. The first organism on earth were thought

to be

- A. Anaerobic autotrophs
- B. Photosynthetic
- C. Heterotrophs
- D. Anaerobic chemosynthetic

### Answer:

**550.** Which of the following lions has the greatest fitness according to darwin

A. A male that survives better in natural condition and leaves behind progeny of three cubs

B. A female that raises four of her young cousin

C. A male that is the leader of his social group is youngest and has two cubs of

its own

### D. A male that has one cub from different

females

Answer:

Watch Video Solution

**551.** In a small population of an endangered dessert rodent, which of the following poses a concern for the future of the species?

A. Increase frequency of mutation in small

population

B. Absence of natural selection

C. Lack of natural resources in desert

D. Increased homozygosity of recessive

alleles

Answer:

**552.** if 9% of an African population is born with a severe form of sickle cell anaemia what percent of the population will be more resistant to the malaria scenes they are heterozygote for the sickle cell gene?

- A. 81%
- $\mathsf{B.}\,42~\%$
- $\mathsf{C}.\,0.03\,\%$
- D. 19~%



## 553. George Cuvier replacement of the species

by another is caused by

A. massive number of mutation

- B. the wrath of God
- C. Extinctions due to catastrophes such as

floods

D. genetic inbreeding





# **554.** The formation of two species from one ancestral species is known as

A. convergent evolution

B. divergent evolution

C. parallel evolution

D. stasigenesis

### Answer:



**555.** Different species of dragon flies do not mate with each other because the males of each species have appendages that can clasp and hold , for copulation only females of their only females of their own species. This is an example of

A. Behavioral isolation

- B. genetic isolation
- C. temporal isolation
- D. mechanical isolation

### Answer:

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556. choose the false statement

A. mutations are random and directionless

B. Hugo de Vries based his work on evening

primrose

C. Darwin's variation of small and non

directional

D. work of Thomas Malthus on populations

influenced Darwin

Answer:

557. who gave the statement " any population

have built variation in characteristics"?

A. Alfred Wallace

**B.** Charles Darwin

C. Thomas Malthus

D. Lamarck

Answer:

**558.** Stanley Lloyd Miller and Harold Urey simulated conditions on primordial earth in laboratory. which compounds did he obtained after the first experimental run?

A. urea

B. alanine, glycine, aspartic acid

C. Glycerol

D. Glucose

Answer:

**559.** a horse has karyotype of 64 chromosomes and a donkey has karyotype of 62 chromosomes. deer offspring mule is sterile because it can not successfully

A. count other mules

B. complete development of zygote

C. Form gametes

D. Copulate with other mule, donkey, horse



**560.** which of the following represents the correct match between character and corresponding fossil?

A. intermediate horse - Hyracotherium

B. Ruminating horse - Mesohippus

C. Dawn horse - Merychippus

D. first one toed horse - Piohippus



# **561.** which of the following should adaptive radiation after cretaceous tertiary boundary?

A. arthropods

B. mammals

C. reptiles

D. Bony fish



**562.** the Tasmanian wolf( a marsupial) and American Timber wolf (a placental) may have evolved along similar lines because of similar selection pressure acting on similar gene pools. if so there an example of

A. Homology

B. parallel evolution

C. coevolution

D. convergent evolution

### Answer:



**563.** The theory " ontogeny recapitulates phylogeny" was proposed by

A. Charles Lyell

B. Ernst Mayr

C. Darwin

D. Ernst Haeckel





**564.** Australia has unusual organisms because their evolution for the past 3 million years has been

A. rapid

B. slow

C. isolated from other organisms

D. both (1) & (3)

### Answer:



**565.** which hominid if the first clear evidence of human culture ( pebbles chipped into tools) in sights roughly 2 million years old and had brain capacity of 650-800 cc?

A. Neanderthal man

B. Homo habilis

C. Homo erectus

D. Australopithecus

### Answer:

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**566.** which of the following was not an anatomy change in the evolution of Homo line Australopithecus?

A. development of monocular vision

B. greater modification of leaves for

corporate walking

C. increase in sexual dimorphism

D. increase in brain size

#### Answer:

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567. the earliest evidence of use of fire by

hominids belongs to species

A. Homo sapiens neanderthalensis

B. Homo sapiens fossils

C. Homo erectus

D. Homo habilis

### **Answer:**

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**568.** comparison between which of the following chromosome of ape and man reveal a shared ancestory?

