

# **BIOLOGY**

# **AAKASH INSTITUTE ENGLISH**

# TEST 7

Exercise

1. Which one is not a correct statement w.r.t.

cyclic photophosphorylation?

- A. It occurs mostly in stroma lamellae membrane
- B. It operates under high light intensity and aerobic conditions only
- C. It operates when  $CO_2$  availability is poor
- D. It does not take part in photosynthesis except for certain bacteria



- 2. Choose the correct statement
  - A.  $C_3$  pathway is a slower process of carbon fixation than  $C_4$  pathway
  - B. 6 ATP are consumed to fix one  $CO_2$  via  $C_4$  pathway
  - C. The first stable product is a 4C compound in  $C_3$  pathway
  - D. The primary acceptor of  $CO_2$  is PEP in  $C_3$  pathway



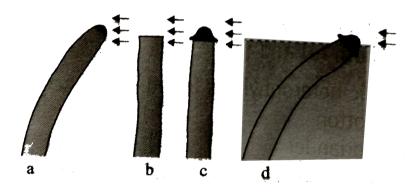
- **3.** Which of the following plants has scotoactive stomata?
  - A. Opuntia
  - B. Cuscuta
  - C. Sugarcane
  - D. Rice



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- 4. Dimorphic chloroplasts are found in
  - A. Wheat
  - B. Rice
  - C. Maize
  - D. Pea

**5.** Avena curvature test is a bioassay for examining the activity of



- A. Auxin activity
- B. Gibberellic acid (GA) activity
- C. Benzyl amino purine (BAP) activity

D. Abscisic acid (ABA) activity

### **Answer:**



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**6.** Which phytohormone is known as Anti GA hormone?

A. Ethylene

B. ABA

C. Cytokinin

D. Auxin

### **Answer:**



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**7.** Molybdenum (Mo) is more commonly found in

A. Roots

B. Stems

C. Leaves

D. Fruits

#### **Answer:**



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## 8. Nitrate assimilation is

A. 
$$NO_3^- \stackrel{ ext{oxidation}}{\longrightarrow} NH_3$$

B. 
$$NO_3^- \stackrel{reduction}{\longrightarrow} NH_3$$

$$\mathsf{C.}\: NO_3^{-} {\overset{\scriptscriptstyle{\mathrm{oxidation}}}{\longrightarrow}} NH_4^{\;+}$$

D. 
$$NO_2^- \stackrel{reduction}{\longrightarrow} NO_3^-$$



- **9.** Nitrifying bacteria such as Nitrosomonas and Nitrobacter are
  - A. Heterotrophs
  - B. Photoautotrophs
  - C. Symbiotic
  - D. Chemoautotrophs



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**10.** Potometer is a device used for measuring rate of

- A. Imbibition
- B. Ascent of sap
- C. Transpiration
- D. Phloem transport



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**11.** In roots, which tissue layer acts as control point for solutes and allow the passage of ions in one direction only?

- A. Epiblema
- B. Endodermis
- C. Pericycle
- D. Cortex



- **12.** At the sink, sucrose is moved out of the phloem sap by \_A\_ , as a result the osmotic pressure \_B\_ in sieve tube elements. Fill the blanks with suitable A and B.
  - A. A- Active transport ,B-Increases
  - B. A- Active transport ,B-Decreases
  - C. A- Passive transport ,B- Increases

D. A- Passive transport, B-Decreases

### **Answer:**



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**13.** Which phytohormone stimulates cell division and delays senescence?

A. Auxins

B. Gibberellins

C. Cytokinins

D. Vernalins

### **Answer:**



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**14.** Which phytohormone is known as stress hormone?

- A. Cytokinin
- B. Gibberellin
- C. Abscisic acid

D. Ethylene

### **Answer:**



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# 15. Auxin (IAA) was first isolated from

A. Yeast

B. Rhizopus

C. Fusarium

D. Human urine



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### **16.** Which one is odd wrt. LDP?

A. Wheat

B. Tobacco

C. Sugarbeet

D. Radish

17. Select the wrong statement.

A. In epigeal seed germination, hypocotyl grows first

B. In a plant, the perception site of light/dark is the leaves

C. Rate of respiration decreases rapidly during seed germination

D. Vernalisation can help in shortening the period between germination and flowering

## **Answer:**



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**18.** In  $C_3$  cycle, fixation of one  $CO_2$ , requires

A. 5ATP + 2NADPH

B. 5 ATP + 3NADPH

C. 3ATP + 3NADPH

D. 3ATP + 2NADPH

### **Answer:**



- 19. Immediate donor of electrons to PS I is
  - A. Phaeophytin
  - B.  $Cytb_6$
  - C. Plastocyanin

D. Plastoquinone

### **Answer:**



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20. Choose the events which correctly differentiate non cyclic photophosphorylation from cyclic photo phosphorylation br a. Requirement of an external electron donor, br b. Synthesis of ATP, br C. Photolysis of water, br

d. Involvement of PSI, br e-Formation of

NADPH

A. a, b and c only

B. b,c,d and e

C. a, c and e only

D. a, b, c and e

## Answer:



**21.** Who used prism, green alga Cladophora and aerobic bacteria and plotted the first action spectrum of photosynthesis?

A. Jan Ingenhousz

B. T. W. Engelmann

C. Joseph Priestley

D. C. Van Niel

#### **Answer:**



- **22.** Select the incorrect statement related to Mn toxicity
  - A. Prevention of binding of Mg with enzymes
  - B. Promotion of Ca translocation to shoot apex
  - C. Reduction in uptake of Mg
  - D. Combined deficiency symptoms of Mg,

Fe and Ca



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23. The effect of tuberculosis is seen on

\_\_\_\_\_



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**24.** Which set of elements become toxic when their concentration exceeds 10 mmol/kg of dry matter in plants?

