

NEET BIOLOGY 2018-19 - Chennai

Test ID : 038

Number of questions: 150

Name: _____

ID No: _____

Test date: 16.04.2019

Time: 3HRS

Negative Marks : 4 marks for correct attempt & 1 mark deducted for every wrong attempt.

- The water potential of pure water is
 - Less than zero
 - More than zero but less than one
 - More than one
 - Zero
- Which of the following facilitates opening of stomatal aperture
 - Decrease in turgidity of guard cells
 - Radial orientation of cellulose microfibrils in the cell wall of guard cells
 - Longitudinal orientation of cellulose microfibrils in the cell wall of guard cells
 - Contraction of outer wall of guard cells
- A few drops of sap were collected by cutting across a plant stem by a suitable method. The sap was tested chemically. Which one of the following test results indicates that it is phloem sap?
 - Acidic
 - Alkaline
 - Low refractive index
 - Absence of sugar
- Root pressure develops due to
 - Passive absorption
 - Active absorption
 - Increase in transpiration
 - Low osmotic potential in soil
- A column of water within xylem vessels of tall tree does not break under its weight because of
 - Lignifications of xylem vessels
 - Positive root pressure
 - Dissolved sugars in water
 - Tensile strength of water
- Which is essential for the growth of root tip?
 - Zn
 - Fe
 - Ca
 - Mn
- In which of the following all three are macronutrients?
 - Molybdenum, magnesium, manganese
 - Nitrogen, nickel, phosphorus
 - Boron, zinc, manganese
 - Iron, copper, molybdenum
- The oxygen evolved in photosynthesis, comes from water molecules. Which one of the following pair of elements is involved in this reaction?
 - Magnesium and molybdenum
 - Magnesium and chlorine
 - Manganese and chlorine
 - Manganese and potassium
- During biological nitrogen fixation, inactivation of nitrogenase by oxygen poisoning is prevented by
 - Carotene
 - Cytochrome
 - Leghaemoglobin
 - Xanthophyll
- Minerals known to be required in large amounts for plant growth include
 - Potassium, phosphorous, selenium, boron
 - Magnesium, sulphur, iron, zinc
 - Phosphorous, potassium, sulphur, calcium
 - Calcium, magnesium, manganese, copper

11. With reference of factor affecting the rate of photosynthesis, which of the following statement is not correct?
- Increasing atmospheric CO_2 concentration up to 0.05% can enhance CO_2 fixation rate.
 - C_3 plants correspond to higher temperature with enhanced photosynthesis while C_4 plants have much lower temperature optimum.
 - Tomato is a greenhouse crop which can be grown in CO_2 enriched atmosphere for higher yield.
 - Light saturation for CO_2 fixation occur at 10% of full sunlight.
12. Phosphoenol pyruvate(PEP) is the primary CO_2 acceptor in?
- C_4 plants
 - C_2 plants
 - C_3 and C_4 plants
 - C_3 plants
13. The process which make major difference between C_3 and C_4 plants?
- Glycolysis
 - Calvin cycle
 - Photorespiration
 - Respiration
14. Water vapour comes out from the plant leaf through the stomatal opening. Through the same stomatal opening carbon dioxide diffuses into the plant during photosynthesis. Reason out the about statements using one of the following options.
- The above processes during only night time
 - One process occur during the day time and the another at night time
 - Both process cannot happen simultaneously
 - Both process can happen together because the diffusion coefficient of water and CO_2 is different
15. In a chloroplast the highest number of proton are found in ?
- Intermembrane space
 - Antennae complex
 - Stroma
 - Lumen of thylakoids
16. Which statement wrong for kreb's cycle?
- There is one point in the cycle where FAD^+ is reduced to FADH_2
 - During conversion of succinyl CoA to succinic acid, a molecule of GTP is synthesised
 - The cycle start with condensation of acetyl group (acetyl CoA) with pyruvic acid to yield citric acid
 - There are three point in the cycle where NAD^+ reduced to $\text{NADH}+\text{H}^+$
17. Which of the following bio molecule is common to respiration –mediated breakdown of fats, carbohydrates and protein?
- Glucose – 6 - phosphate
 - Fructose 1, 6-biphosphate
 - Pyruvic acid
 - Acetyl CoA
18. Oxidative phosphorylation is?
- Formation of ATP by transfer of phosphate group from a substrate to ADP
 - Oxidation of phosphate group in ATP
 - Addition of phosphate group in ATP
 - Formation of ATP by energy released from electron removed during substrate oxidation
19. Cytochromes are found in ?
- Cristae of mitochondria
 - lysosomes
 - matrix of mitochondria
 - outer wall of mitochondria
20. Which one of the following processes CO_2 is not released?
- Aerobic respiration in plants
 - Aerobic respiration in animals
 - Alcoholic fermentation
 - Lactate fermentation