A. 6&9

B. 3&6

 $\mathsf{C.}\,3,6\&Y$ 

 $\mathsf{D.}\,2,\,6\&Y$ 

### **Answer:**

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569. Select the incorrect match.

A. Lucy - Australopithecus africanus

B. Tuang baby - 450 c.c cranial capacity

### C. Cro Magnon man - Cave paintings

D. Nut cracker man - Australopithecus with

massive jaws and jaw muscles

#### **Answer:**

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570. Arborescent lycopods, horse tails and

ferns dominated land during

- A. Silurian period
- B. Devonian period
- C. Carboniferous period
- D. Triassic period

#### Answer:



**571.** The skull of baby chimpanzee is more like?

A. Adult chimpanzee skull

B. Adult Gorilla skull

C. Adult human skull

D. Adult orangutan skull

#### Answer:

Watch Video Solution

**572.** Which of the following test can be used to identify causative agent of the symptoms listed below?

"Sustained high fever(39° to 40 °C), weakness,

stomach pain, constipation, headache and loss

of appetite."

A. Gravidex test

B. Wassermann's test

C. WIDAL test

D. Mantoux test

Answer:

**573.** Choose the odd one out w.r.t viral disease.

A. Pneumonia

B. Influenzae

C. Dengue

D. Small pox

Answer:

**574.** Select the incorrect match.

A. Disease : Common cold --- Causative

agent : Rhino virus

B. Disease : Typhoid --- Causative agent :

Salmonella typhi

C. Disease : Pneumonia --- Causative agent :

Haemophilus influenzae

D. Disease : Plague --- Causative agent :

Xenopsylla

#### Answer:



**575.** When a female Anopheles mosquito bites an infected person, the parasite enter the mosquitoes bodies in many forms. Which of these is the infective form for mosquito?

A. Sporozoite

- B. Gamete form
- C. Gametocyte

#### D. All of these

#### Answer:

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**576.** Presence of which of the following in man's blood is responsible for chill and high fever?

A. Haemoglobin

B. Mosquito's haemoglobin

C. Haemozoin

D. Both (2) & (3)

#### **Answer:**

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**577.** Various diseases can spread through inhaling the droplets/aerosols released by infected person. From the option given choose the diseases that acquired by this method. (a)

Diphtheria, (b) pneumonia, (c) Dengue, (d)

Malaria, (e) Dysentery, (f) Chikungunya

A. d, e, f

B. a, b, c

C. a & b

D. c & f



**578.** Which of the following is correctly matched w.r.t disease and organ affected?

- A. Filariasis Lymph nodes
- B. Elephantiasis Only right leg of infected

individual

- C. Amoebiasis Small intestine
- D. Enteric fever Urinary bladder



**579.** The B-lymphocytes produce an army of proteins in response to pathogens into our blood to fight with them. These proteins are called

A. Antigens

**B.** Antibodies

C. Antitoxins

D. Epitopes





## **580.** Which character has been incorrectly matched w.r.t type of immunoglobulin listed?

A. IgM - Number of antigen binding sites 10

B. IgA - Provide passively acquired

immunity to foetus

C. IgE - Released in response to allergens

D. IgG - Provide passively acquired natural

immunity to foetus

#### Answer:



## **581.** Which of the following is a source for production of hepatitis B vaccine?

A. Pig's intestine

- B. Escherichia coli
- C. Yeast
- D. Cattle's pancreas





**582.** From the list given choose the helminthic diseases.

A. Ringworm

B. Ascariasis

C. Amoebic dysentery

D. Tetanus





## **583.** All the following are bacterial diseases, except

A. Cholera

B. Typhoid

C. Polio

D. Gonorrhea

#### Answer:



## **584.** Physiological barriers that prevent microbial growth include all, except

A. Acid in stomach

B. Saliva in mouth

C. Mucus coating of the epithelium lining

D. Tears from eyes

#### Answer:

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**585.** Read the statements given below and mark the incorrect one

A. CMI is responsible for graft rejection

B. B cells produce immunoglobulins

C. Disulphide bonds are found between
light and heavy chains in
immunoglobulin molecules
D. IgM is major antibody formed in
anamnestic response