A. C, Mg, S

B. S, Mg, Fe

C. B, Zn, Cu

D. Mn, Mg, Ca

## **Answer:**



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25. For a solution at atmospheric pressure

A.  $\psi_w > \psi_s$ 

B. 
$$\psi_w=\psi_s$$

C. 
$$\psi_w=0$$

D. 
$$\psi_w < \psi_s$$



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26. Symptoms of hypertension.



27. Which one is incorrectly matched pair

A. Lenticular transpiration- Approximately

0.1% of total water loss

B.  $\psi_w$  of pure water- Minimum

C.  $\psi_w$  of pure water - zero

D.  $\psi_s$  (solute potential) - Lowering of free energy of water

### **Answer:**



**28.** Read the following statements and choose the correct option. Statement-A: Potassium pump theory explains that during opening of stomata in light, ion exchange is an active process. Statement-B: Poaceous stomata are ellipsoidal in shape.

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



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## 29. In a flaccid cell

A. 
$$DPD = 0$$

$$B. DPD = OP$$

**30.** Maximum energy is released during conversion of

A. Glucose into pyruvic acid

B. Glucose into ethyl alcohol and  $CO_2$ 

C. Pyruvic acid into acetyl CoA

D. Pyruvic acid into  $CO_2$  and  $H_2O$ 



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**31.** In electron transport system of respiration, which enzyme complex is odd w.r.t. electron carrier?

A. Complex I

B. Complex III

C. Complex IV

D. Complex V

**32.** How many ATP molecules will be formed from complete oxidation of two molecules of 3-PGAL in an eukaryotic cell?

A. 34

B. 40

C. 36

D. 42

**33.** Auxin promotes the apical dominance whereas it is counteracted by\_Complete the statement by choosing the correct option

- A. Gibberellin
- B. Cytokinin
- C. Ethylene
- D. ABA

**34.** Match the phytohormones given their precursors given and find the wrong option

A. auxins--indole compounds

B. gibberlins---terpenes

C. cytokinins---adenine derivatives

D. abscissic acid---acetate compounds



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**35.** Identify the wrong statements: br a. There are three steps in Krebs cycle where $NAD^{+}$  is reduced to  $NADH + H^{\,+}$  , br b. Krebs cycle starts with the condensation of acetyl group with fumaric acid to yield citric acid.br c. Cytochrome c is a small, mobile carrier protein, which transfers protons between complex III and IV.br d. In glycolysis, glucose undergoes partial d d. oxidation and at the end produces 2 molecules of pyruvic acid. .

- A.b. c and d
- B. b and c only
- C. b and c only
- D. c and d only



- 36. Read the given statements and choose the correct option:
  - A. Yeasts poison themselves to death when the

concentration of alcohol reaches about 10%.

B. During glucose activation phase of glycolysis, 2 ATP are consumed,

A. Only A is correct

B. Only A is incorrect

C. Both A and B are correct

D. Both A and B are incorrect

#### **Answer:**



**37.** On the basis of the RQ values, arrange the given respiratory substrates in descending order. a. Glucose b. Oxalic acid C. Tripalmitin d. Protein

- A. b gt a gt d gt c
- B. a gt b gt d gtc
- C. b gt c gt a gt d
- D. c gt b gt a gt d

## **Answer:**



**38.** Select the correct set of non-mineral essential elements

- A. C. CI, N
- B. C, H. B
- C. C, H, O
- D. H.O, CI

## **Answer:**



**39.** Which one of the following elements helps in photolysis of water and to maintain anion-cation balance in cells?

- A. Boron
- B. Chlorine
- C. Manganese
- D. Potassium

# **Answer:**



**40.** Which of the following prevents inactivation of enzyme nitrogenase by oxygen poisoning, during biological nitrogen fixation?

- A. Nod factors
- B. Leguminous haemoglobin
- C. Cytochrome
- D. Amides

## **Answer:**



**41.** In  $C_4$  plants, bundle sheath cells are characterised by how many features given below? Br i. Large cells, br ii- Having large number of agranal chloroplasts, br iii- Thin walled ,br iv- Impervious to gaseous exchange, br v- Presence of intercellular space.

**A.** 5

B. 4

C. 2

D. 3



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**42.** Read the oven statements and choose the correct option br A- Like dark reactions, light reactions are also temperature sensitive but are affected to a much lesser extent, br  $B-C_4$  plants respond to lower temperatures and show higher rate of photosynthesis.

A. Only A is correct

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



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- 43. Select the incorrect statement
  - A. In monocots, guard cells are dumb-bell

shaped

B. The positive pressure that develops in xylem is called root pressure

C. Active transport is a downhill process

D. Diffusion is a slow process

# **Answer:**



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**44.** The opening of stoma is aided due to the orientation of the microfibrils in the cell walls of the guard cells. These microfibrils are

- A. Proteinaceous
- B. Cellulosic
- C. Lipid derivative
- D. Polynucleotide chains



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**45.** Read the following statements and select the correct option.

- A. Mixing of oxygenated and deoxygenated blood occurs in heart of fish and amphibians
- B. Paired pharyngeal gill slits present on dorsal side of body are characteristic feature of chordates
- C. Gills function as respiratory as well as excretory structure of molluses
- D. Male and female leeches can be distinguished on the basis of size



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# 46. A true fish among the following is not

A. Dog fish

B. Cat fish

C. Hag fish

D. Saw fish

#### **Answer:**

**47.** Structures called ommatidia are associated with which organ system of Periplaneta?

A. Respiratory system

B. Reproductive system

C. Nervous system

D. Excretory system

**Answer:** 



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**48.** Which one of the following is the correct description about the animal concerned?

