



# BIOLOGY

## NEET & AIIMS

### TEST 5

#### Exercise

1. Consider the following cellular functions:
  - a. Transport of substances.
  - b. Synthesis of proteins.

c. Synthesis of steroidal hormones.

d. Glycogen metabolism.

e. Detoxification of drugs.

f. Giving rise to sphaerosomes.

A. Two

B. Four

C. Six

D. Five

**Answer:**



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2. The eukaryotic cell structure, which controls the activities of organelles and also plays a major role in heredity is

A. Nucleoli

B. Nucleus

C. Nucleoid

D. Mitochondria

**Answer:**



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### 3. Select the incorrect statement

A. Leeuwenhoek first described a live cell

B. Robert Brown discovered the nucleus

C. Robert Hooke first saw a living cell

D. Schwann proposed that bodies of animals and plants are composed of cells and products of cells

**Answer:**





4. One of the most important functions of the plasma membrane is the transport of molecules. Which of the following is correct w.r.t. this statement?

A. Polar molecules can pass easily through the lipid bilayer

B. Polar molecules can pass easily through the lipid bilayer transport

C. Neutral solutes require a carrier protein of membrane for transport

D. The membrane is selectively permeable to some molecules present on either side of it.

**Answer:**



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5. Algal cell wall is made of

A. Calcium pectate

B. Hemicellulose and pectin

C. Cellulose, hemicellulose and pectin

D. Cellulose, galactans and mannans

**Answer:**



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**6.** Select the mis-match w.r.t. function of the structure

- A. Plasmid - Confers unique phenotypic characters to bacteria
- B. Fimbriae - Helps bacteria in motility.
- C. Mesosome - Helps in DNA distribution to daughter cells
- D. Cell wall. Prevents the bacterium from collapsing

**Answer:**



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## 7. Inclusion bodies

- A. Are bound by a unit membrane
- B. Store reserve material in eukaryotic cells
- C. Can be glycogen granules
- D. Are living structures

**Answer:**



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8. Read the following statements, br A. Mitochondria help in generation of adenosine triphosphate. Br B - The outer mitochondrial membrane folds into several cristae

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

**Answer:**



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## 9. The cell envelope

- A. Is present in most eukaryotic cells
- B. Consists of a tightly bound three layered structure with plasma membrane being outermost
- C. Has each layer performing similar functions
- D. Acts together as a single protective unit

**Answer:**



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**10.** In which of the following features bacterial cells, plant cells and animal cells show similarity?

- A. Cytoskeleton
- B. Glycocalyx
- C. 70 S ribosomes
- D. Flagella organisation

**Answer:**



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**11.** The function like delivery of packaged materials either to the intracellular targets or secreted outside the cell is principally performed by

A. Lysosomes

B. Golgi body

C. Vacuole

D. ER

**Answer:**



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**12.** Mitochondria and plastids are similar in all of the following aspects, except

A. Possess circular ds-DNA

B. Have endo-symbiotic origin

C. Are the sites of carbohydrate biosynthesis

D. Divide by fission

**Answer:**



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**13.** Select the incorrect match

A. Thylakoids - Contain chlorophyll pigments

B. Chromoplasts - Contain xanthophyll

C. Leucoplast Stores tannin and resin

D. Food vacuoles - Have food particles

**Answer:**



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**14. Lysosomes are**

A. Double membrane bound vesicular structures



B. Rich in few hydrolases

C. Formed by packaging in Golgi apparatus

D. Formed by engulfing the food particles

**Answer:**



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**15.** Chromosome with one shorter arm and one longer arm, having centromere slightly away from middle is

A. Acrocentric

B. Metacentric

C. Sub-metacentric

D.

**Answer:**



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**16.** How many of the following features are associated with the endomembrane system?

Synthesis of steroidal hormones, Digestion of

food, Storage of waste, Storage of proteins,  
Synthesis of ATP, Formation of glycolipid

A. Four

B. Three

C. Five

D. two

**Answer:**



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**17. Chromatin contains**

A. DNA and histones

B. Non-histone proteins and RNA

C. DNA and proamines

D. More than one option is correct

**Answer:**



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**18.** Select the odd one out w.r.t ribosomes

A. Synthesised inside the nucleus in eukaryotes

B. Composed of DNA and proteins

C. Not surrounded by any membrane

D. Prokaryotic ribosomes are 70S

**Answer:**



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**19.** Select the correct statement

A. Centrioles form the basal body of cilia and flagella

B. Secondary constrictions on the chromosomes do not have a constant location

C. Microbodies are present in plant cells only

D. Nucleoli are less in number in cells undergoing protein synthesis

**Answer:**



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**20.** Cell wall of fungi and plants are

- A. Non-living flexible structure
- B. Similar in composition to middle lamella
- C. Involved in cell-to-cell interaction
- D. Selectively permeable in nature

**Answer:**



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21. Lipid like steroidal hormones in animal cells are synthesised in

- A. Centrosome
- B. SER
- C. RER
- D. Golgi apparatus

**Answer:**





22. The membrane bound space found in the cytoplasm

- A. Is active site for ribosomal RNA synthesis
- B. Helps in protein synthesis
- C. Contains water, sap, excretory product
- D. Forms the spindle apparatus

**Answer:**



**23. Select the incorrect match**

A. Cristae - Increase the surface area

B. Amyloplast - Store starch

C. Inner nuclear membrane - Bears  
ribosomes

D. Kinetochore - Attachment site for  
spindle fibres

**Answer:**





24. Choose the incorrect option w.r.t. cell cycle
- A. Events are under genetic control
  - B. DNA synthesis occurs during one specific stage
  - C. Cytoplasmic growth is maximum in M-phase
  - D. M-phase usually ends with cytokinesis

**Answer:**



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25. Human cells in culture, divide once in approximately every 24 hours, during this

A. Interphase lasts for 1 hour

B.  $G_1$ ,  $S$  and  $G_2$  lasts for more than 22 hours

C.  $S$  phase takes more than 95% of the duration

D.  $M$ -phase takes 50% the time

**Answer:**



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**26.** Select the incorrect statement w.r.t the  $G_0$  phase of the cells cycle

- A. Cells do not proliferate
- B. Also called quiescent stage
- C. Cells remain metabolically inactive

D. Heart cells exit  $G_1$  phase to enter this phase

**Answer:**



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27. The most dramatic period of the cell cycle, which involves major reorganisation of all components of the cell is

A. S-phase

B. M-phase

C.  $G_2$ -phase

D. Interphase

**Answer:**



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**28.** When viewed under the microscope, cells do not show Golgi complexes, ER, nucleolus and nuclear envelope during

A. Early prophase

B. End of prophase

C. Telophase

D. Interphase

**Answer:**



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**29.** Centromeres split, chromatids separate and move to opposite poles during



A. Anaphase-1

B. Metaphase

C. Anaphase

D. Telophase

**Answer:**



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**30.** Read the following statements

A - Most of the organelle duplication occurs during  $G_1$ -phase,

B - A very significant contribution of mitosis is cell repair

A. Both (A) and (B) are incorrect

B. Both (A) and (B) are correct

C. Only A is incorrect

D. Only B is incorrect

**Answer:**



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**31.** Chromosomes are fully condensed and the meiotic spindle is assembled to prepare the homologous chromosomes for separation during

A. Diakinesis

B. Diplotene

C. Pachytene

D. Zygotene

**Answer:**



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**32. Select the incorrect match**

A. Leptotene - Chromosomes become gradually visible

B. Zygotene - Formation of synaptonemal complex

C. Diplotene - Terminalisation of chiasmata

D. Pachytene - Appearance of recombination nodule

**Answer:**



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**33.** The homologous chromosomes separate while sister chromatids remain associated at their centromeres in

- A. Prophase-I
- B. Metaphase-I
- C. Anaphase-I
- D. Anaphase-II

**Answer:**



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**34.** Consider the following events :

- a. Two nuclear divisions.
- b. One cycle of DNA replication.
- c. Formation of four haploid cells in the end.
- d. Genetically identical daughter cells. How many are incorrect for meiosis?

A. a, b and c

B. b and c

C. Only d

D. c and d

**Answer:**



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**35.** A cell having  $2n = 20$ , chromosomes with  $2C$  amount of DNA, is undergoing mitosis, what will be the number of chromosomes and

amount of DNA during  $G_1$  S and  $G_2$  phases respectively?

A. 20/2C, 20/4C, 20/4C

B. 20/2C, 40/4C, 40/4C

C. 20/2C, 40/2C, 40/4C

D. 10/C, 20/2C, 20/4C

**Answer:**



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**36.** Select the correct statement w.r.t. interkinesis

A. Chromosomes reach the extremely extended state.

B. it is just like interphase

C. Cell growth and centriole duplication takes place

D. DNA replicates during this state

**Answer:**





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37. If a cell at interphase stage has  $2n = 40$ , it will form how many bivalents during prophase-I?

A. 20

B. 40

C. 10

D. 15

**Answer:**



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**38.** Recombinase enzyme is synthesised in

A. Anaphase-I

B. Anaphase-II

C. Mitotic Anaphase

D. Prophase-I

**Answer:**



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**39.** Chromosome number of the parent is conserved in the daughter cells in

A. Equational division

B. Meiosis

C. Reduction division

D. Gametogenesis

**Answer:**



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40. Nuclear envelope assembles around the chromosome clusters during

- A. Prophase
- B. Metaphase
- C. Anaphase
- D. Telophase

**Answer:**



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41. In some organisms karyokinesis is not followed by cytokinesis, which results in the formation of

- A. Haploid cell
- B. Syncytium
- C. Diploid cell
- D. Uninucleate cell

**Answer:**



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**42.** Air entering the lungs of a patient through a tracheotomy (a tube inserted directly into the trachea) is colder and drier than normal, which often causes lung infection. This occurs primarily because the air

- A. Enters the respiratory system too rapidly
- B. Is not properly humidified by the larynx
- C. Does not flow through the nasal passages

D. Does not flow past the mouth and tongue

**Answer:**



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**43.** In the process of fat emulsification, bile salts make fats more susceptible to the action of lipases by



- A. Lowering the pH of fluids in small intestine
- B. Functioning as a catalyst for the lipases
- C. Transporting fat globules to the region of lipase activity
- D. Increasing the surface area of the fat globules, exposed to lipase

**Answer:**



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**44.** The pancreatic enzyme steapsin is involved in the digestion of

A. Starch

B. Protein

C. Fat

D. Nucleic acid

**Answer:**



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45.  $CO_2$  is primarily transported in the arterial blood as

- A. Dissolved  $CO_2$
- B. Carbonic acid
- C. Carbaminohaemoglobin
- D. Bicarbonate

**Answer:**



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**46.** Which of the following does not occur as the blood passes through systemic capillaries in tissue?

A. Unloading of oxygen

B. Shift of hemoglobin dissociation curve to left

C. Shift of oxygen-hemoglobin dissociation curve to right

D. Every 100 ml of oxygenated blood can deliver around 15 ml of  $O_2$  to the tissues

during strenuous exercise

**Answer:**



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**47.** Read the statements given below and mark the correct statement

A.  $O_2$  diffuses more easily than  $CO_2$  across diffusion boundary in alveoli because solubility of  $O_2$  is higher than  $CO_2$

- B. Arterial blood delivers 5 ml per dl of  $O_2$  to tissue under normal physiological conditions
- C. Percentage of  $O_2$  carried in chemical combination in blood is 3%
- D.  $O_2$  delivery to tissues does not depend on cardiac output and haemoglobin concentration

**Answer:**



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**48.** Spirometry can demonstrate and measure all of the following, except

A. Tidal volume

B. Vital capacity

C. Residual volume

D. Inspiratory reserve capacity

**Answer:**



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**49.** Mark the option that defines functional residual capacity

A. Volume remaining in lungs after forced expiration

B. Volume remaining in lungs after normal expiration

C. Inspiratory capacity minus inspiratory reserve volume



D. Maximum volume of air a person can breathe out after a forced inspiration

**Answer:**



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**50.** Mark the correct set of muscles involved in forceful expiration in humans

A. External    intercostal    and    internal

intercostal muscle

B. Diaphragm and abdominal muscles

C. Diaphragm and external intercostal muscles

D. Abdominal muscles and internal intercostal muscles

**Answer:**



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51. A person suffers punctures in his chest cavity in an accident, without any damage to the lungs its effect could be

- A. Reduced breathing rate
- B. Rapid increase in breathing rate
- C. No change in respiration
- D. Cessation of breathing

**Answer:**



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**52.** Mark the statement that explains condition called apnea

- A. Stoppage of heart beat
- B. Cessation of breathing
- C. Painful breathing
- D. Irregular respiration

**Answer:**



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53. Why is the epiglottis important?

A. It regulates the flow of chyme

B. It separates the pharynx from the nasal cavity

C. It is the passage through which the food travels into the stomach

D. It prevents the food from going down the trachea

**Answer:**



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54. Which of the following cannot act as stimulus for excitation of central chemoreceptors?

A. Fall in  $pO_2$  in arterial blood

B. Increase in  $pCO_2$

C. Fall in pH

D. Increase in  $H^+$  ion concentration

**Answer:**



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**55.** Decompression sickness is observed in

- A. Astronauts
- B. Undersea divers
- C. Chronic smokers
- D. Worker in coal mine

**Answer:**



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56. Which of the following terms is matching with its volume and capacities?

A. Residual volume - 800 ml to 1000 ml

B. Inspiratory reserve volume - 1500 ml to  
2500 ml

C. Functional residual capacity - 2100 ml to  
2300 ml

D. Expiratory capacity – 2500 ml to 3000 ml

**Answer:**







57. SA node acts as a pacemaker of the heart because of the fact that it

- A. Is capable of generating impulses spontaneously at irregular rate
- B. Has rich sympathetic innervations
- C. Generates impulses with greatest rhythmicity
- D. Is located in right atrium

**Answer:**



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**58.** During the cardiac cycle valves that open at the end of isovolumetric contraction

- A. Tricuspid valve
- B. Semilunar valves
- C. Bicuspid valve
- D. Both (1) & (3)

**Answer:**



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**59.** In a normal ECG, ventricular depolarisation is represented by

- A. P wave
- B. QRS complex
- C. ST segment
- D. T wave

**Answer:**



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**60.** Site of erythropoiesis in 20 year old healthy male is

- A. Liver
- B. Red bone marrow
- C. Spleen
- D. Yolk sac

**Answer:**



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**61.** Deficiency of which vitamin can lead to clotting related problem

A. B complex

B. C complex

C. K complex

D. E complex

**Answer:**



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**62.** What is the condition called when heart muscle is suddenly damaged by an Inadequate blood supply In myocardial infarction?

- A. Angina
- B. Heart failure
- C. Cardiac arrest
- D. Heart attack

**Answer:**



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**63.** Difference between artery and vein includes all, except

A. Diameter of vessel

B. Valves

C. Elasticity of vessel wall, smooth muscles  
in tunica media

## D. Type of cells in endothelium

**Answer:**



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**64.** A unique vascular connection that exists between the digestive tract and liver is called hepatic portal system. Select the blood vessel that brings deoxygenated but nutrient blood from intestine to liver?

A. Hepatic vein



B. Hepatic artery

C. Hepatic portal vein

D. Hepatic portal artery

**Answer:**



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**65.** The organ that receives blood first when heart pumps oxygenated blood from left ventricle

A. Brain

B. Kidney

C. Heart

D. Liver

**Answer:**



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**66.** Presence of which of the following hormones can increase the strength of ventricular contraction,

- a. Epinephrine,
- b. Acetylcholine,
- c. Nor adrenaline,
- d. Catecholamines

A. a, b & c

B. b, c & d

C. a, c & d

D. a, b, c & d

**Answer:**



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**67.** The action potential is conducted to the ventricles by AVN (Atrioventricular node) damage to AVN results in

- A. Tachycardia
- B. Heart block / Ventricular escape
- C. Atherosclerosis
- D. Congestive heart failure

**Answer:**



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68. What percentage of ventricular filling is achieved by atrial contraction?

A. 0.66

B.  $\left(\frac{1}{3}\right)rd$

C.  $\left(\frac{2}{3}\right)rd$

D. 0.75

**Answer:**



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**69.** What is the stroke volume in a person if his resting cardiac output is 5.25 L/min and heart rate = 75/min?

A. 70

B. 75

C. 80

D. 72

**Answer:**



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70. The first heart sound 'lubb' is associated with

- A. Beginning of isovolumetric diastole
- B. Closure of mitral valve and tricuspid valves
- C. Opening of atrioventricular valves
- D. Closure of semilunar valves

**Answer:**



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**71. Find the mismatch**

A. Neutrophils - Exhibit diapedesis

B. Basophils - Least number of cells/ml of  
blood

C. Monocytes - Bean shaped nucleus

D. Lymphocytes - Granulocytes phagocytic  
cells.

**Answer:**



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72. How many of the following are protein digesting enzymes secreted by Intestine? Br a. Secretin, b. Trypsin, br c. Pepsin, br d. Sucrase.

- A. Zero
- B. One
- C. Three
- D. Five

**Answer:**



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73. Pulses consumed in diet by a ten year old child are acted upon first by

A. Gastrin in stomach

B. Pepsin in stomach

C. Rennin in stomach

D. Trypsin in stomach

**Answer:**



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74. Monomers as end products are produced by the action of all, except

- A. Dipeptidase
- B. Nucleases
- C. Sucrase
- D. Carboxypeptidase

**Answer:**



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75. Which of the following has been correctly matched with its source cell?

- A. Trypsinogen - Brush border cells
- B. HCl - Chief cells
- C. Castle's intrinsic factor - Oxyntic cells
- D. Pepsin - Parietal cells

**Answer:**



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76. Relaxation of which of the following is responsible for release of bile from common bile duct into pancreatic duct?

- A. Sphincter of Oddi
- B. Sphincter of Boyden
- C. Lesser oesophageal sphincter
- D. Upper oesophageal sphincter

**Answer:**



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77. Which of the following enzymes is not secreted by villi present in small intestine?

A. Lactase

B. Enterokinase

C. Nucleosidase

D. Amylase acting at pH 7.8

**Answer:**



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**78.** Which of the following are absorbed directly into lymph vessels called lacteals instead of blood?

- A. Amino acid
- B. Chylomicrons
- C. Maltose
- D. Glucose

**Answer:**



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79. A person complains of abnormal frequency of bowel movement and increased liquidity of faecal discharge. He is suffering from

A. Jaundice

B. Indigestion

C. Diarrhoea

D. Constipation

**Answer:**



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**80.** Maximum absorption of total water which we ingest occurs in which part of alimentary canal?

A. Large intestine

B. Jejunum

C. Stomach

D. Mouth

**Answer:**



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**81.** Number of teeth in upper jaw of a teenager is

A. 28

B. 14

C. 6

D. 12

**Answer:**



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**82.** Neural signals that lead to activation of parasympathetic system trigger all, except

- A. Decreased release of saliva
- B. Increased peristaltic movement
- C. Decreased heart rate
- D. Increased release of gastric juice

**Answer:**



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**83.** If a child consumes 150 g of lentils (proteins), 500 ml of water, 100 g of green leafy vegetables, 20 g of butter and 100 g of whole wheat bread, what is the total kilocalorie intake?

A. 600

B. 1180

C. 870

D. 2300

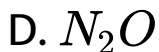
**Answer:**



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## Example

1. Uptake of nitrogen by plants occurs in all of the given forms, except



**Answer:**



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2. Which of the given sets of elements is present in plant tissue in excess of 10 mmole kg<sup>-1</sup> of dry matter?

A. N , P, K, B

B. Ca, Mg, S, Cl

C. N, S, B, O

D. N, Ca, S, K

**Answer:**



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**3. Sulpher is not a component of**

- A. Cysteine
- B. Biotin
- C. Deoxyadenosine
- D. Coenzyme-A

**Answer:**



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4. Select the mismatched pair

A. Mn- Photolysis of water

B. Zn- Auxin synthesis

C. Cu- Nitrate reductase

D. Fe- Activator of carboxylases

**Answer:**



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5. Identify the element on the basis of given statements a. Its deficiency symptoms first appear in young leaves, b. It is required in formation of mitotic spindle

A. B

B. Fe

C. Ca

D. S

**Answer:**



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6. Chosse the odd one w.r.t the elements which help in maintainig cation-anion balance in cells

A. P

B. Na

C. K

D. Cl

**Answer:**



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7. Toxicity of manganese in a plant results in a. Brown spot surrounded by chlorotic veins, b. Increases in uptake of Fe, c. Inhibition of Ca translocation in shoot apex

A. Only a

B. Both a and b

C. Only c

D. Both a and c

**Answer:**



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**8. Movement of ions into symplast area of a plant cell**

A. Is an active process

B. Is metabolic phase of mineral absorption

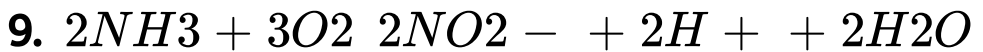
C. Does not involve transmembrane proteins

D. Both 1 and 2

**Answer:**



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The organism responsible for the above conversion can be all, except

A. Chemoautotrophs

B. Nitryfying bacteria

C. Filamentous BGA

D. Free living

**Answer:**



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**10.** Enzyme nitrogenase will be absent in

A. Frankia

B. Azotobacter

C. Anabaena

D. Nitrococcus

**Answer:**



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**11.** The region of nodule here Rhizobium is active, lacks

A. Leghemoglobin

B. Molecular oxygen

C. Nitrogenase enzymes

D. ATP

**Answer:**



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**12.** Read the following statements and mark them as True (T) or False (F)

- A. Plants can assimilate ammonium ions only,
- B. Rhizobium is an obligate anaerobe,
- C. In legumes, nodule is formed by inner cortex and pericycle cells.