**Answer:** 

**586.** If a person meets with a road accident, which of the following is administered?

A. Anti-venin

B. Tetanus toxoid

C. Anti-tetanus serum

D. IgA enriched colostrum

#### Answer:

**587.** the low-temperature treatment that reduce the period between sowing and flowering is called

A. venation

B. vernalisation

C. photopariodism

D. dormancy

#### Answer:

**588.** The red absorbing from of phytochorme gets converted to the far - red absorbing from after getting irradiated at

A. 600nm

B. 730nm

C. 700nm

D. 780nm

#### **Answer:**

589. movement of leaves in Mimosa pudica in

response to stimulus is an example of

A. Nyctinasty

**B.** National movement

C. Thigmonasty

D. seismonasty

#### Answer:

590. respiratory climatic is observed in

A. mango

B. strawberry

C. grapes

D. pineapple

Answer:

591. Richmond Lang effect can be oberved in

plants by the treatment of

A. Cytokinins

B. ethylene

C. auxins

D. gibberellins

#### Answer:

592. the hormone is responsible for early seed

production in conifers and bolting is

A. Auxin

B. ABA

C. Gibberellin

D. cytokinin

Answer:

**593.** which of the following plants can flower only if given photoperiod is more than critical day length

A. radish and soybean

B. wheat and henbane

C. tomato and oat

D. tabacco and sugarbeet

#### Answer:

**594.** the plant hormone auxin was first isolated for

A. human urine

B. cotton fruits and rice plants

C. Avena coleoptile and the fungus,

Gibberella

D. rice seedling

Answer:

**595.** match the columns. Column I (PGR) a. Auxins, b. Abscisic acid, c. Gibberellic acid, d. Cytokinins. Column II (chemical composition) (i) adenine derivatives, (ii) terpenes, (iii) indole compounds, (iv) Carotenoid derivatives

A. a(ii),b(i),c(iii), d(iv)

B. a(iii),b(iv),c(i),d(ii)

C. a(iii),b(iv),c(ii),d(i)

D. a(iv),b(iii),c(i),d(ii)

#### Answer:



**596.** who's the collect 1 word environmental heterophyllous development in plants.

A. Cotton

B. coriander

C. buttercup

D. larkspur





#### 597. substance whose RQ is less than one is

A. glucose

- B. tripalmitin
- C. oxalic acid
- D. Malic acid





#### **598.** In how many steps, $CO_2$ is released in

#### aerobic respiration of pyruvic acid

A. one

B. six

C. three

D. twelve





599. both lactic acid and alcoholic fermentation A. produce water as end product B. produce  $CO_2$ C. reduce  $NAD^+ \in \rightarrow NADH + H^+$ D. release less than 7% of the energy contained in glucose



# **600.** How many ATP molecules will be generated in a plant system during complet oxidation of 40 molecules of glucose?