A. Cockroach - 10 pairs of spiracles present on ventral side of body

B. Earthworm - Internal fertilisation and indirect development

C. Frog - Ureters function as urinogenital duct in male.

D. Crow - Heterodont dentition

# **Answer:**



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**49.** In contrast to flatworms, the roundworms show

- A. Radial symmetry
- B. Three germ layers
- C. Organ level of organization

D. Complete digestive system

# **Answer:**



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**50.** Which of the following represents the correct combination without any exception?

A. Characteristics -Fore limbs modified into wings, partially ossified endoskeleton, moist and glandular skin, Taxon-Aves

- B. Characteristics- Acoelomate organism, bilateral symmetry, complete digestive system, Taxon-Aschelminthes
- C. Characteristics Tetrapod in adult,

  presence of post anal tail, moist and
  glandular skin, Taxon- Amphibia
- D. Characteristics Presence of mammary glands, body hair is present at some point of development internal fertilisation, Taxon-Mammals



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**51.** Mark the odd one among the following parasitic organisms.

A. Hook worm

B. Tape worm

C. Leech

D. Limulus



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**52.** What is true about Asterias, Ophiura and Cucumaria?

- A. They all possess ventral heart
- B. They all exhibit secondary radial symmetry

C. They all have mouth on dorsal side and anus on ventral side

D. They all are sessile organisms

# **Answer:**



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**53.** Common characteristic between devil fish and tongue worm is

A. Presence of haemocoel

- B. Unsegmented body
- C. Direct development
- D. Presence of parapodia as respiratory structure



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**54.** Life of Petromyzon begins in \_A\_ and ends in \_B\_ Select the option which gives correct answer for blank in above statement

- A. A-Brackish water, B-Sea
- B. A- Fresh water, B-Brackish water
- C. A- Fresh water, B- Fresh water,
- D. A- Sea, B- Fresh water,



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**55.** Select the correct matched with its scientific name

- A. Cockroach Pinctada vulgaris
- B. Lion Panthera leo
- C. Tortoise Chelone graeca
- D. Flying fish Clarias magur



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**56.** Structure present at the junction of foregut and midgut in cockroach are

- A. Hepatic caecae
- B. Crop
- C. Malpighian tubules
- D. Gizzard



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**57.** Presence of pneumatic bones and avascular air sacs are characteristic feature of members of class

- A. Aves
- B. Mammalia
- C. Amphibia
- D. Osteichthyes



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**58.** Every phylum is named according to certain features present in most of its members. Cephalochordates are named so

A. Due to presence of notochord only in tail of adult

B. Because of presence of notochord only in head of larva and adult

C. Due to presence of notochord from head

to tail throughout the life of organism

D. Because of presence of notochord from head to tail only in larval stage

# **Answer:**



# 59. Select the incorrect statement

- A. Hooks and suckers are primarily locomotory structures of Taenia
- B. Bioluminescence is well marked in members of phylum Ctenophora.
- C. Poriferans are neither clearly diploblastic nar triploblastic organisms

D. Multicellularity is common charactenstic

of all members of Kingdom Animalia,

# **Answer:**



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**60.** A chordate having both vertebral column and notochord in adult stage is

A. Branchiostoma

B. Rattus

C. Scoliodon

D. Bungarus

# **Answer:**



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61. How many among the animals given in the box are homeotherms having bony endoskeleton and exhibit internal fertilisation? [Pristis, Ichthyophis, Calotes, Corvus Hyla, Felis, Elephas, Pterophyllum]

A. Four
B. Five
C. Seven
D. Three
Answer:
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<b>62.</b> As compared to Clarias, Trygon has
A. Bony endoskeleton

- B. Electric organ
- C. Claspers as copulatory structure
- D. Presence of swim bladder



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**63.** Characteristic(s) common between Macropus. Omithorhynchus and Pteropus include.

- A. Poikilothermy
- B. Presence of marsupial pouch
- C. Internal fertilisation and direct development
- D. Presence of ear pinna



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64. Notochord in chordates is located

B. Ventral to gut C. Ventral to nerve cord D. Lateral to gut **Answer: Watch Video Solution** 65. Economically harmful insect is A. Locusta

A. Dorsal to nerve cord

- B. Bombyx
- C. Apis
- D. Laccifer



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**66.** Read the following statements and select the correct option br 1. In poriferans, water enters spongocoel via multiple oscula. Br II- In

Spongilla, digestion is both extracellular as well as intracellular.

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

# **Answer:**



**67.** Select the correct option where the set of animals which belong to same taxon.

- A. Silver fish, dog fish, cuttle fish
- B. Hook worm, round worm, tongue worm
- C. Dolphin, whale, flying fox
- D. Sea pen, sea lily, sea urchin

#### **Answer:**



**68.** Read the following features of certain organisms. Br (a) Metameric segmentation, br (b) Presence of haemocoel, br (c) Exhibits metamorphosis, br (d) Presence of tracheal system, Which of the following organisms exhibit above mentioned characteristics?

- A. Chaetopleura
- B. Ancylostoma
- C. Cucumaria
- D. Anopheles

#### **Answer:**



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**69.** Mark the odd one among the following invertebrates.

- A. Doliolum
- B. Amphioxus
- C. Betta
- D. Saccoglossus

#### **Answer:**



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70. Select the correct match.