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

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

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

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

**Answer:**



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**13.**  $A + NH_4 + BC\text{Glatamate} + H_2O + D$

complete the above conversion with suitable option for A, B C and D.

A. A Glutamic, B FADH<sub>2</sub>, C Glutamate  
DEHYDROGENASE, D FAD

B. A Oxaloacetic, B NADPH, C Glutamate  
dehydrogenase, D NADP

C. A  $\alpha$ -ketoglutaric acid, B NADPH, C  
Glutamate dehydrogenase, D NADP

D. A  $\alpha$ -ketoglutaric acid, B NADPH, C  
Transaminase, D NADP

**Answer:**



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**14.** Read the following statements and choose the correct option

A: Asparagine contains more nitrogen than the aspartic,

B: amides are derived from amino acids in which hydroxyl part of acid is replaced by another amino group.

A. Only A is true

B. Only A is false

C. Both A and B are true

D. Both A and B are false

**Answer:**



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**15. Mark the odd statement for ureides**

A. Transported via vessels

B. Have low nitrogen to carbon ratio

C. Formed in soybean plant

D. Produced inside nodule

**Answer:**



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**16.** Which of the following is not a benefit of hydroponics

- A. Controls soil borne pathogens
- B. Can regulate pH for a specific crop
- C. Can be used in areas having thin, infertile and dry soils

D. High cost of setting

**Answer:**



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**17.** Deficiency of which element is not responsible for death of leaf tissues

A. Mo

B. Ca

C. Mg

D. K

**Answer:**



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**18. Mark the incorrect match.**

A. *Rhodospirillum* — anaerobic nitrogen

fixer

B. *Azotobacter* — aerobic nitrogen fixer

C. *Bacillus vulgaris* — denitrifying bacteria

D. Rhizobium —  $N_2$  fixation in alfalfa

**Answer:**



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**19.** Elements found in ferredoxin are

A. Fe and S

B. Fe and Ca

C. Fe and Zn

D. Fe and Mn



**Answer:**



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20. Chlorophyll synthesis will be largely affected due to deficiency of which of the following sets of elements?

A. K, Fe, Mg

B. Fe, Mg, Ca

C. Fe, Mg, Zn

D. K, Fe, S

**Answer:**



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**21. T.W. Engelmann prepared the first action spectrum of photosynthesis by using**

- A. Cladophora
- B. Aerobic bacteria
- C. Hydrilla
- D. Both (1) and (2)

**Answer:**



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22. A pigment appears yellow-orange in the chromatogram and found in leaves of higher plants, helps

(a) In absorption of light of different wavelength

(b) To prevent oxidative destruction of chlorophyll pigment by light.

(c) By absorbing wavelengths beyond visible

spectrum which increases the efficiency of photosynthesis.

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

**Answer:**



**Watch Video Solution**

23. which of the given statements are true regarding *PSI* and *PSII*? a. both are found on stroma lamellae b. both are involved in non cyclic flow of electrons c. only *PSII* is associated with the release of  $O_2$  d. *PSII* lies on outer surface where as *PSI* lies on inner surface of thylakoids

A. only b& c

B. All a, b, c&d

C. only b, c & d

D. only c& d

**Answer:**



**Watch Video Solution**

**24.** the condition(s) under which cyclic photophosphorylation occurs is/are a. light of wavelength beyond 680 nm b. anaerobic conditions c. poor  $CO_2$  availability

A. all a, b & c

B. only a & b

C. only a

D. only b & c

**Answer:**



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**25.** Synthesis of ATP by enzymes present on thylakoids does not involve

A. a transmembrane channel

B. change in confirmation of  $F_1$

C. facilitated diffusion of protons across  
the membrane

D. diffusion of electrons along with  
protons back to the stroma.

**Answer:**



**Watch Video Solution**



26. which of the given is not a component of assimilatory power for dark reaction?

A. ATP

B. NADPH

C.  $CO_2$

D. Both ATP & NADPH

**Answer:**



**Watch Video Solution**

27. choose the odd one w. r. t. the steps of Calvin cycle

A. carboxylation

B. reduction

C. regeneration

D. dearmination

**Answer:**



**Watch Video Solution**

28. The  $C_4$  pathway of  $CO_2$  fixation is an adaptation of plants found mainly in

A. Xerophytic conditions

B. Dry tropical regions

C. Temperate regions

D. Alpine regions

**Answer:**



**Watch Video Solution**

29. the dual activity of *RuBisCO* is found in

A. Maize

B. Sorghum

C. sugarcane

D. Wheat

**Answer:**



**Watch Video Solution**

**30.** read the following statements and state them as true (T) or false (F)

a. in both potato and amaranthus, Calvin cycle corporates in Bundle shreath cells

b. both *RuBisCO* and PEPcase catalyse the process of carboxylation

c. dark reaction is not dependent directly on presence of light

d. Calvin cycle operates in all plants, be they  $C_3$ ,  $C_4$  and CAM

A. F T T F

B. F T F F

C. F T T T

D. T F T F

**Answer:**



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**31.** the most abundant enzyme of the world is related to all, except

A. heat sensitivity

B. photorespiration

C. have much greater affinity for  $O_2$  than

$CO_2$  when  $O_2:CO_2$  is nearly equal

D. Have  $Mg^{2+}$  as its activator

**Answer:**



**Watch Video Solution**

**32.** For every  $CO_2$  molecule entering the calvin cycle, the number of ATP and NADPH required is

A. 3, 3

B. 18, 12

C. 2, 3

D. 3, 2

**Answer:**



**Watch Video Solution**

**33.** Make the incorrect statement for kelvin cycle



- A. Primary  $CO_2$  acceptor molecule is a five carbon ketose sugar
- B. Conversion of PGA to PGAL requires only NADPH
- C. To continue the cycle uninterrupted, the RuBP must be regenerated
- D. Carboxylation is the most crucial step of the cycle

**Answer:**



**Watch Video Solution**

34. Plants showing  $C_4$  pathway are better than the  $C_3$  plants in

A. Utilisation of water

B. Having photorespiration

C. Producing more yield at very high  $CO_2$  concentration

D. Being sensitive to high temperature

**Answer:**





**35.** Bundle sheath cells are to similar in mesophyll cells in (a)Having grana (b)Having large number of chloroplasts (c)Being involved in  $CO_2$  fixation (d) being impervious to gaseous exchange (e) their primary  $CO_2$  fixation

A. only c and e

B. only c

C. only a, b and e

D. only a and d

**Answer:**



**Watch Video Solution**

**36.** Diurnal acid cycle is

A. As efficient as  $C_4$  cycle

B. Responsible for fast growth of succulents

C. Related to chloroplast dimorphism

D. Found in plants with scotoactive stomata

**Answer:**



**Watch Video Solution**

**37.** Photorespiration is useful for plants as it

A. Protects plants from photo-oxidative damage

B. Provides net gain 2 ATP

C. Enable RuBisCO to show its oxygenase activity

D. Increase rate of  $CO_2$  fixation

**Answer:**



**Watch Video Solution**

**38.** In  $C_2$  cycle oxygenation and decarboxylation is occur respectively in

A. Chloroplast and peroxisome

B. Chloroplast and mitochondria

C. Mitochondria and chloroplast

D. Mitochondria and peroxisome

**Answer:**



**Watch Video Solution**

**39.** Select the correct match for  $C_4$  cycle —

A. First product of  $CO_2$  fixation - 3 carbon compound

B. PEP synthetase - cold sensitive

C. Transportation of  $C_4$  acid(OAA) -

Mesophyll cells

D. Regeneration of primary  $CO_2$  acceptor -

Bundle of sheath

**Answer:**



**Watch Video Solution**



40. Choose the odd one w.r.t the four carbon acid formed during  $C_4$  cycle

A. Oxaloacetic acid

B. Malic acid

C. Aspartic acid

D. Pyruvic acid

**Answer:**



**Watch Video Solution**

41. At low light intensities, increase of  $CO_2$  concentration will

A. Increase the rate of photosynthesis in  $C_3$  plants

B. Increase the rate of photosynthesis in  $C_4$  plants

C. Increase the rate of photosynthesis in both  $C_3$  and  $C_4$  plants

D. Neither affect the rate of photosynthesis in  $C_3$  nor  $C_4$  plants

**Answer:**



**Watch Video Solution**

**42.** cyclic photophosphorylation differs from non-cyclic photophosphorylation in formation of

A. Both ATP and NADPH

B. ATP only

C. NADPH only

D. Both ATP and  $O_2$

**Answer:**



**Watch Video Solution**

**43.** How many ATP molecules are required in  $C_3$  and  $C_4$  cycles respectively to form two molecules of hexose sugar in maize plant?

A. 36, 24

B. 30, 18

C. 24, 36

D. 18, 30

**Answer:**



**Watch Video Solution**

**44.** Nervous system is differ from endocrine system because

A. Transmission of information is comparatively slower

B. Response is comparatively slower

C. Response is longer duration

D. Response is limited to only those cells  
which are innervated by neurons

**Answer:**



**Watch Video Solution**

**45.** Which of the following hormone has  
significant anabolic effect on muscle proteins

A. Cortisol

B. Thymosin

C. Parathormone

D. Growth hormone

**Answer:**



**Watch Video Solution**

**46.** Choose the incorrect match

A. Cholecystokinin - Duodenal mucosa

B. TCT - Thyroid gland

C. Gonadotrophin - Adenohypophysis

## D. Somatotrophin - Hypothalamus

**Answer:**



**Watch Video Solution**

**47.** Hyposecretion of which hormone since pregnancy causes stunted growth in humans ?

A. PRH

B. FSH

C. Thyroxine



D. Insulin

**Answer:**



**Watch Video Solution**

**48.** The largest endocrine gland is

A. Pituitary gland

B. Thyroid gland

C. Adrenal gland

D. Thymus gland

**Answer:**



**Watch Video Solution**

**49.** Choose the correct match

A. Estrogen-osteoporosis in males

B. Thyroxin- myxedema in infants

C. Parathormone- Tetany

D. Vasopressin- Diabetes mellitus

**Answer:**



Watch Video Solution

50. Innermost layer of adrenal cortex secretes mainly

- A. Aldosterone
- B. Cortisol
- C. Androgenic steroids
- D. Epinephrine

**Answer:**



51. Destruction of adrenal cortex results in disease is known as

- A. Addison's disease
- B. Cushing's disease
- C. Exophthalmic goiter
- D. Conn's disease

**Answer:**



52. Which of the following is hypoglycemic hormone

A. Glucagon

B. Thyroxin

C. Insulin

D. Growth hormone

**Answer:**



**Watch Video Solution**

**53.** Cells in testes responsible for secretion of hormone testosterone are

- A. Leydig cells
- B. Sertoli cells
- C. Sustentacular cells
- D. Spermatozoa

**Answer:**



**Watch Video Solution**

54. Thymosin is a

A. Peptide hormone that helps in maturation of T-lymphocytes

B. Proteinaceous enzyme

C. Peptide hormone secreted by thyroid gland

D. Catecholamines secreted during emergency

**Answer:**



**Watch Video Solution**

55. All of the following are true for hormone gastrin except

- A. Acts antagonistically to enterogastron
- B. Increase secretion of HCL
- C. Increase secretion of pepsinogen
- D. Increase secretion of gastric amylase

**Answer:**



**Watch Video Solution**



56. Pars distalis of pituitary gland does not  
secret

A. PRL

B. TSH

C. ACTH

D. ADH

**Answer:**



**Watch Video Solution**

57. Corpus luteum formed from the remnants of graffian follicles after ovulation is maintained by

A. LH

B. FSH

C. Progesterone

D. Estrogen

**Answer:**



**Watch Video Solution**

**58.** Pineal gland is located on

- A. Ventral side of forebrain
- B. Latetral side of forebrain
- C. Dorsal side of forebrain
- D. Ventral side of midbrain

**Answer:**



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**59.** Gustatoreceptor presents on tongue are responsible for detection

- A. Chemical stimulus
- B. Mechanical stimulus
- C. Pain stimulus
- D. Electrical stimulus

**Answer:**



**Watch Video Solution**

60. Choose the incorrect match

A.  $T_3$  - Promotes erythropoiesis

B. TCT - Regulates blood calcium level

C. PTH - Stimulates the process of bone  
resorption

D. Epinephrine - Decrease alertness and  
increase pupillary constriction

**Answer:**



**Watch Video Solution**

61. In human females, secondary sexual character are controlled by

A. Progesterone

B. parathomone

C. Estrogen

D. FSH

**Answer:**



**Watch Video Solution**

62. All these statements regarding testosterone are correct except

- A. Stimulates growth OF Facial and axillary hair
- B. Influences the male libido
- C. Stimulates muscular growth
- D. Causes catabolic effects on protein and carbohydrate metabolism

**Answer:**



**Watch Video Solution**

**63.** All of the following receptors are present in dermis of human skin except

A. Pacinian corpuscles

B. Meissner's corpuscles

C. Ruffini's organ

D. Merkel's discs

**Answer:**



**Watch Video Solution**



64. The hormone responsible for milk formation and secretion in alveoli of mammary gland is

A. Vasopressin

B. oxytocin

C. Prolactin

D. Proactin and oxytocin respectively

**Answer:**



**Watch Video Solution**

**65.** Chosse the incorrect match

A. Cretinism- Deaf mutism due to  
hyposecretion of thyroxine

B. Goitre- Enlargement of thyroid gland  
due to hyperscretion of TSH

C. Diabetes insipidus- Duresis due to  
hyposecretion

D. Myopia- This defect can be overcome by  
using convex lens

**Answer:**



**Watch Video Solution**

**66.** Identify the hormone which is correctly matched with respect to its source and function

A. 

B. 

C. 

D. 

**Answer:**



**Watch Video Solution**

**67.** Hormone recognised as an amino acid derivative is

A. Glucagon

B. ANF

C. Aldosterone

D. Adrenaline

**Answer:**



**Watch Video Solution**

**68.** Endocrine gland among the following is

- A. Mammary gland
- B. Salivary gland
- C. Lacrimal gland
- D. Parathyroid gland

**Answer:**



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69. Action of water soluble hormone is executed through secondary Messenger. All of the following are secondary messengers except

A. cMAP

B. cGMP

C.  $Ca^{2+}$

D. ATP

**Answer:**



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**70.** Cells absent in retina are

- A. Bipolar cells
- B. Photoreceptor cells
- C. Ganglionic cells
- D. Hair cells

**Answer:**



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71. All the given features regarding human ear are correct except

A. Endolymph is present in scala media

B. Stapes is attached with oval window

C. Basilar membrane forms floor of scala media

D. Cochlea is filled only with endolymph



**Answer:**



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**72.** Select the odd one w.r.t. vestibular apparatus

A. Utricle

B. Cochlea

C. Sacculle

D. Crista ampullaris

**Answer:**



**Watch Video Solution**

**73.** Stereocilia of sensory cells of human ear come in contact with elastic membrane called

- A. Basilar membrane
- B. Tympanic membrane
- C. Tectorial membrane
- D. Reissner's membrane

**Answer:**



**Watch Video Solution**

**74.** Visual purple is found in

- A. Bipolar cells
- B. Ganglionic cells
- C. Rods
- D. Cones

**Answer:**



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**75.** Outermost layer of human eye is

- A. Choroid
- B. Sclera
- C. Retina
- D. Ciliary body

**Answer:**



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76. Structure that helps to maintain equal pressure on both sides of ear drum is

- A. Oval window
- B. External auditory meatus
- C. Semicircular canal
- D. Eustachian tube

**Answer:**



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77. Hormone that regulates gene expression by interaction with genome through the hormone receptor complex is

A. TCT

B. Estrogen

C. Norepinephrine

D. Oxytocin

**Answer:**



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**78.** All are features of hormones except

A. They are non nutrient chemicals

B. Released in trace amounts

C. Transported through blood to act on  
distant target cells

D. All are proteinaceous in nature

**Answer:**



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**79.** Air borne odour molecules are detected in

A. Eye

B. Ear

C. Nose

D. Skin

**Answer:**



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**80.** Lifespan



A. Is a specific trait of each organism

B. Is always correlated to the size of an organism

C. is about 60 minutes in E. coli

D. Of crow is more than parrot

**Answer:**



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**81.** Select the correct match w.r.t. the vegetative propagules.

A. Sucker - Chrysanthemum

B. Bulbil - Onion

C. Offset - banana

D. Leaf bud - Agave

**Answer:**



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**82.** Plants like bryophytes, pteridophytes, gymnosperms and angiosperms are similar in

(a) medium used for transfer of male gametes

(b) producing morphologically distinct gametes

(c) having internal fertilization

(d) Formation of embryo

A. All (a), (b), (c), (d)

B. Only (b) and (c)

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

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

**Answer:**



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**83.** Mark the incorrect statement.

- A. In *Paramecium* and *Amoeba* cell division is itself a mode of reproduction
- B. Certain perennial bamboo species are monocarpic plants

C. Wheat and carrot lack recovery

phase/inter flowering phase in their life

D. Cucurbits have staminate and pistillate

flowers on separate plants

**Answer:**



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**84.** Which of the given structures/modes of reproduction does not produce genetically similar individuals?

A. Conidia of Penicillium

B. Fusion of isogametes of Cladophora

C. Eyes of potato

D. Buds of yeast

**Answer:**



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**85.** For the common features between chara and Marchantia are

(a) Dioecious,

(b) Flagellated antherozoids

(c) jacketed sex organs

(d) protogynous

(e) Female sex organ is nucule or oogonium

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

B. Only (b) and (c)

C. Only (a) and (e)

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

**Answer:**



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**86.** Mark the odd one w.r.t. the post fertilisation events occurring in a flowering plant.

A. Embryo formation

B. Ovule develops into a seed

C. Gametogenesis

D. Ovary ripens into a fruit

**Answer:**



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87. A typical angiospermic anther is (a)  
Bilobede (b) Dithecous (c) Tetragonal (d)  
Tetrasporangiate

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

**Answer:**



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88. The cells of anther wall layer which nourish the developing pollen grains is related to all of the following features, except

A. Dense cytoplasm

B. Polyploid

C. Multinucleate

D. Low DNA content

**Answer:**



**89.** If a typical angiospermic anther has 25 microspore mother cells in its each sporangium, calculate the total number of microspore tetrads, pollen grains and male gametes respectively produced by this anther.

A. 25, 100, 200

B. 100, 400, 800

C. 100, 100, 400

D. 50, 200, 400

**Answer:**



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**90.** Mark the statement which is not correct for pollen grains.

A. In majority of angiosperms, the cell with spindle shaped nucleus and dense cytoplasm is absent in pollen at the time of dispersal

B. Pollens of carrot grass cause allergy

C. They remain viable for variable period

which depends upto some extent on

surrounding temperature and humidity

D. They can be stored at  $-196^{\circ}\text{C}$  in pollen

banks

**Answer:**



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91. Which of the given functions is not performed by nucellus?

- A. Megasporogenesis
- B. Storage of reserve food
- C. Can form embryo in mango
- D. To protect the body of ovule

**Answer:**



**Watch Video Solution**

92. The most common ovule found in 82% of angiosperms is not related to the feature such as

A. Micropyle situated close to the hilum

B. Body of ovule is at right angle to the funicle

C. Chalaza forms its base

D. It is bitegmic generally

**Answer:**



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**93.** Choose the statement which is correct for monosporic female gametophyte.

A. Unicelled egg apparatus is situated towards micropylar end.

B. Synergids have special cellular thickening at the micropylar tip which guides the entry of pollen tube

C. Out of the eight nuclei, only seven are surrounded by cell wall



D. Central cell is uninucleate

**Answer:**



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**94.** Which of the following features promote the chances of cross pollination in plants? (a) Bud pollination (e) Protandry (b) Chasmogamy(f) Dioecy (c) Homogamy (g) Dichogamy (d) Cleistogamyx (h) Self incompatibility

A. Only (a), (c), (f) and (h)

B. Only (e), (f), (g) and (h)

C. Only (b), (e), (f), (g) and (h)

D. Only (d), (f) and (g)

**Answer:**



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**95.** Plants like papaya and date palm show

A. Autogamy

B. Geitonogamy

C. Xenogamy

D. Cleistogamy

**Answer:**



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**96.** Select the characteristics of wheat and maize plants. (1) Colourful, fragrant flower (2) Presence of nectaries (3) Mucilage surrounded pollen (4) Feathery stigma (5) Light weight

pollen (6) Well exposed stamen (7) Large sized  
flower

- A. Only (d), (e) and (f)
- B. Only (a), (d), (e) and (f)
- C. Only (a), (b), (c), (e) and (f)
- D. Only (d), (e) and (g)

**Answer:**



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97. Choose the odd one w.r.t. reward for insects in entomophily.

A. Nectar

B. Safe place for egg laying

C. Pollen grains

D. Fragrance

**Answer:**



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98. Angiosperms differ from other plants of plant kingdom in having

- A. Syngamy
- B. Triple fusion
- C. Double fertilization
- D. Both (2) and (3)

**Answer:**



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**99.** If artificial hybridization is performed in maize, then which of the given steps will not be required?

(a) Selection of parents

(b) Emasculation

(c) Bagging

(d) Rebagging

A. Selection of parents

B. Emasculation

C. Bagging

## D. Rebagging

**Answer:**



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**100.** Choose the correct match w.r.t. monocot embryo.