**A.** 1440

**B.** 380

 $C.\,1520$ 

D. 3040





## **601.** the mobile electron carrers attached to outer surface of inner member of mitochondria is

A. cytochrome - a

B. Ubiquinone

C. cytochrome -  $a_3$ 

D. Cytochrome - c



### **602.** Pasteur effect is concerned with the shifting of environmental conditions from

A. Light to dark

- B. Aerobic to anaerobic
- C. Anaerobic to Aerobic
- D. Dark to Light





**603.** during aerobic respiration which of the following conversion undergo both dehydrogenation and decarboxylation

A. PGALrarr BPGAL

B. Succintly CoA -rarr Succinic acid

C. Pyruvic acid -rarr Acetyl CoA

D. Malic acid --rarr Oxaloacetic acid





# 604. Plants which can photosynthesize at as

low temperature (upto  $-35\,^\circ$  C) are

A. Conifers

- B. All phanerogams
- C. Xerophytes
- D. Tropical Plants

#### Answer:

**605.** The  $C_4$  plants are photosynthetically more efficient than  $C_3$  plants beacause.

A. Photorespiration is absent

B. CO\_2 compensation point is high

C.  $CO_2$  generated during photo

respiration is trapped and recycle throw

PEP carboxylase

D. All except (3)

### Answer:



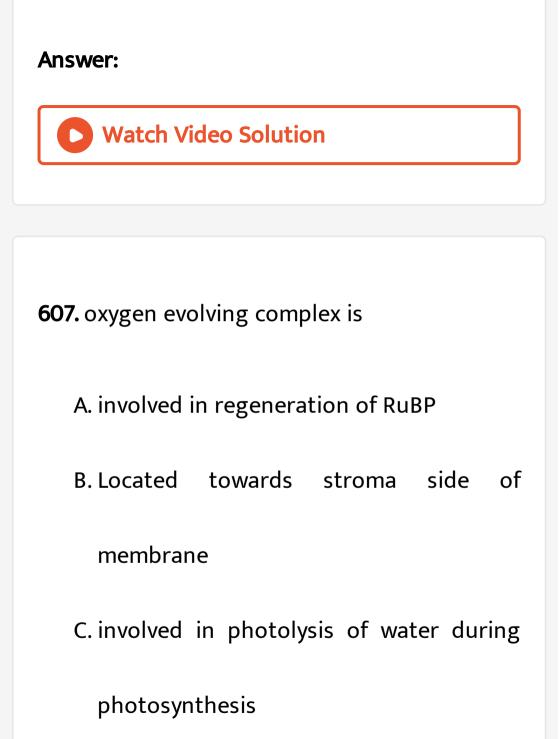
**606.** the number of carbon atoms in first  $CO_2$  acceptor A molecule and the first stable product B molecule in  $C_3$  cycle is

A. A- 2C, B - 3C

B. A- 3C, B - 4C

C. A-5C, B-3C

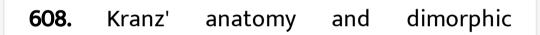
D. A-3C, B-5C



# D. associated with PSI

### Answer:

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chloroplasts are present in

A. Sugarcane and maize

B. Cotton and mustard

C. Pea and Euphorbia

# D. Mango and Opuntia

### Answer:

Watch Video Solution

**609.** How many components listed below are part of cyclic ETS & non-cyclic ETS, respectively?  $P_{700}$  ,  $P_{680}$  , NADP reductase, Hydrogen carrier, PSI, Water splitting complex, PS II

A. Three & Seven

B. Four & Seven

C. Seven & Three

D. Four & Three

### Answer:

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# 610. Choose the correct pair w.r.t. important

discoveries in photosynthesis.

A. Julius Von Sachs- Sunlight is essential for

photosynthesis

B. Jan Ingenhousz-  $H_2S$  is hydrogen donor

in purple and green bacteria

C. Engelmann- First action spectrum of

photosynthesis

D. Van Niel- Glucose is produced during

photosynthesis

Answer:

**611.** Fill in the blanks by choosing the correct option regarding chemiosmosis. "F\_0 of ATPase enzyme forms a/an \_\_\_(i)\_\_\_\_ that carries out \_\_(ii)\_\_ diffusion of protons across the membrane. F\_1 protrudes on the \_\_(iii)\_\_ surface of the \_\_(iv)\_\_ on the side that faces the \_\_(v)\_\_."

A. (i) Extrinsic protein, (ii) Active, (v) Stroma

B. (i) Transmembrane channel, (iii) Outer,

(v) Stroma

C. (ii) Facillitated, (iii) Inner, (iv) Lumen

D. (iii) Outer, (iv) Lumen, (v) Thylakoid

membrane

Answer:

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**612.** During cyclic photophosphorylation (1) Only PSI is functional. (2) The electron is circulated within the photosystem. (3) Grana lamellae is involved only. (4) Both ATP and

 $NADPH + H^+$  are synthesised.

A. (1) and (2) are incorrect

B. (3) and (4) are incorrect

C. (1) and (3) are correct

D. (2) and (4) are correct

Answer:

**613.** Which one of the following is an amide found in plants and is structural part of protein?

A. Glutamic acid

B. Aspartic acid

C. Asparagine

D. All except (C)

# Answer:

**614.** Number of  $H^+$  &  $e^-$  required for the formation of ammonia from nitrite during assimilation in plants are respectively

A. 6&12

**B.** 8&8

 $\mathsf{C.}\,6\&6$ 

D. 12&12

### Answer:



**615.** \_A\_ is the reduction of nitrates into gaseous nitrogen by the action of \_B\_

A. A - Nitrification, B - Pseudomonas

B. A - Ammonification, B - Nitrocystis

C. A - Denitrification, B - Thiobacillus

D. B - Nitrosomonas

### **Answer:**

**616.** How many of the given are the symbiotic  $N_2$  fixing microbes found in root nodules of plants? Beijerinckia Frankia, Rhodospirillum, Rhizobium, Azotobactor

A. Two

B. Three

C. Four

D. Five

Answer:

**617.** Excess of manganese may induce the deficiencies of

A. Ca, B, Zn

B. Ca, Fe, Mg

C. Mg, Mo, P

D. Fe, Cu, S

#### **Answer:**



618. Which of the following is not caused by

deficiency of mineral nutrients?