- A. Psittacula Ectotherm
- B. Pavo Open type circulation
- C. Petromyzon Spawning in sea water
- D. Pterophyllum Presence Of swim bladder

#### **Answer:**



**71.** Air bladder is found in which of the following fishes?

A. Trygon

B. Torpedo

C. Labeo

D. Carcharodon

**Answer:** 



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72. What is humus?



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**73.** A multicellular organism which uses cilia for locomotion is

A. Sycon

B. Paramecium

C. Pleurobrachia

D. Physalia

## **Answer:**



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**74.** Acoelomate organism despite presence of mesoderm belongs to which of the following phylum?

A. 1.Platyhelminthes

B. 2.Cnidaria

C. 3.Annelida

D. 4. Echinodermata

#### **Answer:**



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**75.** Read the following statements regarding cockroach and select the correct option. I-2nd nymphal stage of cockroach is almost similar to adult except that the wings, II- Development of nymph takes place inside ootheca.

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

# **Answer:**



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76. Define communicable disease.



77. Fasciola infects its primary host at \_A\_ larval stage and its secondary host at \_B\_ larval stage. Select the option which gives correct answer for blanks in above statement.

- A. A-Sporocyst, B-Cercaria
- B. A- Metacercaria, B-Miracidium
- C. A- Cercaria, B-Metacercaria
- D. A- Miracidium, B-Sporocyst

#### **Answer:**

78. Complete the following analogy. Fasciola:

Flame cells :: Balanoglossus:

A. Flame cells

B. Proboscis gland

C. Nephridia

D. Renette cell

**Answer:** 



**79.** Alligator and Corvus are similar to Pteropus and Bufo in which one of the following features?

- A. Presence of dorsal, hollow notochord in embryonic life
- B. Forelimbs are modified for flight
- C. Presence of four chambered heart
- D. Categorized under Gnathostomata

#### **Answer:**



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**80.** Select the correct statement from the ones given below w.r.t. Periplaneta americana.

A. Malpighian tubules present at the junction of gizzard and mesenteron help in removal of excretory waste from haemolymph

B. About 12 alary muscles cause rhythmic contraction of heart

C. Spermathecae in males are site for storage of sperm

D. Nervous system consists of a scene of fused segmentally arranged ganglia joined by paired longitudinal connectives on ventral side of body

# **Answer:**



**81.** True coelomate organism exhibiting metamerism, closed circulatory system and bilateral symmetry is

- A. Bombyx
- B. Aplysia
- C. Ascidia
- D. Pheretima

#### **Answer:**



**82.** Which one of the following pairs of animals are similar to each other pertaining to the features stated against them?

A. Catia and Pristis - Body covered by placoid scales, marine fishes

B. Hippocampus and Chameleon -

Ectotherms, prehensile tail

C. Antedon and Loligo - Sessile organism,

indirect development

D. Salpa and Limulus - Chitinous exoskeleton, Retrogressive metamor phosis

# **Answer:**



83. Mark the correct statement w.r.t. snakes.

A. Their body is covered by dry and cornified skin, composed of mesodermal

scales

B. They are oviparous and exhibit metamorphosis

C. Like birds, their body temperature is regulated by external environment

D. They lack ear pinnae

## **Answer:**



**84.** In which one of the following the genus name, its two characters and its phylum are not correctly matched?

A. Genus - Euspongia, Characters- (a) Water canal system,(b) Skeleton made up of spongin fibres, Phylum-Porifera

B. Genus- Gorgonia, Characters-(a)

Calcareous skeleton , (b) Sessile

organism, Phylum-Coelenterata

C. Genus - Taenia, Characters- (a) Lacks
digestive system, (b) Indirect
development, Phylum-Platyhelminthes

D. Genus - Octopus, Characters- (a)

Hexapoda, (b) Segmented organism,

Phylum- Mollusca

## **Answer:**



**85.** Which of the following features cannot be associated with Rana tigrina?

- A. Tympanum represents the ear
- B. Three chambered heart
- C. Body divisible into head and trunk
- D. Direct development

#### **Answer:**



**86.** Male Ascaris can be distinguished from the female on the basis of all of the following except

- A. Size
- B. Presence of separate excretory pore
- C. Presence of penial setae
- D. Presence of cloaca

#### **Answer:**



**87.** Find the odd one among the following w.r.t. dioecious organisms.

- A. Ascaris
- B. Anopheles
- C. Ctenoplana
- D. Nereis

## **Answer:**



**88.** Select correct option with its scientist who discovered / isolated it

- A. Auxins----charles darwin
- B. cytokinins----F. skoog
- C. gibberlins---F. W went
- D. Ethylene--- cousins and workers

#### **Answer:**



**89.** Which type of body symmetry is most suitable for sessile and motile organisms respectively?

- A. Radial and bilateral symmetry
- B. Bilateral and radial symmetry
- C. Bilateral and biradial symmetry
- D. Biradial and radial symmetry

#### **Answer:**



**90.** In multicellular organisms growth and reproduction are the events which are

- A. Mutually inclusive and linked
- B. Mutually exclusive but linked
- C. Mutually inclusive but not linked
- D. Mutually exclusive and not linked

#### **Answer:**



91.	Middle	Lamella	is	mainl	y	made	up	of
-----	--------	---------	----	-------	---	------	----	----

- A. Cellulose
- B. Chitin
- C. Calcium and magnesium pectate
- D. Lignin

#### **Answer:**



92.	Non	pigmented	plastid	which	lacks	grana	is
-----	-----	-----------	---------	-------	-------	-------	----

- A. Chromoplast
- B. Leucoplast
- C. Chloroplast
- D. Tonoplast

#### **Answer:**



# **93.** Match the column I with column II and choose the correct option

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- A. Mutualism
- B. Commensalism
- C. Parasitism
- D. Predation