A. Coleoptile - Undifferentiated sheath like structure

B. Coleorhiza - Hollow foliar structure



C. Epiblast - Remains of second cotyledon

D. Scutellum- Part of embryonal axis

**Answer:**



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**101.** Nucellus is not completely consumed and remains inside the seed of

A. Maize

B. Barley

C. Beet

D. Pea

**Answer:**



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**102.** Read the given statements and select the option accordingly. (a) Apomictic embryos are genetically same and they can be called clones. (b) Apomictic seeds can be very useful in maintaining hybrid traits as they prevent

segregation of characters of the hybrid variety.

- A. Only (b) is false
- B. Only (a) is false
- C. Both (a) and (b) are false
- D. Both (a) and (b) are true

**Answer:**



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**103.** Some flowers of common pancy do not require pollinators for their pollination but still this property is not very useful for plants because

- A. Their yield is reduced
- B. Their flowers do not remain attractive
- C. They will have limited genetic diversity
- D. Their flowers will become nectarless

**Answer:**



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**104.** Eichhornia and Vallisneria are common in having

- A. Same type of pollinator
- B. Aquatic habitat
- C. Bright coloured, fragrant flowers
- D. Unwetttable stigma

**Answer:**



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**105.** Out of the seven characters of pea studied by Mendel, genes for three were situated on the chromosome number four (flower position, pod shape and plant height). Suppose if they were closely situated and were linked, then which of the following rule would not have been discovered or explained by Mendel?

- A. Law of dominance
- B. Law of segregation

C. Law of independent assortment

D. Law of purity of gametes

**Answer:**



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**106.** Which of the given statements is true regarding Mendel's genetics experiments?

A. Mendel conducted his experiments from

1856 - 1876

B. He performed his experiments on hawkweed, lablab and garden pea but succeeded only with garden pea

C. Mendel selected 7 true-breeding pea plant varieties

D. For the first time Mendel used the term "pure-line".

**Answer:**



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**107.** In how many of the following organisms sperm will decide the sex of progenies? (1) Grasshopper (2) Drosophila (3) Bird (4) Butterflies (5) Moths (6) Humans

A. 4

B. 3

C. 2

D. 1

**Answer:**



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**108.** Select the option with correct set of statements for Punnett square. (a) Developed by a British geneticist. (b) Used to calculate the probability of genotypes of offsprings. (c) Useful for monohybrid crosses only. (d) It is a mathematical formula which helps to calculate the types of gametes.

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

B. Only (a) and (d)

C. Only (b) and (d)

D. Only (a) and (b)

**Answer:**



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**109.** Calculate the probability of obtaining a zygote with genotype AaBBccDD if a cross is made between individuals whose genotypes are aaBBcc DD and AAbbCCDD respectively.

A.  $\left(\frac{1}{2}\right)$

B.  $\left(\frac{1}{4}\right)$

C. 0

D.  $\left(\frac{1}{8}\right)$

**Answer:**



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**110.** Which of the following pedigree charts does not represent inheritance of disorders like myotonic dystrophy?

A. 

B. 

C. 

D. 

**Answer:**



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**111.** In garden pea, gene controlling starch synthesis is related to all of the given phenomenon, except

A. Pleiotropy

B. Incomplete dominance

C. Codominance

D. Complete dominance

**Answer:**



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**112.** Considering the inheritance of a disorder like colourblindness, state the given statements as True(T) or False(F) and choose

the correct option (A) Both affected mother and father can never have an unaffected children, (B) Both affected parents (mother and father) can have affected male child but unaffected female child, (C) If a child has disorder, then his or her grandparents must have the trait if not the disorder, (D) A marriage between an affected female and an unaffected male can produce all unaffected children.

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

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

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

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

**Answer:**



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**113.** Select the correct match.

A. AB Blood group - Codominance

B. Hypostatic gene - Masks the action of  
another gene



C. Flower colour in 4 O' clock plant -

Complete dominance

D. Gene for phenylalanine - Polygene

hydroxylase enzyme

**Answer:**



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**114.** A new born child was diagnosed with a genetic disorder. He showed some symptoms like (A) Furrowed and big wrinkled tongue (B)

Many loops on finger tips (C) Broad palm with palm crease On the basis of above features identify the chromosomes complement of the child.

A.  $45 + XY$

B.  $44 + XXY$

C.  $44 + XY$

D.  $44 + XO$

**Answer:**



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**115.** Mark the statement incorrect for chromosomal theory of inheritance.

A. Both chromosomes and genes retain their number and individuality throughout the life of an organism

B. Chromosome are carrier of Mendelian factors which seggregate and assort independently during meiosis

C. The two alleles of a gene pair, are located on homologous sites of non-homologous chromosomes

D. A gamete carries only one chromosome of a type and one of two alleles of a trait

**Answer:**



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**116.** What is the distance between genes 'y' (body colour) and 'w' (eye colour) of *Drosophila*?

(a) 98.7 cM

(b) 1.3 cM

(c) 62.8 cM

(d) 37.2 cM

A.  $98.7cM$

B.  $1.3cM$

C.  $62.8cM$

D. 37.2cM

**Answer:**



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**117.** Gene for 'hypertrichosis' passes from father to his sons only, such traits are known as

- A. Sex limited traits
- B. Sex influenced traits

C. Hologynic traits

D. Holandric traits

**Answer:**



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**118.** Mark the correct reason for sickle cell anaemia.

A. Absence or reduced synthesis of globin chains

B. Lack of a liver enzyme

C. Transversion mutation in gene

controlling beta-chain synthesis

D. Lack of plasma thromboplastin.

**Answer:**



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**119.** The strongest mutagen among the following is



A. UV-A rays

B. X- rays

C. Light of wavelength between 400 700  
nm

D. Infrared radiations

**Answer:**



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120. Which of the given test crosses will produce maximum possible phenotypes in offsprings?

A. AABb x aabb

B. AABB x aabb

C. AaBb x aabb

D. AaBB x aabb

**Answer:**



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121. A woman with blood group AB marries to a man with blood group B whose mother had blood group O. Calculate the probability of getting their first son with blood group AB.

A.  $\left(\frac{1}{2}\right)$

B.  $\left(\frac{1}{8}\right)$

C.  $\left(\frac{1}{4}\right)$

D.  $\left(\frac{1}{16}\right)$

**Answer:**



**Watch Video Solution**

122. Out of the five different phenotypes of wheat kernel colour, which phenotype will be the most frequent in wheat population?

- A. Deep red
- B. Extreme red
- C. White
- D. Intermediate red

**Answer:**



Watch Video Solution

**123.** Which among the given phenotypes is expressed in pure line condition only?

- A. Terminal flowers in pea
- B. Red eye in fruit fly
- C. Normal wings in fruit fly
- D. Green pod colour in pea

**Answer:**



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**124.** Cryptorchidism i.e. failure of descent of testes in humans occurs due to

A. Hypersecretion of testosterone

B. Hyposecretion of testosterone

C. Hyposecretion of progesterone

D. Hyposecretion of estrogen

**Answer:**



**Watch Video Solution**

**125.** Choose the incorrect match.

A. Bulbourethral gland - Lubrication of  
penis

B. Urethral meatus - External opening of  
penis

C. Uterus - Known as womb

D. Sertoli cells - Secrete androgens

**Answer:**



**Watch Video Solution**

**126.** in case of human males inhibin inhibits the secretion of

A. LH

B. GnRH

C. FSH

D. Testosterone

**Answer:**



**Watch Video Solution**



127. choose the correct sequence w.r.t human embryonic stages

A. Blastocyst rarr Gastrula rarr Morula

B. Gastrula rarr Blastocyst rarr Morula

C. Morula rarr Blastocyst rarr Gastrula

D. Gastrula rarrMorula rarr Blastocyst

**Answer:**



**Watch Video Solution**

**128.** Initiation of gastrulation in humans is marked by formation of

- A. Blastocoel
- B. Primitive streak
- C. Morula
- D. Notochord

**Answer:**



**Watch Video Solution**

**129.** The slow block to polyspermy

- A. Triggers the movement of  $\text{Ca}^{2+}$  from cytosol to endoplasmic reticulum
- B. Describes fusion of egg and sperm nuclei
- C. Involves exocytosis of cortical granules into perivitelline space
- D. Allows the fusion of more than one sperm to egg's plasma membran

**Answer:**



**Watch Video Solution**

**130.** Genetic constitution of (22 + Y) found in

- A. Primary spermatocyte
- B. Spermatozoa
- C. Primary oocyte
- D. Ootid

**Answer:**



Watch Video Solution

**131.** increase in concentration of which hormone determine the time of childbirth?

A. hCG

B. hPL

C. Cortisol

D. Progesterone

**Answer:**



**132.** which of the following hormone is not secreted by placenta?

- A. Chorionic somatomammotropin
- B. Chorionic thyrotropin
- C. Human chorionic gonadotropin
- D. Cortiso

**Answer:**



**133.** Select the correct match in relation to extra embryonic membranes and their origin.

- A. Amnion- Only mesoderm
- B. Chorion- Endoderm and mesoderm
- C. Allantois- Ectoderm and mesoderm
- D. Yolk sac- Mesoderm and endoderm

**Answer:**



**Watch Video Solution**

**134.** Choose the odd one w.r.t.LNG 20

- A. Suppresses endometrial changes
- B. Releases copper
- C. Impairs implantation
- D. Changes nature of cervical/mucus

**Answer:**



**Watch Video Solution**



**135.** In a nonpregnant female, regression of corpus luteum occurs due to fall in level of

A. Progesterone

B. Estrogen

C. hCG

D. LH

**Answer:**



**Watch Video Solution**

**136.** Select odd one w.r.t.barrier method of contraception.

A. Condom

B. Vaut

C. Diaphragm

D. Combined pills

**Answer:**



**Watch Video Solution**

**137.** IVF and ET represent and respectively

Select the option that fills the blanks correctly.

A. In vivo fallopian transfer and embryo

transfer

B. Intra vaginal fertilization and ejection

technique

C. In vitro fertilization and egg transfer

D. in vitro fertilization and embryo-transfer

**Answer:**





Watch Video Solution

**138.** Mix of ova and sperms is placed in fallopian tube of infertile couple looking for parenthood in

A. GIFT

B. ZIFT

C. ICSI

D. IUI

**Answer:**



Watch Video Solution

**139.** Longitudinal binary fission is found in

- A. Amoeba
- B. Paramecium
- C. Planaria
- D. Euglena

**Answer:**



Watch Video Solution

**140.** Gemmule formation occurs in

- A. Helminthes
- B. Ctenophorans
- C. Cnidarians
- D. Poriferans

**Answer:**



**Watch Video Solution**

141. Which of the following Sexually Transmitted Infection causative agent is incorrectly

- A. Syphilis - *Treponema pallidum*
- B. Genital herpes - HSV-2
- C. Genital warts - *Haemophilus ducreii*
- D. AIDS - HIV

**Answer:**



**Watch Video Solution**

**142.** Which of the following is correctly matched event occurring during menstrual cycle?

A. Follicular phase - This phase starts with menstruation in ovary

B. Luteal phase - This phase occurs before ovulation

C. Menstruation phase - Break down of endometrium in uterus



D. Secretory phase - Formation of mucous

plug in cervix under the effect of

estrogen

**Answer:**



**Watch Video Solution**

**143.** Development of unfertilised egg into complete organism is known as \_\_ (a) in honey bee \_\_ (b) are produced parthenogenetically and they produce gametes by \_\_ (c)

respectively. Select the option which fill the blanks correctly.

A. Polyembryony(a), workers (b), mitosis(c)

B. Homozygosity (a), queen bee(b)  
,meiosis(c)

C. Parthenogenesis(a), drones (b),mitosis  
(c)

D. Parthenogenesis(a), worker(b), meiosis(c)

**Answer:**



**Watch Video Solution**

**144.** Chromosome number in meiocyte of housefly and chromosome number in gamete in fruit fly \_\_ and \_\_ respectively.

A. 12, 8

B. 4, 12

C. 12, 4

D. 16, 12

**Answer:**



**Watch Video Solution**

**145.** Terminal method of family planning includes

A. Emergency contraception

B. Implants

C. Chemical methods

D. Surgical methods

**Answer:**



**Watch Video Solution**

**146.** Saheli is a

- A. Non-steroidal IUD
- B. Non-steroidal oral contraceptive pills
- C. Steroidal contraceptive
- D. Oral pill developed at NDRI, Lucknow

**Answer:**



**Watch Video Solution**

147. According to the 2011 census, the population growth rate in India was?

A. 3.7 %

B. 2 %

C. 3 %

D. 2.7 %

**Answer:**



**Watch Video Solution**

**148.** Read the following statements regarding amniocentesis. Statement A : It is a test based on study of chromosomal pattern of embryonic cells in amniotic fluid to detect genetic disorder. Statement B: It is useful in detection of certain biochemical and enzymatic abnormalities. Choose the correct option.

A. Both statements are incorrect

B. Both statements are correct

C. Statement A is incorrect

D. Statement B is incorrect

**Answer:**



**Watch Video Solution**

**149.** Select the organism in which thelytoky is observed.

A. Bees

B. Wasps

C. Turkey



D. Typhlina brahmia

**Answer:**



**Watch Video Solution**

**150.** All are medicated intrauterine devices  
except

A. Cu-T

B. Progestasert

C. Cu-7

## D. Lippe's loop

**Answer:**



**Watch Video Solution**

**151.** Select the incorrect statement w.r.t. cleavage in humans

- A. Slow and asynchronous
- B. Nucleocytoplasmic ratio increases
- C. Equal holoblastic and indeterminate

D. Unequal spiral and determinate

**Answer:**



**Watch Video Solution**

**152.** Government of India legalised MTP in the year

A. 1971

B. 2001

C. 2011

D. 1951

**Answer:**



**Watch Video Solution**

**153.** The organisms which are considered as immortal is/are

A. Amoeba only

B. All unicellular organisms

C. Aphis

## D. Periplaneta

**Answer:**



**Watch Video Solution**

**154.** Maximum life span is a characteristic of \_\_ (A) and life expectancy is the characteristic of a \_\_ (B) Select the option which fill the blanks correctly.

A. Species (A)-Population(B)

B. Population (A)- Species(B)

C. Genus (A) - Class(B)

D. Class(A)- Genus(B)

**Answer:**



**Watch Video Solution**

**155.** Select the odd one w.r.t. sexuality of organism.

A. Cockroach

B. Earthworm

C. Leech

D. Tapeworm

**Answer:**



**Watch Video Solution**

**156.** Combined pills called OCP contain a mixture of

A. GnRH and FSH

B. FSH and progesterone

C. Estrogen and progesterone

D. Estrogen and hCG

**Answer:**



**Watch Video Solution**

**157.** The vital link ensures continuity of species between organisms of one generation and the next is



A. Sperm

B. Ova

C. Zygote

D. Embryo

**Answer:**



**Watch Video Solution**

**158.** Which among the following part of male reproductive system is not considered intratesticular genital duct?

A. Tubuli recti

B. Rete testis

C. Ductuli efferentes

D. Epididymis

**Answer:**



**Watch Video Solution**

**159.** Activation of sperms in female genital tract to facilitate fertilization is known as

A. Insemination

B. Acrosomal reaction

C. Capacitation

D. Spermiation

**Answer:**



**Watch Video Solution**

**160.** Choose the odd one w.r.t. number.

A. Seminal vesicle

B. Prostate gland

C. Cowpers gland

D. Bartholin's gland

**Answer:**



**Watch Video Solution**

**161.** The first sign of growing foetus may be noticed by

A. Beating of heart

B. Development of limbs

C. Development of extenal genitalis

D. Development of eye lashes

**Answer:**



**Watch Video Solution**

**162.** Milk ejection hormone in a lactating mother is

A. Prolactin

B. Oxytocin

C. Progesterone

D. Estrogen

**Answer:**



**Watch Video Solution**

**163.** What is correct about hormones in a normal healthy pregnant woman?

- A. hCG stimulates foetal ejection reflex during parturition
- B. High level of progesterone facilitate implantation of embryo
- C. High level of prolactin stimulates implantation of zygote
- D. High level of hCG is responsible for persistence of Graafian follicle within ovary

**Answer:**



Watch Video Solution

**164.** During cleavage in fertilized egg, which centriole of sperm is responsible for formation of astral rays?

- A. Proximal centriole
- B. Distal centriole
- C. Ring centriole
- D. Nebenkem

**Answer:**





Watch Video Solution

**165.** A wider region, called ampula is a part of which of the following structures?

A. Mammary gland

B. Fallopian tube

C. Vas deferens

D. Testes

**Answer:**



**166.** Meiosis I in female gametogenesis is completed in

- A. Primary oocyte in Graafian follicle
- B. Secondary oocyte in Graafian follicle
- C. Primary oocyte in tertiary follicle
- D. Secondary oocyte in secondary follicle

**Answer:**



**167.** A cellular layer made up of glycoproteins within Graafian follicle around ovum prevents ectopic pregnancy is

A. Corona radiata

B. Granulosa

C. Zona pellucida

D. Theca externa

**Answer:**



**Watch Video Solution**

**168.** Which among the given phenotypes is expressed in pure line condition only?

- A. Terminal flowers in pea
- B. Red eye in fruit fly
- C. Normal wings in fruit fly
- D. Green pod colour in pea

**Answer:**



**Watch Video Solution**

**169.** Out of the five different phenotypes wheat kernel colour, which phenotype will be the most frequent in wheat population?

- A. Deep red
- B. Extreme red
- C. White
- D. Intermediate red

**Answer:**



**Watch Video Solution**

**170.** A woman with blood group AB marries to a man with blood group B whose mother had blood group O. Calculate the probability getting their first son with blood group AB.

A.  $\frac{1}{2}$

B.  $\frac{1}{8}$

C.  $\frac{1}{4}$

D.  $\frac{1}{16}$

**Answer:**



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171. Which of the given test crosses will produce maximum possible phenotypes in offsprings?

A.  $AABb \times aabb$

B.  $AABB \times aabb$

C.  $AaBb \times aabb$

D.  $AaBB \times aabb$

**Answer:**



Watch Video Solution

**172.** The strongest mutagen among the following is

A. UV - A rays

B. X - rays

C. Light of wavelength between 400 - 700  
nm

D. Infrared radiations



**Answer:**



**Watch Video Solution**

**173.** Mark the correct reason for sickle cell anaemia

A. Absence or reduced synthesis of globin

chains

B. Lack of liver enzyme

C. Transverse mutation in gene controlling

beta-chain synthesis

D. Lack of plasma thromboplastin

**Answer:**



**Watch Video Solution**

**174.** Gene for 'hypertrichosis' passes from father to his sons only, such traits are known as

as

- A. Sex limited traits
- B. Sex influenced traits
- C. Hologynic traits
- D. Holandric traits

**Answer:**



**Watch Video Solution**

**175.** What is the distance between genes 'y' (body colour) and 'w' (eye colour) of *Drosophila*?

A. 98.7 cM

B. 1.3 cM

C. 62.8 cM

D. 37.2 cM

**Answer:**



**Watch Video Solution**

**176.** A new born child was diagnosed with a genetic disorder. He showed some symptoms like (A) Furrowed and big wrinkled tongue, (B)

Many loops on fingertips, (C) Broad palm with palm crease, On the basis of above features identify the chromosomes complement of the child

A.  $45 + XY$

B.  $44 + XXY$

C.  $44 + XY$

D.  $44 + XO$

**Answer:**



**Watch Video Solution**

177. Select the correct match

A. AB Blood group - Codominance

B. Hypostatic gene - Masks the action of  
another gene

C. Flower colour in 4 O' clock plant -  
Complete dominance

D. Gene for phenylalanine hydrosylase  
enzyme - Polygene

**Answer:**



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**178.** Considering the inheritance of a disorder like colourblindness, state the given statements as True(T) or False(F) and choose the correct option (A) Both affected mother and father can never have an unaffected children, (B) Both affected parents (mother and father) can have affected male child but unaffected female child, (C) If a child has

disorder, then his or her grandparents must have the trait if not the disorder, (D) A marriage between an affected female and an unaffected male can produce all unaffected children.

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

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

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

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

**Answer:**





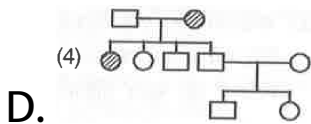
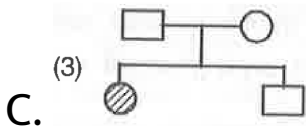
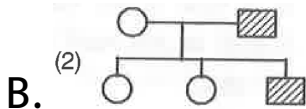
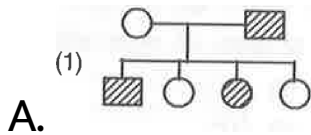
**179.** In garden pea, gene controlling starch synthesis is related to all the given phenomena, except

- A. Pleitropy
- B. Incomplete dominance
- C. Codominance
- D. Complete dominance

**Answer:**



180. Which of the following pedigree charts does not represent inheritance of disorders like myotonic dystrophy?



**Answer:**



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**181.** Calculate the probability of obtaining a zygote with genotype  $AaBBccDD$  if a cross is made between individuals whose genotypes are  $aaBBccDD$  and  $AAbbCCDD$  respectively,

A.  $(1/2)$

B.  $(1/4)$

C. 0

D. (1/8)

**Answer:**



**Watch Video Solution**

**182.** Select the option with correct set of statements for Punnett square. (1) Developed by British geneticist. (2)Used to calculate the probability of genotypes offsprings. (3)Useful for monohybrid crosses only. (4) It is a

mathematical formula which helps to calculate the types of gametes.