A. Necrosis

**B.** Chlorosis

C. Etiolation

D. Delay in flowering

#### Answer:

619. Hydroponics is a technique of/for

A. Growing aquatic plants only

B. The commercial production of all

vegetables except lettuce

C. Growing plants in only purified water

D. Growing plants in a balanced nutrient

solution

Answer:

**620.** Which one of the following is not an essential mineral element for plants

A. Calcium

B. Sodium

C. Magnesium

D. Iron

Answer:

# 621. Find the direction of flow of water in the

# given

system.

Cell A 
$$\begin{array}{|c|c|c|} \Psi_{s} = - 18 \text{ bars} & \Psi_{s} = - 14 \text{ bars} \\ \Psi_{p} = 8 \text{ bars} & \Psi_{p} = 2 \text{ bars} \end{array} \end{array} \begin{array}{|c|} \text{Cell } \textbf{B} \\ \Psi_{p} = 2 \text{ bars} & \Psi_{p} = 2 \text{ bars} \end{array}$$

- A. From cell B to cell A
- B. From cell A to cell B
- C. No flow of water between cell B and cell

# С

D. From cell A to cell C but not from C to A

#### **Answer:**



**622.** Meaningful girdling (Ringing) experiments cannot be done on sugarcane because

- A. Phloem is present inside the xylem
- B. It cannot tolerate the injury
- C. Vascular bundles are scattered
- D. It has closed vascular bundles





623. All are related to root pressure, except

A. Guttation

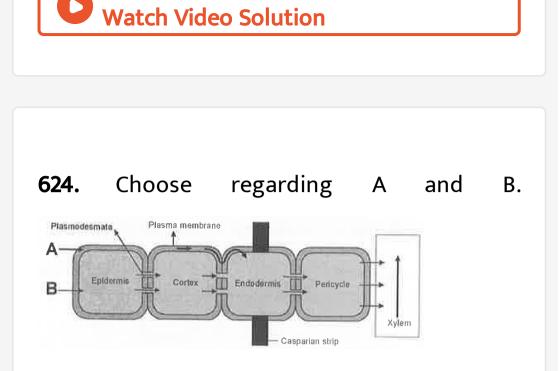
- B. Pushing of water to small heights
- C. Pulling of water at the rate of 15 meters

per hour

D. Re-establishes continuous chain of water

### **Answer:**





A. A - involves mass flow of water due to

adhesive and cohesive properties of

water

B. B - movement of water is fast

C. A - involves system of interconnected

protoplast

D.B - does not involve crossing of cell

membrane

**Answer:** 

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625. Lenticels and hydathodes are small pores

with following common attributes

A. Their opening and closing are not

regulated

B. They allow exchange of gases

C. They always remain closed

D. They are found on the same organ of

plants

Answer:

626. Choose the incorrect match

A. Property : Highly selective - Means of

transport : Facilitated diffusion

B. Property : Transport saturates - Means of

transport : Active transport

C. Property : Uphill transport - Means of

transport : Facilitated diffusion

D. Property : Slow process - Means of

transport : Simple diffusion

### Answer:



**627.** When osmoreceptors are stimulated, they cause the release of some hormones from the "Hypothalamus and posterior lobe of pituitary gland". These hormones is/are - (a) Oxytocin (b) ADH (c) Vasopressin. Options are -

A. Only (a)

B. (a), (b) and (c)

C. Only (b) and (c)

D. Only (b)

### Answer:



628. Otolith organ consists of

A. Three semicircular canals

B. Saccule and utricle

C. Organ of Corti

D. Crista ampullaris

# Answer:

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**629.** Eyes of carnivore mammals glow during night, due to the presence of

A. Tapetum corneum

B. Tapetum lucidum cellulosum

C. Tapetum fibrosa

# D. Luminescent cornea

### Answer:

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**630.** What changes occur in eye when a student starts reading a book in a accommodation reflex?