#### Column II

- 1. Tiger and deer
- 2. Cuscuta on Cissus
- 3. Sucker fish and shark
- 4. Crab and sea anemone

#### **Answer:**

94. Select the correct match.

A. ABA - Closure of stomata

B.  $GA_3$  - Promotes seed dormancy

C. Cytokinin - Derives from violaxanthin

D. Ethylene - Richmond-Lang effect

#### **Answer:**



**95.** A fungus that is decompose of wood, has long lived secondary mycelium, shows clamp connections and produces exogenous sexual spores is put under the class

- A. Zygomycetes
- B. Basidiomycetes
- C. Ascomycetes
- D. Oomycetes

**Answer:** 

Bougainvillea thorns are 96. In the modification of

A. Petiole

B. Stipule

C. Apical buds

D. Axillary buds

**Answer:** 



**97.** Tricarpellary, syncarpous, trilocular, superior ovary with axile placentation is found in

A. Solanaceae

B. Liliaceae

C. Fabaceae

D. Poaceae

#### **Answer:**



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98. In roots, pericycle is

A. Thick walled sclerenchymatous

B. Parenchymatous

C. Collenchymatous

D. Chlorenchymatous

# **Answer:**



- 99. Select the incorrect match.
  - A. Monoecious prothallus Lycopodium
  - B. Dioecious prothallus Dryopteris
  - C. Class sphenopsida Equisetum
  - D. Heterospory Leads to seed habit

#### **Answer:**



**100.** Which one of the given statements is wrong?

A. Bacterial cell wall is made up of peptidoglycan

B. The walls of diatoms are easily destructible

C. In viroids, RNA is of low molecular weight

D. Neurospora is used in the study of biochemical and genetic work.

### **Answer:**



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101. Choose the incorrect match.

A. Cyanobacteria - Chlorophyll 'a' similar to green plants

- B. Halophiles Develop a pigmented membrane in strong light
- C. Azotobacter Free living aerobic bacterium
- D. Transduction Was firstly demonstrated in E. coli



102. State true (T) or false (F) for the given statements and choose the correct option. Br (a) Seeds of Pinus cannot germinate properly without mycorrhizal associations br (b) During passive absorption of water by roots a positive pressure is developed in xylem.



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103. Detritus food chain.



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**104.** Increased level of  $K^+$  and malate ions into the vacuole of guard celis leads to

- A. Increase in turgor pressure of guard cells
- B. Decrease in turgor pressure of guard cells
- C. Exosmosis from guard cells
- D. Decrease in osmotic concentration of guard cells



105. To explain the translocation of food,

"pressure flow hypothesis" was proposed by

- A. Levitt
- B. Graft
- C. E. Munch
- D. M. Fujino

### **Answer:**



**106.** Root pressure is a

A. Negative hydrostatic pressure in the xylem of root.

B. Positive hydrostatic pressure in the xylem due to metabolic activity of root.

C. Negative hydrostatic pressure in companion cells of root.

D. Positive hydrostatic pressure in companion cells of root.

# Answer:

**107.** Read the following features for brown algae a- Presence of pigments Chlorophyll a and c. carotenoids and xanthophyll (fucoxanthin), b- Cell wall is composed of cellulose, pectin and hydrocolloids like carrageen. c- Gametes are pyriform with two laterally attached flagella d-Stored food may be in form of laminarin or mannitol d- Deepest dweller

B. Four
C. Three
D. Two
Answer:
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<b>108.</b> Select the wrong statement.

A. Five

- A. Chlorella and Spirullina are used as food supplements even by space travellers.
- B. Algae are primary producers
- C. Pyrenoids contain protein and starch
- D. Phenetics involves usage of only chemical features for the evaluation of similarities and differences between species



**109.** How many total ATP are produced through ETS only from two molecules of Acetyl CoA in aerobic respiration?

- A. 24
- B. 22
- C. 30
- D. 11

**Answer:** 



**110.** In germinating fatty seeds, fats are converted to sugars by

- A.  $C_2$  cycle
- B. Glyoxylate cycle
- C. Krebs cycle
- D.  $C_4$  cycle

### **Answer:**



# **111.** Universal donor of blood is \_\_\_\_\_



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112. Read the given statements A & B and choose the correct option. Br A- The enzyme nitrogenase is made up of Mo - Fe protein. Br B- The synthesis of ammonia requires very high input of energy i.e. 8 ATP for each  $NH_3$  produced

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



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113. What is true about photorespiration? a- It

is also known as  $C_2$  cycle , b- There is neither

synthesis of sugar nor ATP, c- It is wasteful process in  $C_3$  plants

- A. Only a and b
- B. Only b and c
- C. Only a and c
- D. All a, b and c

### Answer:



**114.**  $CO_2$  fertilization effect signifies

A. Higher yields, if some  $C_3$  crops are allowed to grow in  $CO_2$  enriched atmosphere

B. Effect of  $CO_2$  on double fertilization event

C. Lower yields, if  $C_3$  crops are grown in  $CO_2$  enriched atmosphere

D. Both (1) and (2)



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115. How many of the following are correct regarding plant hormone ABA? Br a- Inhibition of seed germination, br b-Stress hormone, c-Acceleration of abscission of flowers & fruit. Br d - Anti - GA, br e- Respiratory climactic.

A. 3

B. 2

- C. 5
- D. 4



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**116.** Which one lateral meristem is completely primary in origin?