A. Only (1),(2) and (3)

B. Only (1) and (4)

C. Only (2) and (4)

D. Only (1) and (2)

**Answer:**



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**183.** In how many of the following organisms sperm will decide the sex of progenies? (1) Grasshopper (2) Drosophila (3) Bird (4) Butterflies (5) Moths (6) Humans

A. 4

B. 3

C. 2

D. 1

**Answer:**



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**184.** Which of the given statements is true regarding Mendel's genetics experiments?

A. Mendel conducted his experiments from

1856-1876

B. He performed his experiments on

hawkweed, lablab and green pea but

succeeded only with green pea

C. Mendel selected 7 true breeding pea plant varieties

D. For the first time Mendel used the term "pure-line"

**Answer:**



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**185.** Out of the seven characters of pea studied by Mendel, genes for three were situated on the chromosome number four (flower



position, pod shape and plant height). Suppose if they were closely situated and were linked, then which of the following rule would not have been discovered or explained by Mendel?

- A. Law all dominance
- B. Law oh segregation
- C. Law of independent assortment
- D. Law of purity of gametes

**Answer:**



**186.** Eichhornia and Vallisneria are common in having

- A. Same type of pollinator
- B. Aquatic habitat
- C. Bright colored, fragrant flowers
- D. Unwetttable stigma

**Answer:**



**187.** Some flowers of common pancy do not require pollinators for their pollination but still this property is not very useful for plants because

- A. Their yield as reduced
- B. Their flowers do not remain attractive
- C. They will have limited genetic diversity
- D. Their flowers will become nectarless

**Answer:**



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**188.** Read the given statements and select the option accordingly. (1) Apomictic embryos are generally same and they can be called clones. (2) Apomictic seeds can be very useful in maintaining hybrid traits as they prevent segregation of characters of the hybrid variety.

A. Only (2) is false

B. Only (1) is false

C. Both (1) and (2) are false

D. Both (1) and (2) are true

**Answer:**



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**189.** Nucellus is not completely consumed and remains inside the seed of

A. Maize

B. Barley

C. Beet

D. Pea

**Answer:**



**Watch Video Solution**

**190.** Choose the correct match with respect to monocot embryo.

A. Coleoptile- Undifferentiated sheath like structure

B. Coleorhiza- Hollow foliar structure

C. Epiblast- Remains all second cotyledon

D. Scutellum- Part of embryonal axis

**Answer:**



**Watch Video Solution**

**191.** If artificial hybridization is performed in maize, then which of the given steps will not be required?

A. Selection of parents

B. Emasculation

C. Bagging

D. Rebagging

**Answer:**



**Watch Video Solution**

**192.** Angiosperms differ from other plants of the plant kingdom in having

A. Syngamy



B. Triple fusion

C. Double fertilization

D. Both (B) and (C)

**Answer:**



**Watch Video Solution**

**193.** Choose the odd one with respect to reward for insects in entomophily.

A. Nectar

B. Safe place for egg laying

C. Pollen grains

D. Fragrance

**Answer:**



**Watch Video Solution**

**194.** Select the characteristics of wheat and maize plants. (1) Colourful, fragrant flower (2) Presence of nectaries (3) Mucilage surrounded pollen (4) Feathery stigma (5) Light weight

pollen (6) Well exposed stamen (7) Large sized  
flower

- A. Only (4),(5) and (6)
- B. Only (1),(4),(5) and (6)
- C. Only (1),(2),(3), (5) and (6)
- D. Only (4),(5) and (7)

**Answer:**



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**195.** Plants like papaya and date palm show

- A. Autogamy
- B. Geitonogamy
- C. Xenogamy
- D. Cleistogamy

**Answer:**



**Watch Video Solution**

**196.** Which of the following features promote the chances of cross pollination in plants? (1) Bud pollination (2) Chasmogamy (3) Homogamy (4) Cleistogamy (5) Protandry (6) Dioecy (7) Dichogamy (8) Self incompatibility

A. Only (1),(3),(6) and (8)

B. Only (5),(6),(7) and (8)

C. Only (2),(5),(6),(7) and (8)

D. Only (4),(6) and (7)

**Answer:**



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**197.** If a typical angiospermic anther has 25 microspore mother cells in its each sporangium, calculate the total number of microspore tetrads, pollen grains and male gametes respectively produced by this anther.

A. 25100200

B. 100400800

C. 100100400

D. 50200400

**Answer:**



**Watch Video Solution**

**198.** The cells of anther wall layer which nourish the developing pollen grains is related to all of the following features, except

A. dense cytoplasm

B. polyploid

C. multinucleate

D. low DNA content

**Answer:**



**Watch Video Solution**

**199.** A typical angiosperm anther is:

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

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

C. only (a) and (d)



D. only (b) and (d)

**Answer:**



**Watch Video Solution**

**200.** Mark the odd one w.r.t the post fertilisation events occurring in a flowering plant

A. Embryo Formation

B. ovule develops into a seed

C. Gametogenesis

D. Ovary ripens into a fruit

**Answer:**



**Watch Video Solution**

**201.** For the common features between chara and Marchantia are

(a) Dioecious,

(b) Flagellated antherozoids

(c) jacketed sex organs

(d) protogynous

(e) Female sex organ is nucule or oogonium

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

B. only (b) and (c)

C. only (a) and (e)

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

**Answer:**



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202. which of the given structures /modes of reproduction does not produce genetically similar individuals?

- A. Conidia of penicillum
- B. Fusion of isogametes of Cladophora
- C. Buds of Yeast
- D. Eyes of potato

**Answer:**



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**203. Mark the incorrect Statement**

- A. in paramecium and Ameoba cell division is itself a mode of reproduction
- B. Certain perennial bamboo species are monocarpic plants
- C. wheat and carrot lack recovery phase/inter flowering phase in their life
- D. Cucurbits have staminate and pistillate flowers on separate plants

**Answer:**



**Watch Video Solution**

**204.** Plants like bryophytes, pteridophytes, gymnosperms and angiosperms are similar in

- (a) medium used for transfer of male gametes
- (b) producing morphologically distinct gametes
- (c) having internal fertilization
- (d) Formation of embryo

A. All (a),(b),(c),(d)

B. Only (b) and (c)

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

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

**Answer:**



**Watch Video Solution**

**205.** select the correct match w.r.t the vegetative propagules.

A. Sucker - Chrysanthemum

B. Bulbil - Onion

C. Offset - Banana

D. Leaf bud - Agave

**Answer:**



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**206. Lifespan**

A. specific weight of each organism



B. is always correlated to the size of an organism

C. Is about 60 minutes in E coil

D. of crow is more than parrot

**Answer:**



**Watch Video Solution**

**207.** A cellular layer made up of glycoproteins within Graafian follicle around ovum prevents ectopic pregnancy is

A. corona radiata

B. granulosa

C. Zona pellucida

D. Theca extema

**Answer:**



**Watch Video Solution**

**208.** Meiosis I in female gametogenesis is completed in

- A. primary oocyte in Graafian follicle
- B. Secondary oocyte in Graafian follicle
- C. primary oocyte in tertiary follicle
- D. Secondary oocyte in secondary follicle

**Answer:**



**Watch Video Solution**

**209.** A wider region called ampulla is not a part of which of the following structures?

A. Mammary gland

B. fallopian tube

C. vas deferens

D. Testes

**Answer:**



**Watch Video Solution**

**210.** During in fertilized egg which Centroile of sperm is responsible for formation of astral rays

A. proximal centriole

B. distal centriole

C. Ring Centriole

D. Nebenkem

**Answer:**



**Watch Video Solution**

**211.** what is correct about hormones in a normal healthy pregnant women?

A. hCG stimulates foetal ejection reflex  
during parturition

B. High level of progesterone facilitate  
implantation of embryo

C. High level of prolactin stimulates  
implantation of zygote

D. High level of hCG is responsible for  
persistence of Graafian follicle within  
ovary

**Answer:**



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212. Milk ejection hormone in a lactating mother is

- A. prolactin
- B. Oxytocin
- C. progesterone
- D. Estrogen

**Answer:**



**213.** The first sign of growing foetus may be noticed by

- A. beating of heart
- B. development of limbs
- C. development of external genitalis
- D. Development of eye lashes

**Answer:**





214. choose the odd one wrt number

A. seminal vesicle

B. prostate gland

C. Cowper's gland

D. Bartholin's gland

**Answer:**



**Watch Video Solution**

215. activation of sperms in female genital tract to facilitate fertilization is known as

- A. insemination
- B. Acrosomal reaction
- C. Capacitation
- D. Spermiation

**Answer:**



**Watch Video Solution**

**216.** Which among the following part of male reproductive system is not considered intratesticular genital duct?

- A. Tubuli recti
- B. Rete testic
- C. Ductuli efferentes
- D. Epididymis

**Answer:**



**Watch Video Solution**

217. The vital link ensures continuity of species between organisms of one generation and the next is

A. Sperm

B. ova

C. zygote

D. Embryo

**Answer:**



**Watch Video Solution**

**218.** Combined pills called OCP contain a mixture of

- A. GnRH and Fsh
- B. FSH and progesterone
- C. Estrogen and progesterone
- D. Estrogen and hCG

**Answer:**



**Watch Video Solution**

219. Select the odd one w.r.t. sexuality of organism.

A. cockroach

B. Earthworm

C. leech

D. Tapeworm

**Answer:**



**Watch Video Solution**

**220.** Maximum life span is a characteristic of \_\_ (A) and life expectancy is the characteristic of a \_\_ (B) Select the option which fill the blanks correctly.

A. Species(A) Population (B)

B. Population (A) species (B)

C. Genus (A) Class(B)

D. Class (A) Genus (B)

**Answer:**



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221. the organism which are considered as immortal is/are

- A. Ameoba only
- B. All unicellular organisms
- C. Aphis
- D. Periplaneta

**Answer:**



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222. Government of India Legalized MTP in

A. 1971

B. 2001

C. 2011

D. 1951

**Answer:**



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**223.** Select the incorrect Statement W.r.t cleavage in humans

- A. slow and asynchronous
- B. nucleocytoplasmic ratio increases
- C. equal holoblastic and indeterminate
- D. Unequal spiral and determinate

**Answer:**



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224. All are medicated intrauterine devices except

A. Cu- T

B. Progestasert

C. Cu 7

D. Lippe's loop

**Answer:**



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225. select the organism in which thelytoky is observed

A. Bees

B. Wasps

C. Turkey

D. *Typhlina brahmina*

**Answer:**



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**226.** Read the following statements regarding amniocentesis. Statement A: It is a test based on study of chromosomal pattern of embryonic cells in amniotic fluid to detect genetic disorder. Statement B: It is useful in detection of certain biochemical and enzymatic abnormalities. Choose the correct option.

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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**227.** according to the 2011 census report the population growth rate was around

A. 0.037

B. 0.02

C. 0.03

D. 0.027

**Answer:**



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**228. Saheli is**

A. Non-steroidal IUD

B. non steroidal oral contraceptive pills

C. sterodal contraceptive

D. Oral pill developed at NDRI, Lucknow

**Answer:**



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**229. Terminal Methods of Family Planning is**

A. emergency contraception

B. implants

C. chemical methods

D. surgical methods

**Answer:**





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230. chromosome number in meiocyte of housefly and chromosome number in gamut in fruit fly \_\_\_\_\_ and \_\_\_\_\_ respectively.

A. 12,8

B. 4,12

C. 12,4

D. 16,12

**Answer:**



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**231.** Development of unfertilised egg into complete organism is known as \_\_ (a) in honey bee \_\_ (b) are produced parthenogenetically and they produce gametes by \_\_ (c) respectively. Select the option which fill the blanks correctly.

A. Polyembryony (a) workers (b) mitosis (c)

B. Homozygosity (a) Queen bee (b) meiosis

(c)

C. parthenogenesis (a) drones (b) mitosis

(c)

D. parthenogenesis (a) worker (b) meiosis

(c)

**Answer:**



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**232.** which of the following is correctly matched event occurring during menstrual cycle?

A. Follicular phase - This phase starts with menstruation in ovary

B. Luteal Phase - This phase occurs before ovulation

C. menstruation phase- breakdown of endometrium in uterus

D. Secretory phase- formation of mucous plug in cervix under the effect of estrogen

**Answer:**



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**233.** Which of the following sexually transmitted infection (STI) and its causative agent is incorrectly matched?

- A. Syphilis - *Treponema pallidum*
- B. Genital herpes - HSV-2
- C. Genital warts- *Haemophilus ducrei*
- D. AIDS - HIV

**Answer:**



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**234.** Gemmule formation occurs in

- A. helminthes
- B. ctenophorans
- C. cnidarians
- D. Poriferans

**Answer:**



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**235.** Longitudinal binary fission is found in

A. Ameoba

B. Paramecium

C. planaria

D. euglena

**Answer:**



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**236.** Mix of ova and sperms is placed in fallopian tube of infertile couple looking for parenthood in

A. GIFT

B. ZIFT

C. ICSI

D. IUI

**Answer:**



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**237.** IVF and ET represent \_\_\_\_\_ and \_\_\_\_\_ respectively. Select the option that fills the blanks correctly

A. invivo fallopian transfer and embryo transfer.

B. intravaginal fertilization and ejection technique

C. in vitro fertilization and egg transfer

D. in vitro fertilization and embryo transfer

**Answer:**



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**238.** select odd one w.r.t. barrier method of contraception.

A. condom

B. volt

C. diaphragm

D. Combined pills

**Answer:**



**Watch Video Solution**

**239.** in a non pregnant female regression of Corpus luteum occurs due to fall in level of

A. progesterone

B. estrogen

C. hCG

D. LH

**Answer:**



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**240.** choose the odd one w.r.t. LNG 20.

A. suppresses endometrial changes

B. releases copper

C. impairs implantation

D. changes nature of cervical mucus

**Answer:**



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**241.** select the correct match in relation to extra embryonic membranes and their origin in

- A. Amnion- only mesoderm
- B. Chorion - Endoderm and mesoderm
- C. Allantois - Ectoderm and Mesoderm
- D. Yolk sac - mesoderm and endoderm

**Answer:**



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242. which of the following hormone is not secreted by placenta?

- A. Chorionic somatomammotropin
- B. Chorionic thyrotropin
- C. human chorionic gonadotropin
- D. cortisol

**Answer:**



243. increase in concentration of which hormone determine the time of childbirth?

A. hCG

B. hPL

C. Cortisol

D. progesterone

**Answer:**



244. genetic constitution of ( 22+ Y) found in

A. primary spermatocyte

B. spermatozoa

C. primary oocyte

D. Ootid

**Answer:**



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## 245. The slow block to polyspermy

- A. triggers the movement of  $Ca^{+2}$  from cytosol to endoplasmic reticulum
- B. describes fusion of egg and sperm nuclei
- C. involves exocytosis of cortical granules into perivitelline space
- D. allows the fusion of more than one sperm to egg's plasma membrane.

**Answer:**



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**246.** initiation of gastrulation in humans is marked by formation of

- A. Blastocoel
- B. Primitive streak
- C. Morula
- D. notochord

**Answer:**



**Watch Video Solution**

247. choose the correct sequence w.r.t human embryonic stages

A. Blastocyst-Gastrula-Morula

B. Gastrula- Blastocyst- Morula

C. Morula- Blastocyst -Gastrula

D. Gastrula - Morula- Blastocyst

**Answer:**



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**248.** in case of human males inhibin inhibits the secretion of

A. LH

B. GnRH

C. FSH

D. Testosterone

**Answer:**



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**249.** choose the incorrect match

A. Bulbourethral gland - lubrication of  
penis

B. Urethral meatus - external opening of  
penis

C. Uterus - known as womb

D. sertoli cells - secret androgens

**Answer:**



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250. cryptorchidism i.e. failure of descent of testes in humans occurs due to

- A. Hypersecretion of testosterone
- B. hyposecretion of testosterone
- C. hypersecretion of progesterone
- D. hypersecretion of estrogen

**Answer:**



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**251.** Group of organisms in which cell wall forms two thin overlapping shells are

- A. Responsible for bioluminescence
- B. Chief producers of ocean
- C. Prokaryotes
- D. Heterotrophs

**Answer:**



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252. Kingdom Protista brought together Chlamydomonas and Chlorella with Paramecium and Amoeba which were earlier placed in kingdoms

A. Monera and Animalia

B. Plantae and Monera

C. Plantae and Animalia

D. Monera and Fungi

**Answer:**



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**253.** Whittaker did not classify the organisms into five kingdoms on the basis of

- A. Cell structure
- B. Evolutionary relationships
- C. Thallus organization
- D. Response to external stimulus

**Answer:**



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**254.** How many of the following organisms possess membrane bound cell organelles and autotrophic mode of nutrition? (Nitrobacter, Chromatium, Methanococcus, Nostoc Euglena, Gonyaulax, Paramoecium, Yeast, Puccinia)

A. 5

B. 4

C. 2

D. 6

**Answer:**



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**255.** The most common mode of asexual reproduction in bacteria

- A. Occurs in unfavourable conditions
- B. Is amitotic endospore formation
- C. Is amitotic type of cell division
- D. Does not involve DNA replication

**Answer:**



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**256.** Members of kingdom for Monera which do bb"not" have cell wall, are

A. Halophiles

B. PPLO

C. Anabaena

D. Photolithotrophs

**Answer:**



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**257.** Organisms responsible for causing 'red tide' are also characterised by

- A. Presence of stiff cellulosic plates
- B. Presence of  $N_2$  fixing heterocyst
- C. Presence of two longitudinal flagella
- D. Filamentous body made up of trichomes

**Answer:**



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**258.** Ciliated protozoans differ from amoeboid and flagellated protozoans in having

- A. Locomotory structure
- B. single celled body
- C. Heterotrophic mode of nutrition

D. Definite regions of ingestion and egestion

**Answer:**



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**259.** Under favourable conditions, smile moulds form underline A while under unfavourable conditions they form underline B. Complete the above statement by choosing the correct option for A and B.

A. (A) Fruiting bodies (B) Spores

B. (A) Plasmodium (B) Fruiting bodies

C. (A) Fruiting bodies (B) Plasmodium

D. (A) Spores (B) Plasmodium

**Answer:**



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**260.** Continuity of cytoplasm of the adjoining cells in most of the club fungi is maintained by



A. Simple central pore septum

B. Dolipore septum

C. Dissolution of septal wall

D. Chitinous cell wall

**Answer:**



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**261.** Which of the given fungi are edible and form fruiting bodies also? (a) Morels (b) Truffles (c) *Agaricus campestris* (d)

Saccharomyces (e) Neurospora (f) Rhizopus (g)

Ustilago

- A. Only a, b, & d
- B. Only a, b, c, d & e
- C. All except d, e, f & g
- D. All except e, f & g

**Answer:**



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**262.** Mark the correct statement for Albugo.

A. Cause white rust in members of  
Brassicaceae

B. Plasmogamy occurs by gametangial  
copulation

C. Cell wall is made up of fungal cellulose

D. Mycelium is coenocytic and separate

**Answer:**



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**263.** Select the incorrect match.

- A. Puccinia- Rust in wheat
- B. Claviceps- Ergot in rye
- C. Alternaria- Late blight of potato
- D. Ustilago-Smut in wheat

**Answer:**



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**264.** Which of the given fungi is not useful for human beings?

A. Yeast

B. Neurospora

C. Penicillium

D. Rhizopus stolonifer

**Answer:**



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**265.** Members regarded as "fungi imperfecti" are related to all the following characters, except

- A. Decomposition of litter
- B. Formation of conidia
- C. Aseptate and branch mycelium
- D. Help in mineral recycling

**Answer:**



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**266.** Viruses which are involved in transduction usually have their genetic material as

A. ds RNA

B. ds DNA

C. ss DNA

D. ss RNA

**Answer:**



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**267.** Which of the given statements is not true for viruses?

- A. They are nucleoproteins where protein is infectious in nature
- B. They can be crystallized and crystals consists largely of proteins
- C. Virus means venom or poisonous fluid
- D. A virus can never have both DNA and RNA as its genetic material

**Answer:**





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**268.** Viruses and viroids are similar in

- A. Having capsid
- B. Having only RNA as genetic material
- C. Being infections in nature
- D. Having RNA of same molecular weight

**Answer:**



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**269.** Viruses could be crystallized, was shown by

A. D.J. Ivanowsky

B. M.W. Beijerinck

C. W.M. Stanley

D. T.O. Diener

**Answer:**



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**270.** A common feature between TMV and HIV is

- A. Presence of envelope
- B. Absence of capsid
- C. Having ss RNA as genetic material
- D. Having animals as host

**Answer:**



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**271.** Read the following statement and state them as True (T) or False (F)

(1) Abundance of lichens in any area indicates that the area is highly SO<sub>2</sub> polluted.

(2) Mycobiont partner of lichens is always heterotrophic.

(3) Body of lichens is made up of phycobionts only.

A. (1)T,(2)T,(3)F

B. (1)F,(2)T,(3)F

C. (1)F,(2)F,(3)F

D. (1)T,(2)F,(3)F

**Answer:**



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**272.** On the basis of sequences of 16s ribosomal RNA genes, Carl Woese placed all eukaryotes into how many domain (s) of life?

A. 3

B. 1

C. 2

D. 4

**Answer:**



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**273.** Primitive bacteria which are found in guts of ruminant animals, do not show/have,

- a) Heterotrophic mode of nutrition,
- b) Peptidoglycan in their cell wall,
- c) Enzymes for aerobic respiration,

d) Abundance in marshy area,

e) Branched chain lipids in their cell membrane

A. only a,b,e

B. only a & b

C. only a,b & c

D. only b & d

**Answer:**



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274. Still roots differ from prop roots in

- A. Providing support
- B. Being adventitious roots
- C. Arising from lower nodes of stem
- D. Arising from branches of stem

**Answer:**



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275. Identify the odd one w.r.t. the type of modified root

A. Carrot

B. Turnip

C. Radish

D. Sweet potato

**Answer:**



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**276.** Choose the plant which modifies its stem into fleshy cylindrical photosynthetic structure and is found in arid regions

A. Opuntia

B. Asparagus

C. Euphorbia

D. Australian Acacia

**Answer:**



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277. Which of the following statements is not true for runner?