A. Ciliary Muscles : contract, Suspensory Ligaments : Relax, Curvature of lens : Decrease, Power of lens : Increase

B. Ciliary Muscles : Relax, Suspensory Ligaments : Contract, Curvature of lens : Decrease. Power of lens : Decrease C. Ciliary Muscles : Contract, Suspensory Ligaments : Relax, Curvature of lens : Increase, Power of lens : Increase D. Ciliary Muscles : Relax, Suspensory Ligaments : Contract, Curvature of lens : Increase, Power of lens : Decrease





**631.** Choose the incorrect statement out of the following.

A. Nocireceptors are pain receptors in our

visceral organs

B. Pacinian corpuscles are pressure

receptors located deep in dermis

C. Meissner's corpuscles respond to touch

# and gentle pressure

D. Photoreceptors in human eye are

hyperpolarised during darkness and

become depolarised in response to light

stimulus

Answer:

632. Which of the following are the components of membranous labyrinth of human? (a)3-semicircular canals (b)Tympanum (c)Macula (d)Utricule and saccule (e)Organ of Corti (f)Cochlea (g)Ear ossicles A. (a), (c), (d), (e), (f) B. (a), (b), (c), (d), (f), (g)

C. (b), (e), (f), (g)

D. (a), (b), (c), (g)





633. Glaucoma is not associated with

A. Increase in intra-ocular pressure due to

accumulation of vitreous humor

B. Increase in pressure on optic nerve

causing its damage

C. Blockage of canal of Schlemm

D. Term kala motia which may lead to

permanent blindness

#### **Answer:**

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**634.** If a person sees a blurred image of a nearer object due to hypermetropia, the image of the object is formed

A. Behind the retina

B. On the retina

C. In front of retina

D. Blurred image on retina

Answer:

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635. Which of the following nerves are a part

of parasympathetic nervous system and are

called cranial autonomics?

A. III, IV, V, VI

B. III, VII, IX, X

C. V, VII, IX, X

D. III, V, VII, IX

#### **Answer:**

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636. Which of the following is not the function

of hypothalamus?

- A. it has thermoregulating centre
- B. it has hunger and thirst centre
- C. its secrets neurohormones
- D. it controls respiration, cardiovascular

reflexes, and gastric secretion

Answer:

637. which of the following structure is not the

part of prosencephalon/forebrain?

A. cerebellum

**B.** Olfactory lobes

C. Diencephalon

D. Cerebrum

Answer:

**638.**  $Na^+ - K^+$  pump stores during

A. Polarised state

B. when the potential difference between

outer and inner surface of membrane is

-70mv

C. on addition of ouabain

D. Resting potential

Answer:

**639.** lateral ventricles open into diocoel through

A. Foramen of Magnum

B. foramen of Luschka

C. foramen of Magendie

D. Foramen of Monro

#### Answer:

**640.** Meninges at the protective membranous covering of CNS. arranged am from inside to outside

A. Duramater - Arachnoid - Piamater

B. Arachnoid - Duramater - Piamater

C. Piamater - Arachnoid - Duramater

D. Arachnoid - Piamater - Duramater

#### **Answer:**

**641.** which of the following best describes the electrical state of a neurone at rest?

A. the inside of the neurone is negatively

charged and outside of the neurone is

positively charged

B. the outside of the neurone is more

negatively charged than the inside

C. the outside and inside have the same

electrical charge

D.  $K^+$  ions leak into a neurone at rest

#### Answer:



**642.** During the first 5 minute before an interview, a person experiences sweating, increased rate of heartbeat and respiration. which part of nervous system and hormones are responsible for the restlessness respectively?