- A. Cork cambium
- B. Fascicular vascular cambium

- C. Interfascicular cambium
- D. Vascular cambium



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117. If in a flower, Female reproductive part occupies the highest position while other parts are situated below it, the flower is called

A. Perigynous

- B. Partly epigynous
- C. Epigynous
- D. Hypogynous



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118. Which of the following layer of cell wall is capable of growth and gradually diminishes as the cell matures?

- A. Tertiary cell wall
- B. Secondary cell wall
- C. Primary cell wall
- D. Cell membrane



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119. If there are 20 chromosomes in a pollen grain of a diploid plant then the number of

bivalents in a meiocyte of that plant at prophase I will be

- A. 40
- B. 20
- C. 30
- D. 10

### Answer:



# 120. Opposite phyllotaxy is found in

- A. Calotropis
- B. Alstonia
- C. China rose
- D. Sunflower

### **Answer:**



**121.** The fungus in which ascus formation occurs but no ascocarp is seen is

- A. Claviceps
- B. Neurospora
- C. Penicillium
- D. Saccharomyces

### **Answer:**



**122.** Protists obtain their food by (
a-)Chemosynthesis, (b-)Photosynthesis, (c-)Heterotrophic mode of nutrition

- A. (a) only
- B. (a) & (C)
- C. (a) & (b)
- D. (b) & (C)

### **Answer:**



123. In plants, how many of the following symptoms are due to viral infection? Br a-Mosaic formation, br b- Yellowing and vein clearing, br c- Leaf rolling and curling, br d-Dwarfing and stunted growth.

**A.** 1

B. 2

C. 4

D. 3

**Answer:** 

**124.** The deuteromycetes generally reproduce by asexual spores known as

A. Oidia

B. Conidia

C. Sporangiospore

D. Chlamydospore

**Answer:** 



# 125. Pacemaker enzyme of EMP pathway is

- A. Hexokinase
- B. Phosphohexoisomerase
- C. Phosphofructokinase
- D. Enolase

#### **Answer:**



**126.** A flower can be cut into two equal or identical halves in any radial plane passing through the centre. This flower will be

- A. Actinomorphic
- B. Bilateral symmetric
- C. Asymmetric
- D. Zygomorphic

### **Answer:**



**127.** Heterocysts are specialised cells found in some BGA. They are specialised for

- A. Sexual reproduction
- B. Nitrogen fixation under anaerobic condition
- C. Nitrogen fixation under aerobic condition
- D. Performing photosynthesis with the help of PS II



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**128.** Lichens cannot tolerate \_A\_ especially due to \_B\_ Fill the blanks with suitable option for (A) and (B)

- A. (A) -Water pollution ,B  $CO_2$
- B. A- Soil pollution, B-  $CH_4$
- C. A- Air pollution, B-  $SO_2$
- D. A- Air pollution, B  $CO_2$



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129. In bryophytes, spores get disseminated by

A. Wind

B. Water

C. Insects

D. Animals

**Answer:** 

**130.** Which of the following is not a correct statement?

- A. Herbaria serve as quick source of reference in taxonomical studies.
- B. Botanical gardens are in-situ conservation strategies of plants.
- C. Key is artificial analytical device, used for identification for both plants and

animals.

D. Monograph contains information of any one taxon.

### **Answer:**



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**131.** Phellem becomes impervious to water due to deposition of

A. Lignin

- B. Suberin
- C. Cutin
- D.  $SiO_2$



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# **132.** Gymnosperms are

- A. Wind pollinated archegoniates
- B. Insected pollinated archegoniates

- C. Water pollinated non archegoniates
- D. Animal pollinated non-archegoniates



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**133.** Mycorrhizal association is responsible for a- Increasing absorptive area, b- Providing shelter to fungi, c- Nitrogen fixation, d-Enhanced supply of N, P, S

- A. Only a & b
- B. Only b&c
- C. Only a, b & d.
- D. All a, b, c & d



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**134.** Smallest angiosperm is

A. Acacia

- B. Wolfia
- C. Zamia
- D. Ginkgo



- **135.** Complete the following analogy Pheretima
- : Nephridia ::Balanoglossus
  - A. Malpighian tubules

- B. Ctenidia
- C. Flame cells
- D. Proboscis gland



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**136.** All of the following hormones from hypothalamus are carried to pituitary via hypophyseal portal vein except

A. Somatostatin

B. GnRH

C. GHRH

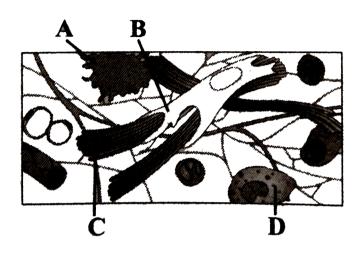
D. ADH

# **Answer:**



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137. Given is the diagrammatic sketch of a certain type of connective tissue Identify the parts labelled as A,B,C and D and select the correct option.



A. (A)Produce antibodies, (B) Secrete fibres,

(C) Provide rigidity, (D) Phagocytic cells

B. (A)Secrete anti coagulant, (B) Phagocytic

cells , (C) Provide elasticity, (D)Produce

antibodies,

C. (A)Secrete collagen fibres, (B) Produce antibodies, C - Component of intracellular matrix (D)Produce histamines

D. (A)-Phagocytic cells , (B)-Secrete collagenfibres, C- Provide strength to tissue, D-Produce anti coagulant

# Answer:



**138.** Select the correct option having set of factors which cause left shift and right shift respectively in oxygen. dissociation curve.