A. Internodes are longer

B. Helps plants to spread to new niches

C. Roots are present at nodes

D. Found in plants like grasses,  
strawberry, jasmine

**Answer:**



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**278.** In Venus-fly-trap, the leaf is modified into special structures to

A. Store food

B. Trap insects

C. Provide support to the plant in climbing

D. Be defensive in nature

**Answer:**



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**279.** Read the following characters and mark the correct ones for family Fabaceae. a) Flowers are arranged in acropetal manner on floral axis, b) Flowers with radial symmetry, c) Hypogynous flower, d) Albuminous seeds, e) Monocarpellary ovary

A. only a & c

B. only a, c, d & e

C. only a, c & e

D. only a & b

**Answer:**



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**280.** Cymose inflorescence is dissimilar to racemose inflorescence in

A. Having limited growth of the main inflorescence axis

B. Having young flowers at top

C. Showing centripetal manner of opening  
of flowers

D. Having acropetal of flowers

**Answer:**



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**281.** Margins of petals or sepals overlap each other but not in a definite manner in

A. Asparagus

B. Cassia

C. China rose

D. Solanum nigrum

**Answer:**



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**282.** China rose, tomato and lemon all are common in having

A. Polyadelphous stamens



B. Zygomorphic flowers

C. Axile placentation

D. Parietal placentation

**Answer:**



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**283.** Which of the given feature is not related to mustard?

A. Superior ovary

B. Variable length of filaments of stamens

C. Parietal placentation

D. Opposite phyllotaxy

**Answer:**



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**284.** a type of fruit in which entire inflorescence is converted into a fruit is called

A. Aggregate fruit

B. Composite Fruit

C. Succulent fruit

D. Dry indehiscent fruit

**Answer:**



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**285.** a small pore above the scar found on seed coat is

A. micropyle

B. Hilum

C. plumule

D. Tegmen

**Answer:**



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**286.** how many of the given features are related to maize seed? a. Scutellum, b. Albuminous, c. Thick seed coat, d. pericarp fuses with seed coat

A. 3

B. 4

C. 5

D. 2

**Answer:**



**Watch Video Solution**

**287.** coconut is different from mangofruit in

A. having fibrous endocarp

B. its edible part

C. having this mesocarp

D. being a drupe

**Answer:**



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**288.** select the incorrect match

A. Green photosynthetic petiole- Australian

Acacia

B. real flats attached at tip of petiole- silk  
cotton

C. papillonaceous corolla- Bean

D. Epi phyllous stamens- Brinjal

**Answer:**



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**289.** mark the odd one w.r.t. endosperm

A. food storing tissue

B. formed as a result of double fertilization

C. present in mature seeds of gram

D. Absent in orchids

**Answer:**



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**290.** which of the the following floral features is not represented by symbols in floral formula of a plant family



A. relative position of ovary w.r.t. other parts

B. adhesion of stamens

C. aestivation of calyx and Corolla

D. symmetry of flower

**Answer:**



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291. which of the given plants of family favaceae is used as an ornamental plants?

A. Sesbania

B. Lupin

C. pea

D. Muliathi

**Answer:**



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292. Conducting part of human respiratory system does not include

A. Trachea

B. Pharynx

C. Bronchi

D. Alveoli

**Answer:**



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**293.** Mark the odd one w.r.t. respiratory structure

A. Reptiles

B. Fishes

C. Birds

D. Mammals

**Answer:**



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**294.** During inspiration in humans

A. contraction of diaphragm increases the volume of thoracic cavity in antero posterior axis

B. Relaxation of diaphragm increases the thoracic volume in antero posterior axis

C. Contraction of internal intercostal muscles increases the volume of thoracic cavity in dorsoventral axis

D. relaxation of internal intercostal muscles

decreases the volume of thoracic cavity

in dorsoventral axis

**Answer:**



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**295.** Thoracic cage of man is dorsally and ventrally formed of ---(A)\_\_\_ and \_\_\_ (B)\_\_\_ respectively select the option which fill the blanks correctly.

A. A= Vertebral column B= stemum

B. A= sternum B = vertebral column

C. A= Vertebral column B= ribs

D. A= ribs B= stemum

**Answer:**



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**296.** After normal expiration the volume of air left in thr lungs is

A.  $TV + ERV$

B.  $ERV + FRC$

C.  $R_v + ERV$

D.  $FRC - ERV$

**Answer:**



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**297.** what is partial pressure of oxygen in systemic vein?



A.  $40\text{mmHg}$

B.  $45\text{mmHg}$

C.  $95\text{mmHg}$

D.  $104\text{mmHg}$

**Answer:**



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**298.** The duration of atrial diastole in a normal cardiac cycle is

A. 0.7s

B. 0.1s

C. 0.4s

D. 0.3s

**Answer:**



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**299.** Semilunar valves of heart open during

A. joint diastole

B. Atrial Systole

C. Ventricular Systole

D. Ventricular diastole

**Answer:**



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**300.** Mark the incorrect statement w.r.t. blood vessels.

- A. Arteries are non collapsible as they have thick walls
- B. Veins do not have valves in them
- C. Most of thr veins corry deoxygenated blood towards heart
- D. Through capillaries, exchange of gases and nutrients occurs between blood and tissues

**Answer:**



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**301.** during joint diastole

A. both the auricles receive oxygenated  
blood

B. tricuspid valve and mitral valve remain  
closed

C. semilunar valves open and dub sound is  
heard

D. left atrium receives oxygenated blood  
through pulmonary veins

**Answer:**



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**302.** which of the following component of  
conducting system of heart has maximum  
conduction velocity ?

A. SA node

B. bundle of His

C. Purkinje fibres

D. AV node

**Answer:**



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**303.** thoracic duct discharge lymph into \_\_\_\_.

select the option which fills the blank correctly

A. inferior Vena cava

B. right lymphatic duct

C. right subclavian vein

D. epinephrine

**Answer:**



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**304.** facultative reabsorption of water occurs in the last part of nephron under the influence of which hormone?



A. ANF

B. Rennin

C. ADH

D. Epinephrine

**Answer:**



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**305.** counter current mechanism between loop of Henle and Vasa recta result in reabsorption of water from

A. ascending limb of loop of Henle

B. distal convoluted part of nephron

C. PCT of nephron

D. descending limb of loop of Henle to the  
ascending limb of Vasa recta

**Answer:**



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**306.** Renin is an enzymatic hormone release by juxta-glomerulus apparatus in response to

- A. Low osmolarity of blood
- B. Low blood pressure
- C. High glomerular blood flow
- D. High blood volume

**Answer:**



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**307.** Micturition reflex is triggered by the activation of stretch receptor present on the wall of

- A. Renal pelvis
- B. Urinary bladder
- C. Urethra
- D. Ureter

**Answer:**



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**308.** Which of the following does not occur in response to decrease in blood volume?

A. Increase in angiotensin II

B. Increase in aldosterone secretion by adrenal cortex

C. Increase tubular reabsorption of sodium

D. Increase secretion of atrial natriuretic peptide from liver

**Answer:**



**309.** If a person is suffering from water deficiency, maximum water reabsorption from filtrate occurs in

- A. Distal convulated tubule
- B. Descending limb of loop of Henle
- C. Collection duct
- D. proximal convulated tubule

**Answer:**





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**310.** Uremia is a condition in which the concentration of urea

- A. Decrease in blood
- B. Increase in blood
- C. Increase in urine
- D. Decrease in hepatic vein

**Answer:**



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**311.** T wave in electrocardiogram represent

- A. The return of ventricles from excited to normal state
- B. Depolarisation of ventrives from normal to excited state
- C. Onset of atrial systole
- D. Onset of atrial diastole

**Answer:**





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**312.** When heart is not pumping blood effectively enough to meet the demand of body tissue, this condition is known as

- A. Myocardial infection
- B. Cardiac arrest
- C. CAD
- D. Heart failure

**Answer:**



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**313.** Release of urine occurs due to

- A. Contraction of detrusor muscle by sympathetic stimulation
- B. Relaxation of detrusor muscle by parasympathetic stimulation
- C. Contraction of external urethral sphincter
- D. Relaxation of urethral sphincter

**Answer:**



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**314.** The value of net filtration pressure in nephron is approximately

- A. 30 mm of hg
- B. 60 mm of hg
- C. 10 mm of hg
- D. 20 mm of hg

**Answer:**



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**315.** Which of the following substances is reabsorbed almost completely in PCT of nephron by active process?

A. Water

B. Uric acid

C. Urea

D. Glucose

**Answer:**



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**316.** Select the correct statement w.r.t. human kidney

A. It is a retroperitoneal organ present in abdominal cavity

B. Right kidney is placed slighter higher in position than the left kidney

C. It regulates the pH of blood by secretion

$H^+$  and  $HCO_3^-$  from the filtrate

D. Malphigian bodies of nephron always

found in renal medulla

**Answer:**



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**317.** Nitrogen byproduct of ornithine cycle is found minimally in

- A. Renal vein
- B. Renal artery
- C. Hepatic vein
- D. Hepatic artery

**Answer:**



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**318.** in which of the following disease, does constriction of smooth muscle in the Wall of bronchioles occur?

A. Emphysema

B. asthma

C. pulmonary fibrosis

D. silicosis

**Answer:**



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**319.** under normal physiological conditions  
1000 ml of venous blood returns how much  
amount of  $O_2$  approximately?



A.  $5\text{ml of } O_2$

B.  $4\text{ml of } O_2$

C.  $14.4\text{ml of } O_2$

D.  $144\text{ml of } O_2$

**Answer:**



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**320.** all the following factors are favourable for association of  $O_2$  with Hb except

A. high partial pressure of  $O_2$

B. less  $H^+$  ion concentration

C. low temperature

D. high partial pressure of  $CO_2$

**Answer:**



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**321.** partial pressure of  $CO_2$  in alveoli of lungs

A. equal to that in the deoxygenated blood

B. more than that in the deoxygenated  
blood

C. less than that in the deoxygenated  
blood

D. more than that of  $O_2$  in alveoli

**Answer:**



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**322.** mark the agranulocytes which perform phagocytosis in human blood.

A. lymphocytes

B. monocytes

C. basophils

D. neutrophils

**Answer:**



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**323.** how many cellular membrane only have to be crossed by oxygen to reach the pulmonary capillaries from alveolar air?

A. one

B. two

C. three

D. four

**Answer:**



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324. which of the following combination represent a plausibility of Erythroblastosis foetalis?

A.  $Rh^{-}$  mother and  $Rh^{-}$  foetus

B.  $Rh^{-}$  mother and  $Rh^{+}$  foetus

C.  $Rh^{+}$  mother and  $Rh^{+}$  foetus

D.  $Rh^{+}$  mother and  $Rh^{-}$  foetus

**Answer:**



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**325.** choose the correct option.

A. Prothrombin rarr Thrombin

B. Fibrinogen rarr Fibrin

C. Fibrin rarr Fibrinogen

D. Prothrombin rarr Thrombin

**Answer:**



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**326.** another common to blood plasma of individual with blood group  $O^-$  an individual with blood group  $B^+$  is/are

- A. Anti-B
- B. Anti-A
- C. Both Anti-B and Anti-A
- D. Anti-Rh

**Answer:**



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**327.** the least abundant cell in the human blood among the following are

- A. neutrophils
- B. monocytes
- C. erythrocytes
- D. Eosinophils

**Answer:**



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**328.** the volume of blood pumped out by the two ventricles of human heart per minute is

A.  $5L$

B.  $10L$

C.  $15L$

D.  $20L$

**Answer:**



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**329.** mark the correct match w.r.t. respiratory volume and capacity

A. Residual volume :  $500ml$

B. Vital capacity :  $2500 - 3500ml$

C. inspiratory capacity :  $2300 - 3000ml$

D. functional residual capacity :  $2300ml$

**Answer:**



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**330.** proximal convoluted tubule is lined by

- A. simple columnar epithelium
- B. brush bordered cuboidal epithelium
- C. brush border columnar epithelium
- D. endothelium

**Answer:**



**Watch Video Solution**

**331.** Time interval between the closure of semilunar valve and closure of AV valve is

A.  $0.1s$

B.  $0.3s$

C.  $0.5s$

D.  $0.8s$

**Answer:**



**Watch Video Solution**

**332.** tunica interna of arteries and veins is composed of

- A. smooth muscle
- B. involuntary muscle
- C. epithelial tissue
- D. striated muscle

**Answer:**



**Watch Video Solution**

**333.** serum differs from blood is the

- A. presence of fibrinogen
- B. absence of fibrinogen
- C. absence of albumin
- D. absence of gamma-globulin

**Answer:**



**Watch Video Solution**

**334.** mark the incorrect statement w.r.t. human mature RBCs.

A. lack nucleus and mitochondria

B. have carbonic anhydrase

C. transport  $CO_2$  as carbamino-hemoglobin

D. undergo aerobic respiration during strenuous exercise

**Answer:**





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**335.** choose the correct option w.r.t. first heart sound.

A. produced by opening of AV-valve

B. shorter duration than second heart sound

C. known as DUB sound

D. produced during ventricular systole

**Answer:**



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**336.** complete double circulation in the characteristic features of all

A. amphibians

B. reptiles

C. fishes

D. mammals

**Answer:**



**337.** Plants possessing leafy body without vascular tissue, presence of embryo stage in life cycle and archegonia as female sex organs but absence of seed formation may be grouped among all, except

A. Atracheophytes and non  
spermatophytes

B. Embryophytes and archegoniates

C. Non-spermatophytes and non-vascular  
crytogams

D. Algae

**Answer:**



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**338.** Artificial system of classification as given by Linnaeus is not acceptable nowadays because

A. Closely related species were grouped together as it was based on a few characters

B. Vegetative and sexual characters were given equal weightage

C. This system used gross superficial morphological and internal characters and forms relationships between different taxa

D. consideration of stamens, carpels and other floral characters was not needed

**Answer:**



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**339.** Choose the incorrect statement regarding Bentham and Hooker's system of classification of angiosperm

- A. Based on natural affinities among the organism
- B. Only external feature of organisms were considered
- C. Is a natural system of classification
- D. embryology, phytochemistry an anatomy of plants were also considered as criteria

**Answer:**



**Watch Video Solution**

**340.** Branch of taxonomy that uses chemical constituents of plants to resolved confusion is

- A. Numerical taxonomy
- B. Cytotaxonomy
- C. Chemotaxonomy
- D. Alpha taxonomy

**Answer:**



**Watch Video Solution**



**341.** system of classification proposed by Engler and Prantl

A. Is based on evolutionary relationship between various organism

B. believes that organism belonging to the same taxa have a common ancestor

C. considered that the monocots are more evolved than the dicots

D. both (1) & (2)

**Answer:**



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**342.** If the number of chromosomes in the secondary nucleus of *Zea mays* is 20, what will be the number of chromosomes in PEC, polar nuclei, coleorhiza and aleurone layer respectively?

A. 60, 20, 60, 60

B. 30, 10, 10, 30

C. 30, 10, 20, 20

D. 30, 10, 20, 30

**Answer:**



**Watch Video Solution**

**343.** How many of the given characters are associated with brown algae (Laminarin, Sulphated phycocolloids, Apical flagella, Fucoxanthin, Heterokont flagellation, chlorophyll c, Carotenoids, Pear-shaped

zoospores, Oogonium, Pyriform gametes, Most complex post- fertilization development)

A. Eight

B. Six

C. Seven

D. Five

**Answer:**



**Watch Video Solution**

**344.** Choose the incorrect option w.r.t bryophytes

- A. Haploid phase in the life cycle is more differentiated than that of algae
- B. Zygote divides by meiosis immediately
- C. The sporophyte is not free living and independent
- D. The spores germinate to produce gametophyte either directly or by A

protoma stage

**Answer:**



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**345.** Which of these may not be an economic importance of bryophytes?

A. food for animals like birds

B. Peat formation used at fuel

C. in older times, Sphagnum was used in place of absorbant cotton

D. Mosses along with lichens are the first organism to colonise rocks

**Answer:**



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**346.** A chlorophycean number can be e separated from red alga in

- A. Presence of one or more storage bodies  
in chloroplasts called pyrenoids
- B. Presence of phycocolloids in cell wall
- C. Absence of oogamous sexual  
reproduction
- D. Absence of endogenous motile asexual  
spores in life cycle

**Answer:**



**Watch Video Solution**



**347.** Choose the Incorrect statement for red algae

- A. Storage food is very similar to amylopectin and glycogen in structure
- B. They may occur in well- lighted regions close to surface of sea-water
- C. Absence of motile stage in life cycle
- D. Female sex organ is jacketed and multicellular

**Answer:**



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**348.** The spread of living pteridophytes is limited and is restricted to narrow geographical region because

A. Gametophytes require cool, damp and shady places to grow

B. Gametophytes is non-vascular and free living

C. Gametophytes require warm, dry & shady places to grow

D. Sporophytes need only moist shaded areas in the hills

**Answer:**



**Watch Video Solution**

**349.** Which of the following statement for racemose inflorescence is Incorrect?

- A. Arrangement of flowers in a group is centripetal
- B. Flowers are borne in lateral fashion
- C. Growing point or shoot apex terminates in a flower
- D. Formation of flowers is indefinite or unrestricted

**Answer:**



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**350.** Origin of seed habit or its foundation was laid on selaginella like pteridophytes but seed formation did not occur because of

A. In situ development of female gametophytes

B. Absence of precocious development of microgametophyte

C. Absence of integumented megasporangium

D. Dependence on water for pollination

**Answer:**



**Watch Video Solution**

**351.** Select the wrong statement for gymnosperms.

A. Include medium sized or tall trees and shrubs of perennial habit

B. Ovules remain exposed, both before and after fertilization

C. All the members of gymnosperms have mycorrhizal roots

D. Leaves are well adapted to withstand extremes of temperature, humidity and wind

**Answer:**



**Watch Video Solution**

**352.** Gymnosperms differ from non-vascular embryophytes in

- A. Possessing meiosis to form haploid spores that rise to gametophyte
- B. Absence of an independent free-living gametophytic stage in life cycle
- C. Presence of seeds without seed coat
- D. Possessing compactly arranged microsporophylls to form female cones



**Answer:**



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**353.** In which of the following plants, the margin of thalamus grows further upward completely enclosing the ovary and getting fused it and bears the sepals, petals and stamens above the ovary?

A. Coriander, Plum

B. Peach, Apple

C. Cucumber, Guava

D. Sunflower, Gulmohur

**Answer:**



**Watch Video Solution**

**354.** Find the odd features w.r.t pinus.

A. Its plant body is monoecious

B. Shows sulphur shower

C. Never shows polyembryony

D. Pollens and seeds both are dispersed by  
air

**Answer:**



**Watch Video Solution**

**355.** Angiosperms are identified by

A. Presence of veins and veinlets in leaves  
and transfusion tissue

B. Occurrence of diplontic life cycle with a distinct independent haploid phase

C. Presence of 7-celled, 8-nucleated megagametophyte in most of the members

D. Presence of well developed embryo and endosperm in seeds universally

**Answer:**



**Watch Video Solution**

**356.** Select the correct matchp

A. Petunia(plant),Opposite (Phyllotaxy) ,

$G_2$  (gynoecium)

B. Soyabean (Plant) Alternate(phyllotaxy)

$G_1$ (Gynoecium)

C. Mustard (Plant) Whorled (Phyllotaxy)  $G_2$

(Gynoecium)

D. Aloe(Plant) Alternate(phyllotaxy)  $G_3$

(gynoecium)

**Answer:**



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**357.** Peculiar feature of angiosperms not found in any plant group is

- A. fertilization with the help of pollen tube
- B. maturation of ovules into seeds after fertilization
- C. formation of pericarp

D. development of zygote into embryo

**Answer:**



**Watch Video Solution**

**358.** Pollination in angiosperms is said to be indirect because

- A. pollens land on stigma
- B. pollens land directly on ovule
- C. pollination occurs by various agencies

D. cross pollination is more common in  
angiosperm

**Answer:**



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**359.** Which of these algae exhibit the haplo-diplontic life cycle?