A. sympathetic nervous system, oestrogen

and progesterone

B. parasympathetic nervous system,

oxytocin and vasopressin

C. sympathetic nervous system, adrenaline

and noradrenaline

D. sympathetic nervous system, insulin and

glucagon

Answer:

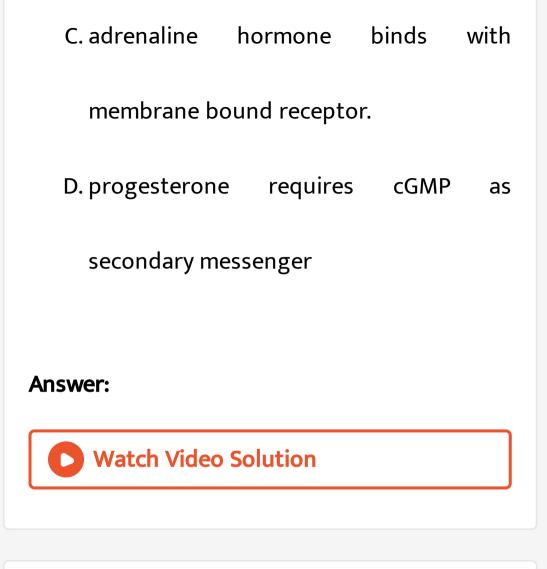
**643.** find the incorrect statement w.r.t. mechanism of hormone action

A. both the steroid hormones and iodothyronines bind to the intracellular receptors.

B. oestrogen regulate the gene expression

by interaction of hormone receptor

complex with genome.



644. a tumor in adrenal cortex can produce all

of these conditions except,

A. Hirsutism

B. Bronze like pigmentation of skin

C. high blood pressure

D. wasting of muscles of limbs

**Answer:** 

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**645.** which of the following statements is incorrect about melatonin ?

A. secreted from the pineal gland which is ectodermal in origin B. synthesised from tryptophan

C. it delays the onset of puberty in the

people who are blind since birth

D. it regulates the 24-hour diurnal

rhythm of body

Answer:

646. match the following feature with their glands. a. Sella tursica (features), (i) thymus (Glands). b. Atropy with age(features), parathyroid (Glands). c. Endemic disease(feature), Neurohypophysis (Glands). d.Hypercalcemic hormone (feature),

thyroid(glands)

A. a(iii), b(i), c(iv), d(ii)

B. a(iii), b(iv), c(i), d(ii)

C. a(ii), b(i), c(iv), d(iii)

D. a(ii), b(iv), c(i), d(iii)

#### Answer:



# **647.** cortisol stimulates/ produces all the following processes, except

A. glycogenesis

- B. anti inflammatory reaction
- C. erythropoeisis
- D. gluconeogenesis





# 648. kidney secrets all the following except

A. calcitriol

- B. Erythropoietin
- C. Angiotensinogen

D. Renin





**649.** when immunoglobulin are synthesized in the body against the body's own cells, certain disorder are produced. which of the following is not an example of such a disorder ?

A. Grave's disease

B. IDDM

C. toxic nodular Goitre

D. Myasthenia gravis

#### Answer:



**650.** a person suffers from some damage to hypothalamus. he passes nearly 6 litre of urine despite normal intake in 24 hours and his urine sample shows lack of ketone bodies, glucose and proteins. probably he is facing condition/ disorder terms as

A. diabetes insipidus

## B. nephrosis

- C. extreme starvation
- D. Aldosteronism

### Answer:

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# 651. Which of the following is not involved in

knee-jerk reflex ?

A. muscle spindle

B. motor neurone

C. quadriceps femoris

D. interneurons

Answer:

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**652.** which out of these statement is not incorrect w.r.t neurohypophysis ?

A. its synthesis and secrets ADH into

bloodstream

B. it is under the control of releasing

factors of hypothalamus

C. it receives hormone from hypothalamo-

hypophysial portal vein

D. is releases oxytocin and vasopressin

synthesized by hypothalamus

#### Answer:

# **653.** which of the following is utilised as secondary messengers by adrenaline

hormone?