- A. High  $PCO_2$ , and low  $igl[H^+igr]$
- B. High  $PO_2$ , and high 2, 3 BPG.
- C. Low pH and high  $pO_2$
- D. Low  $pO_2$ , and lowpCO\_2`

#### **Answer:**



139. Read the following statements and select the correct option regarding muscular and nervous tissue. Br Statement I: Excitability is the common characteristic between muscular and nervous tissue. Br Statement II: Cells which form a large volume of nervous tissue lack electrical excitability.

A. Both statements are incorrect

B. Statement is incorrect

C. Statement II is incorrect

D. Both statements are correct

# **Answer:**



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- 140. If an enzyme has been given the EC code
- 4.3.2.1. it is likely to be involved in
  - A. Joining of C -O, C- S, C-N bonds
  - B. Hydrolysis of peptide and glycosidic

bonds

- C. Formation of double bond
- D. Redox reactions



- **141.** Type of joint present between wrist bones is also present between
  - A. Humerus and pectoral girdile
  - B. Atas and axis

- C. Bones of cranium
- D. Tarsals



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142. Select the incorrect match.

A. Respiratory volume/capacity -Residual

volume, Value-1100 ml -- 1200 ml

- B. Respiratory volume/capacity Vital capacity, Value- 3500 mL 4500 ml
- C. Respiratory volume/capacity Functional residual capacity, Value- 2500 ml
- D. Respiratory volume/capacity Expiratory capacity, Value- 3000 ml 3500 ml



# 143. During muscle contraction

- A. Cross bridges are formed when the energized myosin head attaches to myosin binding site on actin
- B. The Z-lines are drawn towards each other
- C.  $Ca^{2+}$  concentration in the cytosol increases

D. The thick filaments slide over the thin filaments

# **Answer:**



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**144.** Common feature of frog and cockroach is

A. Closed circulatory system

B. Uricotelism

C. Dorsal nerve cord

D. Indirect development

# **Answer:**



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**145.** Choose the incorrectly matched pair.

A. Squamous epithelium - Walls of blood vessels

B. Cuboidal epithelium - Tubular parts of

nephron

- C. Compound epithelium Bronchioles
- D. Glandular epithelium Goblet cells



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**146.** Damage to which cells of gastric glands can cause anemia?

- A. Mucus neck coll
- B. Peptic cells

- C. Parietal cells
- D. Chief cells



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**147.** The following is a list of animals and their excretory organs. Choose the incorrect match

- A. Palaemon Statocysts
- B. Planaria Flame cells

- C. Ancylostoma -Renette cells
- D. Pila Feathery gills



- **148.** Jaundice is a disorder of -
  - A. Excretory disorder
  - B. Digestive disorder
  - C. Occupational respiratory disorder

D. Coronary artery disease

#### **Answer:**



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149. Read the following statements and select the correct option br Statement I:

Development of larvae of earthworm takes place inside cocoon. Br Statement II: In earthworm, fusion of gametes and formation of zygote occurs inside cocoon

- A. Both statements are correct
- B. Statement I is correct but statement II is incorrect
- C. Statement I is incorrect but statement II is correct
- D. Both statements are incorrect



**150.** identify the mismatched option wrt human

A. Inspiration: Occurs due to contraction of external intercostal muscles

B. Renal corpusclo: Consists of Bowman's capsule and renal tubules

C. Lub: First heart sound produced due to the closure of AV valves

D. Atherosclerosis: Caused due to the deposition of cholesterol, calcium and fibrous lissue in arteries

# **Answer:**



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**151.** In normal respiration, contraction of which of the following muscles leads to a decrease in intra pulmonary pressure?

- A. Diaphragm
- B. Internal intercostal muscles
- C. Abdominal muscles
- D. Cardiac muscles



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**152.** Cellular respiration includes

- A. Exchange of gases across alveolar membrane
- B. Pulmonary ventilation
- C. Breakdown of glucose and release of  $CO_2$
- D. Diffusion of gases between blood and tissue



**153.** Which of the following regions of brain is incorrectly paired with its function?

A. Thalamus : Relay centre in cerebral cortex

B. Corpus callosum: Tract of muscle fibres
which connect one cerebral hemisphere
to another

C. Hypothalamus : Thermostat of the body

D. Cerebral aqueduct : Connects third

ventricle to fourth ventricle



- **154.** As compared to sympathetic system, stimulation from parasympathetic system causes.
  - A. Increase in heart rate and cardiac output
  - B. Decrease in duration of cardiac cycle and increase in cardiac output

C. Decrease in speed of conduction of action potential across heart musculature and in heart rate

D. Increase in stroke volume and cardiac output

# Answer:



**155.** Select the set of animals which are homeotherms.

- A. Chelone and Naja
- B. Aptenodytes and Macropus
- C. Pteropus and Calotes
- D. Balaenoptern and Chameleon

#### **Answer:**



**156.** Human eye contains cone cells which respond to red green and blue light. When all of these cones Are stimulated equally then a sensation of \_\_\_ light is produced Select the option which fills the blank correctly.