A. fucus, ulothrix

B. ectocarpus, polysiphonia



C. volvox, Laminaria

D. Spirogyra, laminaria

**Answer:**



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**360.** The main functions of the root system in angiospermic plants is all, except

A. absorption of water and mineral from the soil

B. provides proper anchorage to plants

C. synthesis of plant growth regulators

D. respiration and vegetative propagation

**Answer:**



**Watch Video Solution**

**361.** Region of maturation in a tap root

A. is situated distal to elongation zone

B. undergoes rapid cells elongation and enlargement

C. gives rise to unicellular root hairs from some of its epidermal cells

D. is the only water absorption region

**Answer:**



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**362.** All are adventitious roots that provide extra mechanical support to the plants, except

A. Stilt root

B. Prop root

C. Climbing root

D. Hygroscopic root

**Answer:**



**Watch Video Solution**

**363.** Expanded green petiole specialised for photosynthesis in some plants like *Acacia auriculiformis* is

A. Phylloclade

B. Phyllode

C. Cladode

D. Cladophyll

**Answer:**



**Watch Video Solution**

**364.** Match the following columns.

Column-I a. stem tendrils b. thorns c. leaf  
tendrils

column-II (i) pumpkins (ii) citrus (iii) cucumber  
(iv) bougainvillea (v) peas (vi) grapevines

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

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

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

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

**Answer:**

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**365.** Stems that spread to new niches but do not help to tide over the unfavourable conditions of growth i.e., perennation is found in

- A. grasses and strawberry
- B. ginger and turmeric
- C. potato and elephant food
- D. zaminkand and jerusalem artichoke

**Answer:**



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**366.** Lateral branches originating from the basal and underground portion of the main stem that grows beneath the soil and then come out obliquely upward and give rise to leafy shoot is

A. stolon

B. sucker



C. offset

D. runner

**Answer:**



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**367.** Find out the incorrectly matched pair. a. Caryopsis - Wheat b. Capsule - Mustard c. Cypsela - Sunflower d. Berry - Tomato e. Silicula - Poppy

A. a, c & e

B. b, e

C. b, d & e

D. a, b & e

**Answer:**



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**368.** Leaves get modified as spines and tendrils for protection and climbing respectively in

A. zizyphus and smilax

B. cactus and pumpkin

C. bougainvilleavillea and nepenthes

D. opuntia and gloriosa

**Answer:**



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**369.** The inflorescence in which receptacle becomes cup shaped and consists single

naked female flower surrounded by many male flowers is found in

A. poinsettia

B. fig

C. Indian basil

D. sunflower

**Answer:**



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**370.** How many of the given plants have actinomorphic flowers? Radish, Tulip, Ashwagandha, Wheat, Lupin, Cassia, Canna, Asparagus, Lily, Datura, Mustard, Chilli, Tobacco

A. seven

B. nine

C. six

D. eight

**Answer:**



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**371.** Axile placentation is found in all except

A. tomato

B. China rose

C. lemon

D. dianthus

**Answer:**



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### 372. Tetradyynamous stamens

- A. do not show difference in their lengths
- B. have two outer short and two inner long stamens
- C. are exemplified by ocimum
- D. have four outer short and two inner long stamens

**Answer:**



**Watch Video Solution**

**373.** The fruit which develops from monocarpellary superior ovary and possessing only one seed enclosed in hard endocarp is

A. berry

B. drupe

C. legumn

D. caryopsis

**Answer:**





**374.** Select the odd one w.r.t. aggregate fruit.

A. develops from a polycarpellary

apocarpous ovary

B. actually is an aggregate of simple fruits

C. always develops from many flowers

D. all fruitlets developed from carpels

together form an aggregate fruit

**Answer:**



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**375.** Edible part in banana, almond and litchi are respectively

- A. mesocarp, seeds, aril
- B. pericarp, seeds, thalamus
- C. tesla, endosperm, aril
- D. epicarp and mesocarp, seeds, aril

**Answer:**



**376.** Remains of nucleus in seeds known as perisperm is - and found in -

- A. diploid, black paper
- B. triploid, castor
- C. haploid, coconut
- D. diploid, mango

**Answer:**



**377.** Floral formula of an angiospermic family does not deal with

A. symmetry of flower

B. cohesion and adhesion of stamens

C. placentation in ovary

D. position of ovary w.r.t. other floral parts

**Answer:**



**Watch Video Solution**

**378.** Select the common characters between solanaceae and liliaceae families. a. placentation in ovary b. persistent calyx c. number of stamens d. superior ovary e. endospermous seed

A. a, c & d

B. a, d & e

C. c, d & e

D. a, b & e

**Answer:**



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**379.** How many of the given plants belong to fabaceae solanaceae and liliaceae families respectively? tribolium, colchicum, lupin gloriosa, oryza, groundnut, belladonna, indiagofera, tulip, sweet pea, ashwagandha

A. 5, 2, 3

B. 6, 2, 2

C. 4, 5, 4

D. 6, 4, 3

**Answer:**



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**380.** Read the following statements.

- a. A group of similar cells along with intercellular substances performing a specific function form a tissue.
- b. All members of kingdom animalia consists of only four basic type of tissues.

c. When two or more organs perform a common function by their physical or chemical interaction that together form an organ system.

d. The organ stomach in humans has all four types of tissues. How many above statements are correct?

A. 3

B. 2

C. 1

D. 4



**Answer:**



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**381.** In epithelial tissue

A. cells are compactly packed with large amounts of intercellular matrix

B. a free surface is present which faces either a body fluid or the outside environment

C. the tissue provides a covering or lining

for all parts of the body

D. the cells are always loosely packed with

little intracellular matrix

**Answer:**



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**382.** Match following columns and choose the correct answer.

a.simple      squamous      epithelium(type      of

epithelium)(column I)

b. simple cuboidal epithelium (type of epithelium)(column I)

c. simple ciliated epithelium (type of epithelium)(column I)

d. simple columnar epithelium (type of epithelium)(column I) .

(i) PCT, DCT (Location of epithelium)(column II)

(ii) Air sacs of lungs (Location of epithelium)  
(column II)

(iii) Stomach, intestine (Location of epithelium)  
(column II)

(iv) Bronchioles, fallopian tube(Location of epithelium)(column II).

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

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

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

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

**Answer:**



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**383.** Which type of epithellium has limited role in secretion and absorpction?

- A. simple epithellium
- B. simple cuboidal epithellium
- C. compound epithellium
- D. simple columnar epithellium

**Answer:**



**Watch Video Solution**

**384.** Read the following statements.

a. columnar or cuboidal cells get specialized for secretion and are called Glandular epithellium.

b. Exocrine Glands secrete muscus, saliva, milk, insulin enzymes etc.

c. Goblet cells are unicellular glands while salivary glands are multicellular glands.

d. Tight junctions cement the neighbouring cells together. How many above statements are correct?

A. 2

B. 3

C. 4

D. 1

**Answer:**



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**385.** Find the correct option which includes connective tissue only.

A. cartilage, bone, salivary gland, blood

B. Tendon, ligament, Areolar tissue, blood

C. Ligament, Biceps, Goblet cells, Tendon

D. muscles, pancreas, liver, bone

**Answer:**



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**386.** All of the following are specialized connective tissue except

A. Bone



B. Blood

C. Cartilage

D. Adipose tissue

**Answer:**



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**387.** following are the statements with some blanks. find the correct option which fills blanks correctly. a. Fibres and fibroblasts are compactly packed in the \_\_\_(i)\_\_. b. \_\_\_(ii)\_\_\_

Which connect or attach one born to another.

c. connective tissue are classified into  
\_\_\_\_(iii)\_\_\_\_ types. d.\_\_\_\_(iv)\_\_\_\_ Is a fluid  
connective tissue.

A. (i) dense connective tissue, (ii) Tendon,  
(iii) Four, (iv) Lymph

B. (i) loose connective tissue, (ii) ligament,  
(iii) three, (iv) blood

C. (i) dense connective tissue, (ii) ligament,  
(iii) three, (iv) blood.

D. (i) loose connective tissue, (ii) tendon,  
(iii) four, (iv) blood

**Answer:**



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**388.** all the following structures have cartilage  
except

A. tip of nose, outer ear joint.

B. between adjacent bones of the vertebral column, limbs on adult.

C. nasal septum, hands in adult, thoracic cage

D. heart, kidney, capillaries

**Answer:**



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**389.** the tissue which exerts the greatest control over the body's responsiveness to changing conditions includes

A. neurons only

B. neurons , oligodendrocytes and astrocytes only

C. neurons and astrocytes only

D. neurons , oligodendrocytes, astrocytes and microglial cells.

**Answer:**



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**390.** Which of the following structure is not present in or on the head of cockroach?

A. compound eyes

B. Antennae

C. Ocellus

D. Pronotum

**Answer:**



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**391.** The head of cockroach is formed by the fusion of six segments and shows great mobility in all directions due to a flexible neck.

The neck is a short extension of

A. head

B. prothorax

C. mesothorax

D. metathorax

**Answer:**



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**392.** Which type of wings in cockroach are opaque, dark and leathery? a. forewings  
b. mesothoracic wings c. metathoracic wings d.  
prothoracic wings e. tegmina f. hindwings

A. a & b only



B. c, d & e only

C. a, b & e only

D. a, b & f only

**Answer:**



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**393.** How many of the below structures are paired and found in both male and female cockroach? (compound eye, mandible, labium, salivary gland, anal cerci, anal styles, alary

muscles, phallic gland, collateral glands,  
proventriculus)

A. 8

B. 5

C. 4

D. 6

**Answer:**



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**394.** Find the correct statement related to gizzard in cockroach.

- A. the gizzard is followed by crop which is a sac-like structure
- B. gizzard has an outer layer of the circular muscles and thick inner cuticle forming six highly chitinous plate called teeth
- C. gizzard is present between mesenteron and ileum

D. gizzards secretes maximum number of digestive enzymes

**Answer:**



**Watch Video Solution**

**395.** Following paragraph has some blanks. Find the correct option which fills blanks correctly. Blood vascular system of cockroach is \_\_\_\_\_ type. Blood vessels are \_\_\_\_\_ and open

into spaces. The \_\_\_\_\_ is composed of colourless \_\_\_\_\_ and \_\_\_\_\_.

A. (a)-open,(b)-very well developed,(c)-haemolymph (d)-plasma, (e)-haemoglobin

B. (a)-open,(b)-poorly developed,(c)-haemolymph, (d)-plasma, (e)-RBCs

C. (a)-open, (b)-poorly developed, (c)-haemolymph, (d)-plasma, (e)-haemocytes

D. (a)- open, (b)- very well developed, (c)-  
haemolymph, (d)- haemocytes, (e)-  
plasma

**Answer:**



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**396.** excretion is performed by malpighian tubules in cockroach and each tubule is lined by

A. Glandular cells only

B. Flagellar cells only

C. ciliated cells only

D. glandular and ciliated cells

**Answer:**



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**397.** in cockroach, brain is represented by

A. supra- pharyngeal ganglion

B. supra-oesophageal ganglion

C. sub-oesophageal ganglion

D. sub-pharyngeal ganglion

**Answer:**



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**398.** How many of the structures given below are found only in male cockroach are pairs?  
(testis, phallic, mushroom gland, vas deferens,



caudal style, collateral gland, spermatheca, oviduct, anal cercus)

A. 4

B. 3

C. 2

D. 1

**Answer:**



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**399.** in male cockroach , sperms are stored in

- A. vasa deferentia
- B. seminal vesicles
- C. ejaculatory duct
- D. phallic gland

**Answer:**



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**400.** Largest tergite of thorax of cockroach is connected through

- A. sclerite of metathorax
- B. Sclerite of mesothorax
- C. Sclerite of abdominal segment
- D. Sclerite of last abdominal segment

**Answer:**



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**401.** The structure which is not related to metathoracic segment in cockroach is

A. Legs

B. wings

C. spiracles

D. anal cerci

**Answer:**



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**402.** Grinding and incising region are associated with which mouth part of Periplaneta?

A. Maxilla

B. Labium

C. Mandible

D. Hypopharynx

**Answer:**



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**403.** The blood concentration of glucose in a normal healthy individual is

- A. 4.5-5.0 m mol/L
- B. 45-50 m mol/L
- C. 10-20 mmol/L
- D. 100-200 m mol/L

**Answer:**



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**404.** Find the correct statements related to the living state.

A. Living organisms work continuously and can afford to reach equilibrium

B. Living processes is a constant effort to reach equilibrium

C. Without metabolism there cannot be a living state

D. The living state is a equilibrium steady state to be able to perform work

**Answer:**



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**405.** Read the following statements a. Removal of  $\text{CO}_2$ , from amino acid histidine converts it into an amine. b. Metabolites are converted into each other in a series of linked reactions called metabolic pathways. c. There is no uncatalyzed metabolic conversion in living systems. d. In living systems, the proteins with



catalytic power are known as enzymes. How many above statements are correct?

A. 4

B. 3

C. 2

D. 1

**Answer:**



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**406.** Which of the following is not an example of an anabolic pathway?

- A. Synthesis of cholesterol from acetic acid
- B. Synthesis of a protein from amino acids
- C. Synthesis of glycogen from glucose
- D. Formation of lactic acid from glucose

**Answer:**



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407. Which of the following structure of protein is/are present in a proteinaceous enzyme with a single polypeptide chain only?

- A. Primary structure only
- B. Secondary structure only
- C. Tertiary structure only
- D. Primary, secondary and tertiary structure

**Answer:**



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**408.**  $CO_2 + H_2O \rightleftharpoons H_2CO_3$  In the absence of an enzyme, this above reaction is

- A. Very slow, about 2000 molecules of  $H_2CO_3$  being formed in a minute
- B. Very slow, about 200 molecules of  $H_2CO_3$  being formed in an hour
- C. Very fast, 6,00,000 molecules of  $H_2CO_3$  being formed in a second

D. Very fast, such that 10 million molecules of  $H_2CO_3$  are being formed in a minute

**Answer:**



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**409.** Which is not correct about enzyme activity?

A. An obligatory formation of an 'ES' complex

B. A new structure of the substrate called transition state structure is formed

C. If product is at high energy level than substrate, the reaction is exothermic

D. Enzymes bring down activation energy, make the transition of 'S' to 'P' more easy.

**Answer:**



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**410.** Prosthetic groups are \_\_ (a) \_\_ compound and are distinguished from other \_\_ (b) \_\_ in that they are \_\_ (c) \_\_ bound to the \_\_ (d) \_\_.

A. (a) organic (b) coenzyme (c) loosely (d)

holoenzyme

B. (a) inorganic, (b) cofactor, (c) loosely, (d)

apoenzyme

C. (a) organic, (b) cofactor, (c) tightly, (d)

holoenzyme

D. (a) organic, (b) cofactor, (c) tightly, (d)

apoenzyme

**Answer:**



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**411.** Bond not hydrolysed by class III enzyme is

A. Ester bond

B. Disulfide bond

C. Peptide bond



D. Glycosidic bond

**Answer:**



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**412.** The enzymes that catalyse removal of groups from substrates by mechanisms other than hydrolysis leaving double bonds belong to class

A. Dehydrogenases

B. Transferases

C. Hydrolases

D. Lyases

**Answer:**



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**413.** The effect of competitive inhibitors can be overcome by

- A. Raising the concentration of the substrate
- B. Raising the concentration of the enzyme
- C. Raising the concentration of inhibitor
- D. Raising the concentration of non-competitive inhibitors

**Answer:**



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**414.** Match the following columns and choose the correct answer. (a) Serine(Column I)(ii) (amminoacid) (i) Y(Column II) (one letter abbreviation) (b) Cystine(Column I)(amminoacid) (ii) C(Column II) (one letter abbreviation)(c) Thyrosine(Column I)(amminoacid)(iii) S(Column II) (one letter abbreviation)(d) Glutamic acid(Column I)(amminoacid)(iv) E(Column II) (one letter abbreviation) Code

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

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

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

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

**Answer:**



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**415.** Find the correct option related to secondary metabolite

A. Insulin

B. Glycogen

C. Starch

D. Chitin

**Answer:**



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**416.** Esters of fatty acid with higher molecular weight monohydric alcohols lacking phosphate groups are known as

A. Lecithin

B. Phospholipids

C. Waxes

D. Glycolipids

**Answer:**



**Watch Video Solution**

**417.** Which of the following is not an essential fatty acid with 18 carbons?

A. Linolenic acid

B. Arachidonic acid

C. Oleic acid

D. Linoleic acid

**Answer:**



**Watch Video Solution**

**418.** The correct nomenclature of ATP is

A. Adenosine-2'-triphosphate



B. Adenosine-3'-triphosphate

C. Adenosine-4'-triphosphate

D. Adenosine-5-triphosphate

**Answer:**



**Watch Video Solution**

**419.** In nucleoside of DNA, C-1 of 2'-deoxyribose is linked to \_\_\_ of pyrimidine or to \_\_\_ of purine by a glycosidic bond. of a purine by a

A. N-1 and N-1 respectively

B. N-1 and N-9 respectively

C. N-9 and N-9 respectively

D. N-9 and N-1 respectively

**Answer:**



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**420.** Match the column-I with column-II and find the correct match a. Lipid(Column I)  
(Average composition of cell component) (i) 5-

7(Column II) (%of the total cellular mass) b.  
Protein(Column I) (Average composition of cell  
component) (ii)3(Column II) (%of the total  
cellular mass) c. Nucleic acids(Column I)  
(Average composition of cell component)  
(iii)5(Column II) (%of the total cellular mass) d.  
Carbohydrates(Column I) (Average  
composition of cell component) (iv) 10-  
15(Column II) (%of the total cellular mass)

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

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

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

D. (4) a(i), b(ii), c(ii), d(iv)

**Answer:**



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**421.** Find the correct option related to secondary metabolite

A. Pigments - Anthocyanins, Carotenoids,

Ricin

B. Lectins – Concanavalin A, Cellulose,  
Gums

C. Drugs - Vinblastin, Curcumin

D. Alkaloids – Morphine, Codeine, Lemon  
grass oil

**Answer:**



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**422.** How many of the given plants belong to Fabaceae, Solanaceae and Liliaceae families respectively?

A. 5, 3, 3

B. 6, 2, 2

C. 4, 5, 4

D. 6, 4, 3

**Answer:**



**Watch Video Solution**

**423.** Select the common characters between solanaceae and liliaceae families. a. placentation in ovary b. persistent calyx c. number of stamens d. superior ovary e. endospermous seed

A. a, c & d

B. a, d & e

C. c, d & e

D. a, b & e

**Answer:**



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**424.** Floral formula of an angiospermic family does not deal with

- A. Symmetry of flower
- B. Cohesion and adhesion of stamens
- C. Placentation in ovary
- D. Position of ovary w.r.t other floral parts

**Answer:**





**425.** Remains of nucellus in seeds known as perisperm is \_ and found in \_.

A. Diploid, black, pepper

B. Triploid, castor

C. Haploid, coconut

D. Diploid, mango

**Answer:**



**426.** Edible part in banana, almond and litchi are respectively

- A. Mesocarp, seeds, aril
- B. Pericarp, seeds, thalamus
- C. Testa, endosperm, aril
- D. Epicarp and meso carp, seeds, aril

**Answer:**



**Watch Video Solution**

**427.** Select the odd one w.r.t aggregate fruit

A. Develops from a polycarpellary

apocarpus ovary

B. Actually is an aggregate of simple fruits

C. Always develops from many flowers

D. All fruitlets develops from carpels

together form an aggregate fruit

**Answer:**



**Watch Video Solution**

**428.** The fruit which develops from monocarpellary superior ovary possessing only one seed enclosed in hard endocarp is

A. Berry

B. Drupe

C. Legume

D. Caryopsis

**Answer:**



**Watch Video Solution**

**429. Tetradyynamous stamens**

- A. Do not show difference in their lengths
- B. Have two outer short and four inner long stamens
- C. Are exemplified by *Ocimum*
- D. Have four outer short and two inner long stamen

**Answer:**



Watch Video Solution

**430.** Axile placentation is found in all except

A. Tomato

B. China rose

C. Lemon

D. Dianthus

**Answer:**



Watch Video Solution

**431.** How many of the given plants have actinomorphic flowers? Radish, Tulip, Ashwagandha, Wheat, Lupin, Cassia, Canna, Asparagus, Lily, Datura, Mustard, Chilli, Tobacco

A. Seven

B. Nine

C. Six

D. Eight

**Answer:**



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**432.** The inflorescence in which receptacle becomes cup shaped and consist single naked female flower surrounded by many male flower is found in

A. Poinsettia

B. Fig

C. Indian basil

D. Sunflower



**Answer:**



**Watch Video Solution**

**433.** Leaves get modified as spines and tendrils for protection and climbing respectively in

- A. Zizyphus and Smilax
- B. Cactus and Pumpkin
- C. Bougainvillea and Nepenthes
- D. Opuntia and Gloriosa

**Answer:**



**Watch Video Solution**

**434.** Find out the incorrectly matched pair. a. Caryopsis- Wheat b. Capule - Mustard c. Cypsela - Sunflower d. Berry - Tomato e. Silicula - Poppy

A. a, c & e

B. b. e

C. b, d & e

D. a, b & e

**Answer:**



**Watch Video Solution**

**435.** Lateral branches originating from the basal and underground portion of the main stem that grows beneath the soil and then come out obliquely upward and give rise to leafy shoot is

A. Stolon

B. Sucker

C. Offest

D. Runner

**Answer:**



**Watch Video Solution**

**436.** Stems that spread to new niches but do not help to tide over the unfavourable conditions of growth i.e., perennation is found in

A. Grasses and strawberry

B. Ginger and turmeric

C. Potato and elephant foot

D. Zaminkand and jerusalem arthichoke

**Answer:**



**Watch Video Solution**

**437.** Match the follwig columns Column-I  
Column-II a. Stem tendrills (i) Pumpkins b.

Thoms (ii) Citrus c. Leaf tendrills (iii) Cucumber

. (iv) Bougainvillea . (v) Peas . (vi) Grapevines

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

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

C. (i, v), b(ii, iii), c(iv, vi)

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

**Answer:**



**Watch Video Solution**

**438.** Expanded green petiole specialised for photosynthesis in some xerophytic plants like *Acacia auriciformis*

A. Phylloclade

B. Phyllode

C. Cladode

D. Cladophyll

**Answer:**



**Watch Video Solution**

**439.** All are adventitious roots that provide extra mechanical support to the plants, except

A. Stilt root

B. Prop root

C. Climbing root

D. Hygroscopic root

**Answer:**



**Watch Video Solution**



#### 440. Region of maturation in tap root

A. Is situated distal to elongation zone

B. Undergoes rapid cells elongation and enlargement

C. Gives rise to unicellular root hairs from some of its epidermal cells

D. Is the only water absorption region

**Answer:**



**Watch Video Solution**

**441.** The main functions of the root system in angiospermic plants is all, except

- A. Absorption of water and minerals from the soil
- B. Provides proper anchorage to plants
- C. Synthesis of plant growth regulators
- D. Respiration and vegetative propagation

**Answer:**



**Watch Video Solution**

**442.** Which of these algae exhibit the haplo-diplontic life cycle?

- A. Fucus, Ulothrix
- B. Ectocarpus, Polysiphonia
- C. Volvox, Laminaria
- D. Spirogyra, Laminaria

**Answer:**



**Watch Video Solution**

**443.** Pollination in angiosperms is said to be indirect because

- A. Pollens land on stigma
- B. Pollens land directly on ovule
- C. Polination occurs by various agencies
- D. Cross polination is more common in angiosperms

**Answer:**



**Watch Video Solution**

**444.** Peculiar feature of angiosperms not found in any plant group is

- A. Fertilization with the help of pollen tube
- B. Maturation of ovules into seeds after fertilization
- C. Formation of pericarp
- D. Development of zygote into embryo

**Answer:**



**Watch Video Solution**

**445.** Angiosperm are identified by

A. Presence of veins and veinlets in leaves  
and transfusion tissue

B. Occurance of diplontic life cycle with a  
distinct independent haploid phases

C. Presence of 7-celled, 8-nucleated  
megagametophyte in most of the  
members

D. Presence of well developed embryo and endosperm in seeds universally

**Answer:**



**Watch Video Solution**

**446.** Find the odd features w.r.t. pinus.

- A. Its plant body is monoecious
- B. Shows sulphur shower
- C. Never shows polyembryony

D. Pollens and seeds both are dispersed by  
air

**Answer:**



**Watch Video Solution**

**447.** In which of the following plants, the margin of thalamus grows further upward completely enclosing the ovary and getting fused it and bears the sepals, petals and stamens above the ovary?