A. cTMP

B. cAMP

C. cGMP

D. cCMP





**654.** rapid spasm in muscles due to low calcium in body fluid leading to tetany is caused probably by

A. hyposecretion of PTH

B. hyposecretion of Collip's hormone

C. hyposecretion of mineralocorticoids

D. hyposecretion of TCT





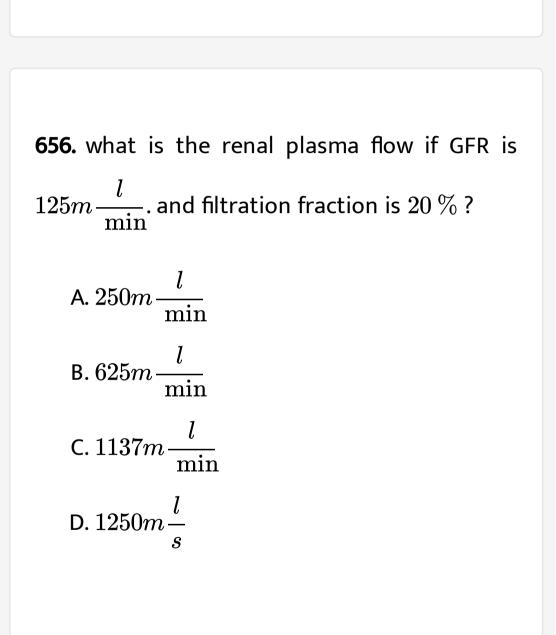
**655.** which of the following animal has the least concentrated urine relative to its blood plasma?

A. birds

B. human

C. freshwater fishes

D. camel



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# **657.** Ketonuria and glycosuria are the indicative of which disease?

A. Diabetes insipidus

**B. Diabetes Mellitus** 

C. Glomerulonephritis

D. Cystitis

### Answer:

**658.** All of the following statements are correct with respect to human kidneys, except

A. situated between the levels of last thoracic and third lumbar vertebra,close to the dorsal inner wall of the abdominal cavity

B. Kidneys are retroperitoneal

C. The right kidney is slightly higher than

the left



urothelium

#### **Answer:**

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# **659.** Which one is incorrect w.r.t cortical nephrons?

A. These constitute nearly 85% of all

nephrons



### C. Loop of Henle is very short

D. Help in concentration of urine by

counter current mechanism

#### Answer:

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660. Ionocytes of the gill membrane in fresh

water fishes

A. Passively uptake monovalent ion from

the surrounding water

B. Activley uptake monovalent ions from

the surrounding water

C. Passively eliminate divalent ions into the

surrounding water

D. Actively eliminate monovalent ions into

the surrounding watwr

#### Answer:

661. Glomerular filtrate is

A. Deproteinised plasma

B. Hypertonic to blood plasma

C. Hypotonic to blood plasma and lacks

plasma proteins

D. Blood without excretory wastes

Answer:

**662.** An auto-immune disorder in which there is inflammation of synovial membrane,secreting abnormal granules and causing erosion of articular cartilage is

A. Osteoarthritis

B. Rheumatoid arthritis

C. Gouty arthritis

D. Myasthenia gravis



**663.** Which one of these is a mismatch

A. Fibrous joint - Tooth in the jaw socket

B. Cartilaginous joint - Pubic symphysis

C. Hinge joint - Between sternum and ribs

D. Pivot Joint - Between radius and ulna

below elbow





**664.** Nodding movement of head occurs due to the joint between

A. Atlas and Vertebrae axis

- B. Atlas and occipital condyles
- C. Scapula and occipital condyles
- D. Cervical and thoracic vertebrae



665. Select the set of bones that share similarity in number in adult humans(a) Tarsals in one hindlimb and movable bones in cranium,(b) Cranial bones and the number of carpals in

one forelimb,

(c) Bones in thoracic cage of adult human and bones in each forelimb.

(d) The bones of facial region and tarsals of both hindlimbs.

A. (a),(b) and (c)

B. (b) and (c)

C. (b) and (d)

D. Only (c)

#### **Answer:**

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666. Bone that is not the part of axial skeleton

A. Malleus

B. Frontal

C. Humerus

D. Parietal

**Answer:** 

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**667.** Progressive degeneration of skeletal muscle mostly due to genetic disorder is

- A. Myasthenia gravis
- B. Muscular tetany
- C. Multiple sclerosis
- D. Muscular dystrophy

#### **Answer:**

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# **668.** What is the role of $Ca^{++}$ in muscle

contraction?

A. It binds to tropomysin,enabling troponin						
to move and reveal binding sites for						
cross-bridge formation						
B. It	binds	to	tr	opomysir	ı,enabl	ing
tropomyosin to move and reveal binding						
sites for cross-bridge formation						
C. It	binds	to	tro	pomyosir	ı,enabl	ing
troponin to release ATP						
D. lt	binds	tc	)	troponir	ı,enabl	ing
tropomyosin to release ATP						

#### Answer:



**669.** Which of the following remain unchanged during contraction of skeletal muscle fibres?

A. Length between two consecutive Z-lines

B. Length of actin filaments

C. Length of an isotropic band

D. Length of H-zone