- A. Black
- B. White
- C. Grey
- D. Brown

**Answer:** 

**157.** Which one of the following statements in regard to the excretion by the human kidneys is correct?

- A. Vasa recta and loop of Henle of cortical nephrons form counter current system
- B. With or without the influence of ADH, maximum reabsorption of water still occurs in proximal convoluted tubules

- C. Reabsorption of water occurs in every segment of the tubular part of nephron
- D. Selective secretion of nutrients like glucose and electrolytes occurs in PCT and collecting duct



**158.** Part of nephron where maximum reabsorption of nutrients occur is lined by

- A. Brush bordered columnar epithelium
- B. Ciliated epithelium
- C. Brush bordered cuboidal epithelium
- D. Squamous epithelium

#### **Answer:**



**159.** Select the option having correct set of sensory type of cranial nerves only

- A. IV, X, XI
- B. I, II, VIII
- C. III, XI, XII
- D. V, VII, IX

# **Answer:**



**160.** Select the disease caused by both hyposecretion as well hypersecretion of a hormone

- A. Four
- B. Five
- C. Three
- D. Six

#### **Answer:**



**161.** What will happen when a threshold stimulus is applied at a particular site in neuron?

A. The entire axonal membrane gets depolarised altogether

B. Axonal membrane becomes more  $\mbox{permeable to } Na^+ \mbox{, leading to efflux of } \\ Na^+ \mbox{ to ECF}$ 

C. Polarity entire of neurilemma gets reversed at a time

D. Reversal of charge occurs only at site where stimulus is applied

# **Answer:**



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**162.** Digestion of carbohydrates begins in \_A\_ and ends in \_B\_ Select the option which fill the blanks correctly

A. A-Stomach, B- Small intestine

- B. A- Duodenum, B- Jejunum
- C. A- Buccal cavity, B- Small intestine
- D. A-Buccal cavity, B- Stomach



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**163.** Select the correct match between group of animals, features and exception.

- A. Animal Pheretima, Hirudinaria, Features-Closed circulatory system, Exception-Pheretima
- B. Animal Ascidia, Petromyzon , Features-Lack vertebral column, Exception-Petromyzon
- C. Animal Rana, Calotes, Features- Three chambered heart, Exception- Calotes
- D. Animal Omithorhynchus, Corvus,

Features- Dorsal nerve cord, Exception-

### Corvus

### **Answer:**



- **164.** Which of the following option given below is correct representation of net filtration pressure?
- (a) (Glomerular hydrostatic pressure) (capsular hydrostatic pressure)
- (b) (Glomerular hydrostatic pressure) -

```
(capsular hydrostatic pressure + blood colloidal osmotic pressure)(c) (Glomerular hydrostatic pressure +
```

(c) (Glomerular hydrostatic pressure + capsular osmotic pressure)

(d) (Capsular hydrostatic pressure + blood colloidal .osmotic pressure) (Glomerular hydrostatic pressure)

A. (Glomerular hydrostatic pressure)

(Capsular hydrostatic pressure)

B. (Glomerular hydrostatic pressure) 
(Capsular hydrostatic pressure + blood

colloidal osmotic pressure)

C. (Glomerular hydrostatic pressure) +
(Capsular osmotic pressure)

D. (Capsular hydrostatic pressure + blood colloidal osmotic pressure) - (Glomerular hydrostatic pressure)

## **Answer:**



**165.** Which part of the body is affected in jaundice?



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**166.** During aestivation and hibernation, a frog respires through

A. Both skin and buccal cavity

B. Only through lungs

C. Only through skin

D. Both lungs and buccal cavity

## **Answer:**



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**167.** After the removal of pituitary gland, a person was advised to undergo pituitary hormone replacement therapy. Select the set of hormones which are included in this therapy.

A. Insulin, Thymosin, Thyroxine

- B. Thyroxine, Relaxin, Gastrin
- C. Oxytocin, Glucagon, Estrogen
- D. ACTH, TSH, ADH



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**168.** The 24 hour (diurnal) rhythm of our body like sleep wake cycle is regulated by which hormone?

- A. Adrenaline
- B. Melanin
- C. Melatonin
- D. Prolactin



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**169.** Select the odd one among the following viviparous organisms?

- A. Scoliodon
- B. Balaenoptera
- C. Trichinella
- D. Testudo



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Cockroaches show **170.** gradual metamorphosis. Which of the following statement correctly illustrates it?

- A. The life story includes egg, nymph

  (young) with small wings and imago

  (adult)
- B. Metamorphosis occurs through a series of nympha stages and is known as paurometabolous
- C. 18 moults occurs to reach the adtlt form
- D. Gradual metamorphosis also occurs in silver fish

**171.** Identify the aromatic amino acid from the given option.

A. Serine

B. Cysteine

C. Tyrosine

D. Stutamic acid

**Answer:** 



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**172.** Which hormone is produced by wall of atria of heart to opposs RAAS pathway?

A. ANF

B. ADH

C. Adrenamie

D. Angiotensin

**Answer:** 



# 173. Erythroblastosis foetalis can occur

A. When mother is Rhive r.nd father is Rhve

- B. When both mother and foetus are Rh-ve
- C. Wher mother is Rh+ and foetus is Fin-ve
- D. When mother is Rh-ve and lotus a Rh+ve

#### **Answer:**



**174.** Which of the following set gives correct description regarding human dentition?

- A. Thecodont, Diphyodont, Homodont
- B. Diphyodont, Heterodont, Thecodont
- C. Monophyodont, Acrodont, Homodont
- D. Diphyodont, Heterodont, Acrodont

### **Answer:**



**175.** Rigor mortis is caused due to

A. Breakdown of cross bridges between actin and myosin head

- B. Depletion of ATP
- C. Degradation of contractile proteins
- D. Loss of troponin and tropomyosin

## **Answer:**



**176.** Select the incorrect match of the site of action on the given substrate the enzyme acting upon it and the end product

A. Stomach : Proteins rarr^(pepsin)

Proteoses+Peptones

B. Buccal cavity : Starch rarr^(Ptyalin)

Maltose

C. Small intestine : Fats rarr^(bile pigments) Micelles

D. Small intestine: Maltoserarr ^(maltase)

Glucose+ Glucose

# **Answer:**



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**177.** Find the odd one among the following skull bones.

A. Zygomatic

B. Lacrimal

C. Nasal

D. Sphenoid

## **Answer:**