A. Coriander, Plum

B. Peach, Apple

C. Cucumber, Guava

D. Sunflower, Gulmohur

**Answer:**



**Watch Video Solution**

**448.** Gymnosperms differ from non-vascular embryophytes in

- A. Possessing meiosis to form haploid spores that rise to gametophyte
- B. Absence of an independent free-living gametophytic stage in life
- C. Presence of seeds without seed coat
- D. Possessing compactly arranged microsporophylls to form female cones

**Answer:**



**Watch Video Solution**

**449.** Select the wrong statement for gymnosperms

- A. Include medium sized or tall trees and shrubs of perennial habit
- B. Ovules remain exposed, both before and after fertilization
- C. All the members of gymnosperms have mycorrhizal roots
- D. Leaves are well adapted to withstand extremes of temperature, humidity, and

wind

**Answer:**



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**450.** Origin of seed habit or its foundation was laid in Selaginella like pteridophytes but seed formation did not occur because of

A. In situ development of female gametophytes

B. Absence of precocious development of  
microgametophyte

C. Absence of integumented  
megasporeangium

D. Dependence on water for pollination

**Answer:**



**Watch Video Solution**

**451.** Which of the following statement for racemose inflorescence is incorrect?

A. Arrangement of flowers in a group is

centripetal

B. Flowers are borne in lateral fashion

C. Growing point or shoot apex terminates

in a flower

D. Formation of flowers is indefinite or

unrestricted

**Answer:**



**Watch Video Solution**

**452.** The spread of living pteridophytes is limited and is restricted to narrow geographical region because

A. Gametophytes require cool, damp and shady places to grow

B. Gametophytes is non-vascular and free-living

C. Gametophytes require warm, dry & shady places to grow

D. Sporophytes need only moist shaded areas in the hills

**Answer:**



**Watch Video Solution**

**453.** Chosse the incorrect statement for red alage



- A. Storage food is very similar to amylopectin and glycogen in structure
- B. They may occur in well-lighted regions close to surface of sea-water
- C. Absence of motile stage in life cycle
- D. Female sex organ is jacketed and multicellular

**Answer:**



**Watch Video Solution**

**454.** A chlorophycean number can be separated from red alga in

A. Presence of one more storage bodies in chloroplasts called pyrenoids

B. Presence of phycocolloids in cell wall

C. Absence of oogamous sexual reproduction

D. Absences of endogenous motile asexual spores in life cycle

**Answer:**



**Watch Video Solution**

**455.** Which of these may not be an economic importance of bryophytes?

A. Food for animals like bird

B. Peat formation used as fuel

C. In order time, Sphagnum was used in place of absorbent cotton

D. Mosses along with lichens are the first organisms to colonise rocks

**Answer:**



**Watch Video Solution**

**456.** Chosse the incorrect option w.r.t. bryophytes

A. Haploid phase in the life cycle is more differentiated than that of algae

B. Zygote divides by meiosis immediately

C. The sporophyte is not free-living and independent

D. The spores germinate to produce gametophyte either directly or by a protonema stage

**Answer:**



**Watch Video Solution**

**457.** If the number of chromosomes in the secondary nucleus of *Zea mays* is 20, what will be the number of chromosomes in PEC, polar nuclei, coleorhiza and aleurone layer respectively?

A. 60, 20, 60, 60

B. 30, 10, 10, 30

C. 30,10,20,20

D. 30, 10, 20, 30

**Answer:**



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**458.** system of classification proposed by Engler and Prantl

A. Is based on evolutionary relationships between various organisms

B. Believes that organisms belonging to same taxa have a common ancestor

C. Considered that the monocots are more evolved than the dicots

D. Both (1) & (2)

**Answer:**



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**459.** Branch of taxonomy that uses chemical constituents of plants to resolve confusions is

A. Numerical taxonomy

B. cytotaxonomy

C. Chemotaxonomy



## D. Alpha taxonomy

**Answer:**



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**460.** Choose the incorrect statement regarding Bentham and Hooker's system of classification of angiosperms

A. Based on natural affinities among the organisms

B. Only external feature of organisms were considered

C. Is a natural system of classification

D. Embryology, phytochemistry and anatomy of plants were also considered as criteria

**Answer:**



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**461.** Artificial system of classification as given by Linnaeus is not acceptable nowadays because

A. Closely related species were grouped together as it was based on a few character

B. Vegetative and sexual characters were given equal weightage

C. This system used gross superficial morphological and internal characters

and forms relationships between  
different taxa

D. Consideration of stamens, carpels and  
other floral characters was not needed

**Answer:**



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**462.** Plants possessing leafy body without  
vascular tissue, presence of embryo stage in  
life cycle and archegonia as female sex organs

but absence of seed formation may be grouped among all, except

A. Atracheophytes and non-spermatophytes

B. Embryophytes and archegoniates

C. Non-spermatophytes and non-vascular cryptogams

D. Algae

**Answer:**



**Watch Video Solution**

**463.** Find the correct option related to secondary metabolites

A. Pigments-

Anthocyanins, Carotenoids, Ricin

B. Lectins-Concanavalin A, Cellulose, Gums

C. Drugs-Vinblastin, Curcumin

D. Alkaloids-Morphine, Codeine, Lemon grass  
oil

**Answer:**



**Watch Video Solution**

**464.** In nucleoside of DNA, C-1 of 2'-deoxyribose is linked to \_\_\_\_ of pyrimidine or to \_\_\_\_ of purine by a glycosidic bond. of a purine by a

- A.  $N - 1$  and  $N - 1$  respectively
- B.  $N - 1$  and  $N - 9$  respectively
- C.  $N - 9$  and  $N - 9$  respectively
- D.  $N - 9$  and  $N - 1$  respectively

**Answer:**



**Watch Video Solution**

**465.** The correct nomenclature of ATP is

- A. Adenosine-2'-triphosphate
- B. Adenosine-3'-triphosphate
- C. Adenosine-4'-triphosphate
- D. Adenosine-5'-triphosphate

**Answer:**





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**466.** Which of the following is not an essential fatty acid with 18 carbons?

- A. Linolenic acid
- B. Arachidonic acid
- C. Oleic acid
- D. Linoleic acid

**Answer:**



**467.** Esters of fatty acid with higher molecular weight monohydric alcohols lacking phosphate groups are known as

- A. Lecithin
- B. Phospholipids
- C. Waxes
- D. Glycolipids

**Answer:**



Watch Video Solution

**468.** All of the following are examples of storage polysaccharides except

A. Inulin

B. Glycogen

C. Starch

D. Chitin

**Answer:**



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**469.** The effect of competitive inhibitors can be overcome by

A. Raising the concentration of the substrate

B. Raising the concentration of enzyme

C. Raising the concentration of inhibitor

D. Raising the concentration of non-competitive inhibitors

**Answer:**



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**470.** The enzymes that catalyse removal of groups from substrates by mechanisms other than hydrolysis leaving double bonds belong to class

A. Dehydrogenesis

B. Transferases

C. Hydrolases

D. Lyases

**Answer:**



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**471.** Bond not hydrolysed by class III enzyme is

- A. Ester bond
- B. Disulfied bond
- C. Peptide bond
- D. Glycoside bond

**Answer:**



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**472.** Prosthetic groups are \_\_ (a) \_\_ compound and are distinguished from other \_\_ (b) \_\_ in that they are \_\_ (c) \_\_ bound to the \_\_ (d) \_\_.

A. (a)organic , (b)coenzyme , (c)loosely, (d)

holoenzyme

B. (a)inorganic, (b)cofactor, (c)loosely,

(d)apoenzyme

C. (a)organic, (b)cofactor,(c)tightly,  
(d)holoenzyme

D. (a)organic,(b)cofactor,(c)tightly,  
(d)apoenzyme

**Answer:**



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**473.** Which is not correct about enzyme activity?



A. An obligatory formation of an 'ES' complex

B. A new structure of the substrate called transition state structure is formed

C. If product is at high energy level than substrate, the reaction is exothermic

D. Enzymes bring down activation energy, make the transition of 'S' to 'P' more easy

**Answer:**



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**474.**  $CO_2 + H_2O \leftrightarrow H_2CO_3$ . In the absence of an enzyme, this above reaction is

A. Very slow, about 2000 molecules of

$H_2CO_3$  being formed in a minute

B. Very slow, about 200 molecules of

$H_2CO_3$  being formed in an hour

C. Very fast, about 6,00,000 molecules of

$H_2CO_3$  being formed in a second

D. Very fast such that, 10 million molecules of  $H_2CO_3$  are being formed in a minute.

**Answer:**



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**475.** Which of the following structure of protein is/are present in a proteinaceous enzyme with a single polypeptide chain only?

A. Primary structure only

B. Secondary structure only

C. Tertiary structure only

D. Primary, secondary and tertiary structure

**Answer:**



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**476.** Which of the following is not an example of an anabolic pathway?

A. Synthesis of cholesterol from acetic acid

B. Synthesis of a protein from amino acids

C. Synthesis of glycogen from glucose

D. Formation of lactic acid from glucose

**Answer:**



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**477.** Find the correct statements related to the living state.

- A. Living organisms work continuously and can afford to reach equilibrium
- B. Living process is a constant effort to reach equilibrium .
- C. Without metabolism there cannot be a living state.
- D. The living state is a equilibrium steady state to be able to perform work.

**Answer:**



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**478.** The blood concentration of glucose in a normal healthy individual is

A. 4.5 – 5.0 m mol/L

B. 45 – 50 m mol/L

C. 10 – 20 m mol/L

D. 100 – 200 m mol/L

**Answer:**



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**479.** Grinding and incising region are associated with which mouth part of Periplaneta?

A. Maxilla

B. Labium

C. mandible

D. Hypopharynx

**Answer:**



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**480.** The structure which is not related to metathoratic segment in cockroach is

A. Legs

B. Wings

C. Spiracles

D. Anal cerci

**Answer:**



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**481.** Largest tergite of thorax of cockroach is connected to

- A. Sclerite of metathorax
- B. Sclerite of mesothorax
- C. Sclerite of 1st abdominal segment
- D. Sclerite of last abdominal segment

**Answer:**



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**482.** In male cockroach, sperms are stored in

- A. Vasa deferentia
- B. Seminal vesicles
- C. Ejaculatory duct
- D. Phallic gland

**Answer:**



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**483.** In cockroach, brain is represented by

- A. Supra-pharyngeal ganglion
- B. Supra-oesophageal ganglion
- C. Sub-oesophageal ganglion
- D. Sub-pharyngeal ganglion

**Answer:**



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**484.** Excretion is performed by malpighian tubules in Cockroach and each tubule is lined by

- A. Glandular cells only
- B. Flageller cells only
- C. Ciliated cells only
- D. Glandular and ciliated cells

**Answer:**



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**485.** Following paragraph has some blanks. Find the correct option which fills blanks correctly. Blood vascular system of cockroach is \_\_\_\_\_ type. Blood vessels are \_\_\_\_\_ and open into spaces. The \_\_\_\_\_ is composed of colourless \_\_\_\_\_ and \_\_\_\_\_.

A. open, very well developed, haemolymph, plasma, haemoglobin

B. open, poorly developed, haemolymph, plasma, RBCs

C. open, poorly developed, haemolymph,  
plasma, haemocytes

D. open, very well developed, haemolymph,  
haemocytes, plasma

**Answer:**



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**486.** Find the correct statement related to gizzard in cockroach.

A. The gizzard is followed by crop which is a saclike structure

B. Gizzard has an outer layer of thick circular muscles and thick inner cuticle forming six highly chitinous plate called teeth

C. Gizzard is present between mesenteron and ileum

D. Gizzard secretes maximum of digestive enzymes



**Answer:**



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**487.** How many of the below structures are paired and found female cockroach?

A. 8

B. 5

C. 4

D. 6

**Answer:**



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**488.** Which type of wings in cockroach are opaque dark and leathery? (a) forewings (b) mesothoracic wings (c) Metathoracic wings (d) Prothoracic wings (e) tegmina (f) Hindwings

A. a & b only

B. a,b & e only

C. c,d & e only

D. a,b & f only

**Answer:**



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**489.** The head of cockroach is formed by the fusion of six segments and shows great mobility in all directions due to a flexible neck.

The neck is a short extension of

A. head

B. prothorax

C. mesothorax

D. metathorax

**Answer:**



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**490.** Which of the following structure is not present in or on the head of cockroach?

A. compound eyes

B. antennae

C. ocellus

D. pronotum

**Answer:**



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**491.** Which of the following tissue exerts the greatest control over the body's responsiveness to changing conditions?

A. neurons only

B. neurons, oligodendrocytes and astrocytes only

C. neurons and astrocytes only

D. neurons, oligodendrocytes, astrocytes, and microglial cells

**Answer:**



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**492.** All of the following structures have cartilage except

A. tip of nose, outer ear joint

B. between adjacent bones of the vertebral column, limbs in adult

C. nasal septum, hands in adult, thoracic cage

D. heart, kidney, capillaries

**Answer:**





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**493.** Following are the statements with some blanks. Find the correct option which fills blanks correctly

A. dense                      connective                      tissue,

tendon, four, lymph

B. loose      connective      tissue,      ligament,

three, blood



C. dense connective tissue, ligament,  
three, blood

D. loose connective tissue,  
tendon, four, blood

**Answer:**



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**494.** All of the following are specialised  
conductive tissue except

A. bone

B. blood

C. cartilage

D. adipose tissue

**Answer:**



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**495.** Find the correct option which includes connective tissue only

A. cartilage, bone, salivary gland, blood

B. tendon, ligament, areolar tissue, blood

C. ligament, biceps, goblet cells, tendon

D. muscles, pancreas, liver, bone

**Answer:**



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**496.** Read the following statements. a.

Columnar or cuboidal cells get specialised for secretion and are called glandular epithelium.

b. Exocrine glands secrete mucus, saliva, milk, insulin, enzymes etc. c. Goblet cells are unicellular glands while salivary glands are multicellular glands. d. Tight junctions cement the neighbouring cells together. How many statements are correct?

A. 2

B. 3

C. 4

D. 1

**Answer: A**



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**497.** Which type of epithelium has limited role in secretion and absorpotion?

- A. Simple epithelium
- B. Simple cuboidal epithelium
- C. Compound epithelium
- D. Simple columner epithelium

**Answer: B**



**498.** In epithelial tissue

A. Cells are compactly packed with large amounts of intercellular matrix

B. A free surface is present which faces either a body fluid or the outside environment

C. The tissue provides a covering or lining for all parts of the body

D. The cells are always loosely packed with little intracellular matrix

**Answer: B**



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**499.** Read the following statements.

a. A group of similar cells along with intercellular substances performing a specific function form a tissue.

b. All members of kingdom animalia consist of

only four basic types of tissues.

c. When two or more organs perform a common function by their physical or chemical interaction, they together form an organ system.

d. The organ stomach in humans has all four types of tissues.

How many above statements are correct?

A. 3

B. 2

C. 1



D. 4

**Answer: A**



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**500.** The number of cells in mature female and male gametophyte in angiosperms is and respectively

A. 8, 1

B. 7, 4

C. 7,3

D. 8,2

**Answer:**



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**501.** To sustain animal visit, the flowers have to provide rewards to the animals. The statement is true for all except

A. Salvia

B. Yucca

C. Adansonia

D. Zea mays

**Answer:**



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**502.** Arrange the following terms in the correct developmental sequence in flowering plants... a. Sperms , b. Heart-shaped embryo , C.

Syngamy, d. Microspore mother cell , e. Sporic meiosis , f. Globular embryo

A. e, d a, c, f, b

B. d, e, a, c, f, b

C. d, e, a, c, b, f

D. e, d, a, c, b, f

**Answer:**



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**503.** Choose the odd one w.r.t. Agamospermy.

A. Diplospory

B. Adventive embryony

C. Parthenocarpy

D. Apospory

**Answer:**



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**504.** The most common mode of entry of pollen tube into ovule is

A. Chalazogamy

B. Xenogamy

C. Porogamy

D. Basigamy

**Answer:**



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505. Pollen grains are able to tolerate extremes of temperature and desiccation as its exine is made of

A. Sporopollenin

B. Cellulose

C. Pectin

D. Callose

**Answer:**



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**506.** How many of the following plants have endospermic seeds? Castor, Pea, Qrchids, Groundnut, Maize,Rice, Beans

A. Five

B. One

C. Three

D. Two

**Answer:**



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**507.** The coconut water from tender coconut is endosperm and the surrounding white kernel is the endosperm.

- A. Cellular, free nuclear
- B. Triploid, hemicellulosic
- C. Free nuclear, cellular
- D. Both (2) &(3)

**Answer:**



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**508.** in vitro pollen germination in laboratory is

- A. Done by bagging and emasculation
- B. Used to produce new species
- C. Done on a glass slide containing a drop of 30% Sugar solution with boric acid
- D. Called hanging drop method

**Answer:**



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509. Integumented indehiscent megasporangium is also called in angiosperms.

A. Ovary

B. Stigma

C. Ovule

D. Carpel

**Answer:**



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**510.** Consider the following statements... a. Tapetum is the inner most polyploid layer of anther wall , b. Microgametogenesis involves two mitotic divisions in angiosperms , C. Megagametogenesis involves free nuclear divisions to form the embryo sac , d. a-cellulosic bands are present in the ephemeral layer of anther wall

A. Only c is incorrect

B. a, b&d are incorrect

C. a & d are correct

D. a, b & c are correct

**Answer:**



**Watch Video Solution**

**511.** Select the odd one w.r.t outbreeding devices.

A. Monocliny

B. Dichogamy

C. Dioecy

D. Self incompatibility

**Answer:**



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**512.** In a typical Polygonum type of embryo sac

A. Wall formation occurs around seven

nuclei so that it becomes seven celled

B. Egg has chalazal vacuole

C. The largest cell becomes diploid just prior to triple fusion

D. The egg apparatus lies at chalazal end

**Answer:**



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**513.** The egg apparatus lies at chalazal end

Read the following statements and select the

correct set of statements. a. Sexual

reproduction is a slow and complex , process.

b. Apomixis always occurs without gamete formation. , C. Small sized organisms always have a shorter life span. , d. Asexual mode of reproduction can occur through formation of specialised reproductive structures

A. a and b

B. b and d

C. c and d

D. a and d

**Answer:**





**514.** In how many of the following listed plants, there is a clear-cut distinction between vegetative, reproductive and senescent phases? Rice, Bamboo, Orange, Apple, Mango, Radish

A. Five

B. one

C. four

D. three

**Answer:**



**Watch Video Solution**

**515.** The progenitor of future generation in seed is called

A. Endosperm

B. Oosphere

C. Zygote

D. Embryo

**Answer:**



**Watch Video Solution**

**516.** Vegetative propagation by leaf buds is commonly seen in

- A. Tamarind
- B. Litchi
- C. Bryophyllum
- D. Mulberry

**Answer:**



**Watch Video Solution**

**517.** Select wrongly matched pair.

- A. Agave-Stolon
- B. Water hyacinth-Offset
- C. Penicillium-Conidia
- D. Banana-Rhizome

**Answer:**



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**518.** Heterogametes are produced by

A. Spirogyra

B. Ulothrix

C. Cladophora

D. Fucus

**Answer:**



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**519. In Marchantia**

- A. The male sex organ produces non-motile male gametes
- B. The sex organs are produced on leafy branches
- C. Both sex organs are produced on leafless stalk in the same gametophyte
- D. The female sex organ is flask shaped and called archegonium

**Answer:**



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**520.** In majority of algae

- A. Carrier of male gametes is pollen tube
- B. Zygote undergoes equational divisions  
in embryogeny
- C. Internal fertilisation is observed
- D. Syngamy occurs in external medium

**Answer:**



**Watch Video Solution**

**521. Mark the correctly matched pair**

- A. Chenopodium - Bronchial affictions
- B. Cashew nut, coconut - False fruits
- C. Amorphophallus - Omithophily
- D. Phoenix dactylifera - Oldest seed viability

**Answer:**





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522. Quantitative problem of synthesising too few  $\beta$ -globin chains is called

- A.  $\alpha$ -thalassemia
- B.  $\beta$ -thalassemia
- C. Sickle cell anaemia
- D. PKU

**Answer:**



**523.** The sum total of all genotypes and phenotypes obtained in  $F_2$  generation of a test cross for a character controlled by three pairs of polygenes is

- A. 14
- B. 34
- C. 12
- D. 16

**Answer:**



**Watch Video Solution**

**524.** When a tall plant with long sized starch grains (TTLL) is crossed with a dwarf plant with short starch grains (tl), the F<sub>1</sub> generation consists of tall plant with intermediate sized starch grains. What Would be the phenotypic ratio of tall plants and plants with long sized starch grains in F<sub>2</sub> generation?

A. (12: 4)

B. (9: 4)

C. (12: 12)

D. (9: 12)

**Answer:**



**Watch Video Solution**

**525.** Cystic fibrosis in humans is

A. Common in Mongolians

B. An autosomal dominant trait

C. A chromosomal disorder

D. An autosomal recessive trait

**Answer:**



**Watch Video Solution**

**526.** Recombinant offspring in  $F_2$  generation found in Morgan's experiment were 1.3 percent as the

- A. Genes were tightly linked on X-chromosome of Drosophila
- B. Parental phenotype of each type obtained were 31.4 %
- C. Both genes are showing independent assortment
- D. More than one option is correct

**Answer:**



**Watch Video Solution**

527. Match the columns and select correct option

column-I	column-II
a. Down's syndrome	(i) Holandric trait
b. Porcupine skin	(ii) Autosomal recessive
c. Alkaptonuria	(iii) X-linked trait
d. Haemophilia	(iv) Trisomy

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

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

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

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

**Answer:**



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**528.** Chosse the odd option w.r.t. sickle cell anaemia.

A. Its result of transversion

B. Heterozygous (HbA Hbs) are carrier of the disease

C. It is due to point mutation

D. GTG in the coding strand is replaced by CAG



**Answer:**



**Watch Video Solution**

**529.** Thyrine dimer formation which disturbs DNA double helix and DNA replication is a major mutagenic effect of which of the following mutagens?

- A. UV-rays
- B. Nitrous acid
- C. Ionizing radiations

## D. 5-Bromouracil

**Answer:**



**Watch Video Solution**

530. (Chosse the odd statement w.r.t the given

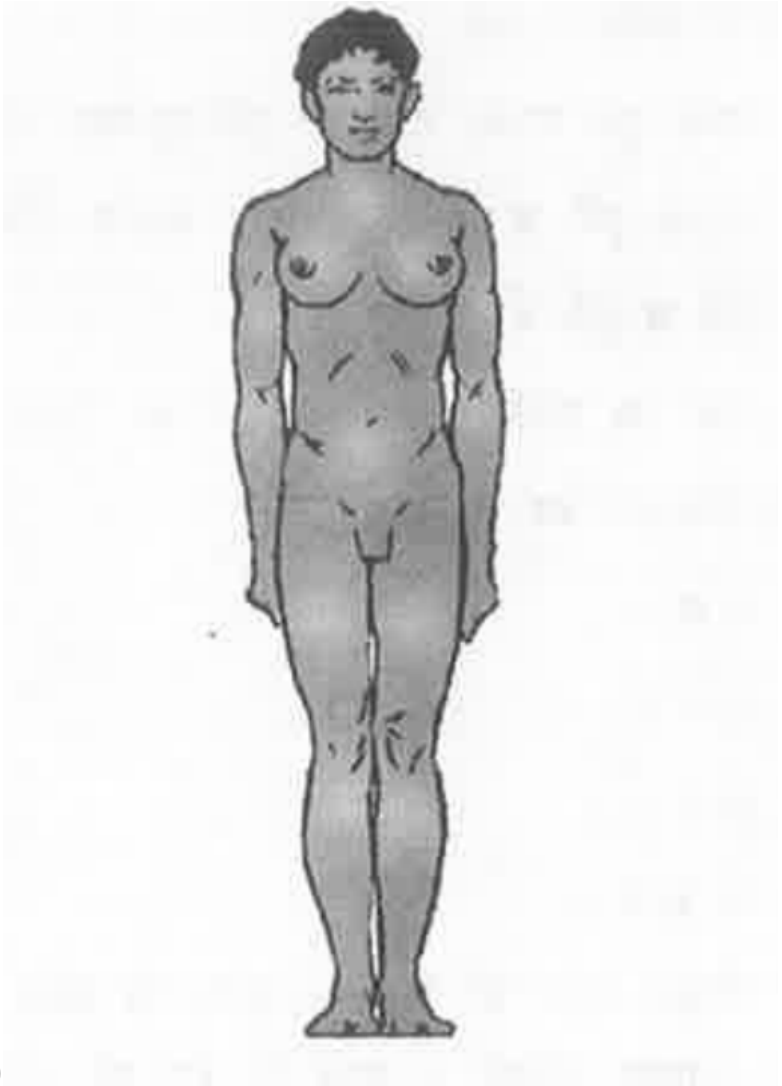


figure.)

A. It has overall masculine development

B. Gynaecomastia

C. The chromosome complement of the individual is  $44+ XXY$

D. Absence of Barr body

**Answer:**



**Watch Video Solution**

**531.** Chosse the odd one w.r.t X-linked recessive traits.

- A. It follows criss-cross pattern of inheritance
- B. It is exemplified by Duchenne's muscular dystrophy
- C. These are expressed only in males
- D. It produces carrier females in heterozygous condition

**Answer:**



**Watch Video Solution**

**532.** Parallelism in the behaviour of genes and chromosomes was proposed by

A. Sutton and Boveri

B. Jacob and Monad

C. Morgan

D. Bateson and punnett

**Answer:**



**Watch Video Solution**

**533.** Normal visioned male marries a carrier female for colour blindness then

a. All sons will be colour blind, daughter will be normal. b. 50% daughters are colour blind carriers. c. Both the sons and daughter will be colour blind. d. A male offspring has 50% chance of active disease. Find the correct option

A. b & c

B. b & d

C. a & c

D. a, b & c

**Answer:**



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**534.** If a cross is made between  $TtRr \times TtRr$  in garden pea (w.r.t plant height and flower colour), what is the probability of the having individuals heterozygous for both traits?

A. 6.25 %



B. 50 %

C. 12.5 %

D. 25 %

**Answer:**



**Watch Video Solution**

**535.** *F*<sup>2</sup> dihybrid phenotypic ratio 9:6:1 is exemplified by

A. Fruit shape in summer squash

B. Flower colour in Lathyrus

C. Comb character in fowl

D. Skin colour in human

**Answer:**



**Watch Video Solution**

**536.** Chosse wrongly match pair.

A.  $2n - 2$  - nullisomic

B. Gynandromorph - Loss of X-chromosome

C. AABbCCdd - Monohybrid

D. X-body - Sturtevant

**Answer:**



**Watch Video Solution**

**537.** Read the following statements and choose the correct option. (a) Test cross for completely linked genes shows recombinants of more than 50% (b) The type of phenotypes

produces by two completely linked genes is always greater than two

- A. Both (a) & (b) are correct
- B. Both (a) & (b) are incorrect
- C. Only (a) is incorrect
- D. Only (b) is incorrect

**Answer:**



**Watch Video Solution**

**538.** Select the odd one w.r.t. Cytoplasmic inheritance.

A. Controlled by plasma gene

B. Extrachromosome inheritance

C. Shows identical results in reciprocal cross

D. Controlled by chloroplast DNA

**Answer:**



**Watch Video Solution**

**539.** Choose the odd statement w.r.t genic balance theory of sex determination proposed by C.B. Bridges

A. The fly with genotype  $AAA + XX'$  is a super-male

B. Super-females have  $X/A$  ratio greater than one

C. The ratio between  $X/A$  determines the sex of *Drosophila*

D. Y-chromosome plays a vital role in determining the fertility of male *Drosophila*

**Answer:**



**Watch Video Solution**

**540.** Bar eye character in *Drosophila* is due to

A. Pericentric inversion

B. Translocation

C. Interstitial deletion

D. Duplication

**Answer:**



**Watch Video Solution**

**541.** Select the incorrect match w.r.t. determination of sex.

A. Grasshoper -  $XO, O$  ↗

B. Butterflies -  $ZO, Q$



C. Bird - ZW, Q

D. Dioscorea-XX, O ↗

**Answer:**



**Watch Video Solution**

**542.** Antibiotics are majority not helpful in the treatment of

A. Genital herpes

B. Chlamydia

C. Syphilis

D. Gonorrhoea

**Answer:**



**Watch Video Solution**

**543.** Which of the following is not a contraceptive function of IUD?

A. Make uterus unsuitable for implantation

B. Prevents spread of hepatitis B

C. Increase phagocytosis of sperms within  
uterus

D. Copper ions released suppress sperm  
motility

**Answer:**



**Watch Video Solution**

**544.** The barrier methods of contraception

A. Cannot be reused

- B. Are inserted by doctors or expert nurses  
in female
- C. Are available for males only and not for  
females
- D. Prevent ejaculated semen to entire into  
female reproductive tract

**Answer:**



**Watch Video Solution**

**545.** Which of the following hormone appears in urine of female during her fertile peroid?

A. LH

B. Estrogen

C. hCG

D. FSH

**Answer:**



**Watch Video Solution**

**546.** Which of the following diagnostic test is performed for syphilis?

A. Mantoux Test

B. ELISA

C. VDRL ( Venereal Disease Research Laboratory)

D. Australian Antigen Test

**Answer:**



**Watch Video Solution**

**547.** Find out the incorrect match

A. Oophorectomy - Surgical removal of ovaries

B. Dysmenorrhoea - Painful menstruation

C. Menorrhagia - Excessive menstruation

D. Teratozoospermia - Low sperm motility

**Answer:**



**Watch Video Solution**

**548.** Which of the following is wrongly matched?

A. AIH- Semen collected from donor is artificially introduced into vagina or uterus of female

B. IVF - Fertilization takes place outside female's body in a dish in a laboratory

C. ZIFT - Embryo upto 8 blastomeres is transferred into another



D. GIFT - Ovum collected from doctor is transferred into another female

**Answer:**



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**549.** Which of the sexually transmitted disease is caused by a protozoan and correctly matched with symptom?

A. Chlamyiasis - Cervicitis and urethritis

B. Genital warts - Hard outgrowths on the skin and mucosal surface of external genitalia

C. Trichomoniasis - Yellow vaginal discharge with offensive odour and severe itching

D. Chancroid - Painful ulcer at genital organ

**Answer:**



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**550.** A childless couple is assisted to have a child through a technique called ICSI which involves

A. In-vivo fertilisation

B. Placing of spermatozoon inside the egg  
by a microscopic needle

C. Sperms are artificially inseminated into  
uterus of female

D. More than one option correct

**Answer:**





**551.** Vasectomy is terminal method of sterilization in which

- A. The oviducts are interrupted by either ligation or cuts
- B. Inhibits spermatogenesis
- C. Blocks transportation of sperms through vas deferens
- D. More than one option correct

**Answer:**



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**552.** Given bellow are four statements with four blanks. Study them and find the suitable option which fill these blanks correctly. A. French drug RU486 (mifepristone) blocks the action of (i) B. India legalised medical termination of pregnancy in (ii) C. Acording to 2001 census report the population growth

rate of India was around (iii) D. The new oral contraceptive Saheli is chemically (iv)

A. (i) (ii) (iii) (iv) Progesterone 1971 1.7%

Centchroman

B. (i) (ii) (iii) (iv) Estrogen 1971 2.1%

Levonogesterel

C. (i) (ii) (iii) (iv) Progesterone 1971 1.7%

Levonogesterel

D. (i) (ii) (iii) (iv) Estrogen 1951 2.7%

Centrochran

**Answer:**



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**553.** Depo-Provera refers to :

- A. An IUD
- B. Injectable contraceptive
- C. An implant
- D. A spermicide

**Answer:**



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**554.** Find out the incorrect match w.r.t. contraceptive device method and duration for which it is effective.

A. Saheli pill - one week

B. Lactational amenorrhoea - 6 years

C. Norplant - 5 years

D. *CuT* – 380A – 7 – 10 years

**Answer:**





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**555.** Just after parturition there is a phase of amaenorrhoea because of

- A. High progesterone level
- B. High oxytocin level
- C. High prolactin level
- D. High FSH & LH level

**Answer:**



**556.** At present India in which stage of Demographic transition?

- A. Birth rate and death rate both are less
- B. Population is declining
- C. Birth rate is more than death rate
- D. Birth rate is less than death rate

**Answer:**



**557.** Which of the following statement is incorrect w.r.t amniocentesis?

A. It can even detect structural developmental anomalies like congenital heart defects

B. It can be done in the early part of second trimester of pregnancy

C. Used for prenatal diagnosis of chromosomal abnormalities

D. Approximately 20 ml of amniotic fluid is aspirated which contains foetal skin cell

**Answer:**



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**558.** Which of the following is not a measure to control over population?

A. Promoting the fact that more children in a family means more income

B. Incentives given to couples with small families

C. Raising of the age of marriage

D. Motivate for using various contraceptive methods to have smaller families

**Answer:**



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**559.** Which of the following is not a the possible ill-effect of use of contraceptive devices?

A. Breast cancer

B. Nausea and abdominal pain

C. Proper space between two children plan

D. Irregular menstrual bleeding

**Answer:**



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**560.** Medical termination of pregnancy (MTP) is performed

- A. Where continuation of pregnancy is harmful to mother or foetus
- B. To get rid of unwanted pregnancy due to casual unprotected intercourse
- C. To get rid of female foetus
- D. More than one option correct

**Answer:**





**561.** Find the correct statement.

- A. STDs may lead to infertility and even cancer
- B. Genital warts is caused by herpes simplex virus II
- C. The incidence of genital herpes is more common in age group of 5-10 years



D. Hepatitis B, genital herpes and HIV infections are completely curable if detected early and treated properly

**Answer:**



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**562.** Among the following most dangerous STD is caused by

A. *Neisseria gonorrhoeae*

B. Hepatitis B virus

C. Teponema pallidum

D. Human immuno deficiency virus

**Answer:**



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**563.** In neonate there is change in respiratory and circulatory system. The switch over is initiated by

A. Dopamine

B. Nitric oxide

C. Nitrous oxide

D. Gamma amino butyric acid

**Answer:**



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**564.** Select the correct set of organs derived from mesoderm.

A. Notochord, adrenal cortex, spleen

B. Pineal gland, skeleton, blood

C. Dermis of skin, heart, adrenal medulla

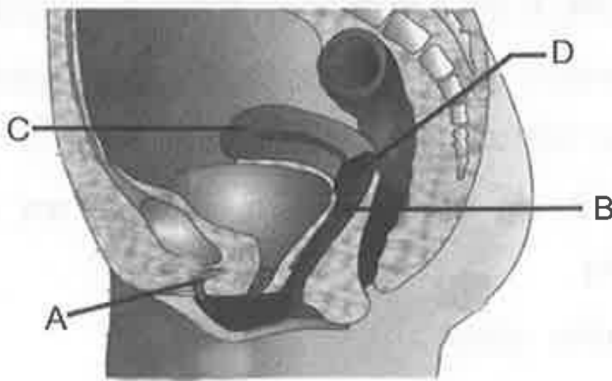
D. Sclera of eye, dermis of skin, lining of  
urinary bladder

**Answer:**



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565. (Select the correct set of names for the parts labelled A, B, C and D in female reproductive system.)



A. A B C D Clitoris Vagina Uterus Cervix

B. A B C D Urethra Cervix Pubic symphysis

Rectum

C. A B C D Libia minora cervix Uterus Vagina

D. A B C D Libia majora Vagina Uterus Cervix

**Answer:**



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**566.** Regarding gastrulation the incorrect statement is

A. Formation of archenteron

B. disintegration of extra embryonic membranes

C. morphogenetic movement of cells form  
three primary germinal layers i.e  
ectoderm mesoderm and endoderm

D. obliteration of blastocoel occurs

**Answer:**



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**567.** During parturition

- A. there is increase in estrogen to progesterone ratio
- B. prostaglandin level falls
- C. relaxin promotes contraction of uterine muscles
- D. cervical mucus plug strengthens by progesterone activity

**Answer:**



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**568.** What is true about human placenta?

A. chorionic villi are arranged in two transverse bands

B. yolk sac and chorion contribute in its formation

C. placenta with all the six barriers between foetal and maternal blood

D. A portion of uterine tissue called decidua is detached and passed out at

birth

**Answer:**



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**569.** Select the correct sequence of stages in ovarian cycle. a. Corpus luteum b. Graafian follicle c. Corpus albicans d. Corpus haemorrhagicum

A. b, a, d, c

B. b, d, c, a

C. a, d, c, b

D. b, d, a, c

**Answer:**



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**570.** Study and find the wrong function of the reproductive structure.

A. Sertoli cells - Present in seminiferous tubules, secrete inhibin to control FSH secretion

B. Vasa efferentia - The ciliated cells help in conducting sperms from epididymis to vas deferens

C. Ampulla - Slightly swollen part of fallopian tube where fertilisation takes place

D. Vagina - Receives the male's penis during copulation. Glands are absent

**Answer:**



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**571.** Which of the following is correct function of the hormone secreted from placenta?

A. Relaxin -Constricts pubic symphysis during parturition

B. Progesterone- Causes dissolution of cervical mucus plug

C. hCG- Keeps corpus albicans active so that it continuously produces progesterone and estrogen

D. hCS - Development of mammary glands during pregnancy

**Answer:**



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**572.** Extraembryonic endoderm is involved in formation of

A. Chorion

B. Amnion

C. Yolk sac

D. Both (1) & (2)

**Answer:**



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**573.** Which of the following is not the function of epididymis in human male reproductive system?

A. Spermatozoa gain motility

B. Nourishment and maturation of spermatozoa takes place

C. Sperms get stored for few days

D. Conduct unejaculated sperms to seminiferous tubules where they get reabsorbed



**Answer:**



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**574.** Suitable time for conception in women having menstrual cycle of 40 days is from

- A. 23rd to 29th day
- B. 14th to 20th day
- C. 17th to 23rd day
- D. 10th to 17th day

**Answer:**



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**575.** Egg of frog is

- A. Microlecithal and isolecithal
- B. Alecithal and cleidoic
- C. Macrolecithal and centrolecithal
- D. Telolecithal and mesolecithal

**Answer:**



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**576.** Secretion of prostate gland in human male do not contain

- A. Enzymes
- B. Fructose
- C. Prostaglandin
- D. Citrate and calcium

**Answer:**



**577.** Find out the incorrect match w.r.t. different phases in menstrual cycle of human female(28 days)

A. Ovulatory phase(14th day) - Higher levels of estrogen and LH causes explosive growth of Graafian follicle which rises to the surface of ovary and ruptures to release ovum

B. Luteal phase(15th -28th day) - LH

stimulates uterine glands to produce

increased amount of progesterone

C. Menstrual phase(1st - 5th day) -

Shedding of endometrium due to

reduced titre of both estrogen and

progesterone

D. Follicular phase (6th-13th day) - FSH

stimulates ovarian follicles to undergo

enlargement. Granulosa cells undergo proliferation and secrete estrogen

**Answer:**



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**578.** Fraternal twins are developed from

- A. Unfertilized egg
- B. Asexual reproduction
- C. Single fertilized egg

D. Distinct fertilized eggs

**Answer:**



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**579.** Internal fertilisation occurs in

A. Porifers and Teleost fishes

B. Mammals and Echinoderms

C. Amphibians and Platyhelminthes

D. Aschelminthes and Reptiles

**Answer:**



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**580.** Select the incorrect statement.

A. Clone is group of all genetically similar individuals formed through asexual reproduction

B. In haploid organism gametes are formed through meiosis



C. In Amoeba multiple fission is preceded by encystment

D. Internal budding occurs in most freshwater sponges to help in dispersal as well as perennation

**Answer:**



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**581.** Find the incorrect match.

A. Number of chromosomes in gamete of  
dog - 19

B. Paedogenetic parthenogenesis -  
Sporocyst and redia larva of *Fasciola  
hepatica*

C. Monoecious animals - Sponges and  
earthworm

D. Polyoestrous animal- Horse and pig

**Answer:**



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**582.** Condition in which testes do not descend into the scrotum due to deficient secretion of testosterone by foetal testes is

A. Cryptorchidism

B. Hydrocoele

C. ADAM

D. Inguinal hernia

**Answer:**



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**583.** Which of the following statements is incorrect w.r.t. male reproductive system?

A. Sertoli cells secrete androgen binding protein that concentrates testosterone in the seminiferous tubules

B. The vas deferens loops over the urinary bladder where it is joined by duct from

seminal vesicles to form the ejaculatory duct

C. The normal temperature of testis in the scrotum is about  $2^{\circ} - 2.5^{\circ}C$  lower than the internal body temperature

D. Tunica albuginea is a fibrous covering surrounding the testis situated under the tunica vasculosa

**Answer:**



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**584.** All of the following could be the consequence of overpopulation except

A. Increased pollution

B. Poor hygienic conditions

C. Scarcity of food, shelter and clothing

D. Increased opportunities for males and females

**Answer:**





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