21. Fruit and leaf drop at early stages can be prevented by the application of ?
- ethylene
 - auxins
 - gibberellic acid
 - cytokinins
22. You are given a tissue with its potential for differentiation in an artificial culture. Which of the following pair of hormones would you add to the medium to secure shoots as well as roots?
- IAA and gibberellin
 - Auxin and cytokinin
 - Auxin and abscisic acid
 - Gibberellins and abscisic acid
23. Phytochrome is a.
- Flavoprotein
 - Glycoprotein
 - Lipoprotein
 - Chromoprotein
24. The avena curvature is used for bioassay of
- IAA
 - ethylene
 - ABA
 - GA₃
25. Auxin can be bioassayed by
- Protometer
 - Lettuce hypocotyl elongation
 - Avena coleoptile curvature
 - Hydroponics
26. Which cell of 'Crypts of Lieberkuhn' secrete antibacterial lysozyme
- Paneth cells
 - Zymogen cells
 - Kupffer cells
 - Argentaffin cells
27. Which of the following option best represents the enzyme composition of pancreatic juice?
- Amylase, Pepsin, Trypsinogen, Maltase
 - Peptidase, Amylase, Pepsin, Rennin
 - Lipase, Amylase, Trypsinogen, procarboxypeptidase
 - Amylase, Peptidase, Trypsinogen, Rennin
28. A boy aged two years is admitted to play school and passes through a dental check-up. The dentist observed that the boy had twenty teeth. Which teeth were absent?
- Canines
 - Pre-molars
 - Molars
 - Incisors
29. Which hormones do stimulate the production of pancreatic juice and bicarbonate
- Angiotensin and epinephrine
 - Gastrin and insulin
 - Cholecystokinin and secretin
 - Insulin and Glucagon
30. Which of the following guards the opening of hepatopancreatic duct into the duodenum?
- Pyloric sphincter
 - Sphincter of Oddi
 - Semilunar valve
 - Ileocaecal valve
31. Lungs are made up of air-filled sacs, the alveoli. They do not collapse even after forceful expiration, because of
- Inspiratory reserve volume
 - Tidal volume
 - Expiratory reserve volume.
 - Residual volume
32. The partial pressure of oxygen in the alveoli of the lungs is
- Equal to that in the blood
 - More than that in the blood
 - Less than that in the blood
 - Less than that of carbon dioxide
33. Lungs do not collapse between breath and some other air always remain in the lungs which can never be expelled because
- There is a negative pressure in the lungs
 - There is a negative intrapleural pressure pulling at the lung walls
 - There is a positive intrapleural pressure
 - Pressure in the lungs is higher than the atmospheric pressure

34. Reduction in pH of blood will
- Decrease the affinity of hemoglobin with oxygen
 - Release bicarbonate ions by the liver
 - Reduce the rate of heart beat
 - Reduce the blood supply to the brain
35. Name the chronic respiratory disorder caused mainly by cigarette smoking
- Respiratory acidosis
 - Respiratory alkalosis
 - Emphysema
 - Asthma
36. Adult human RBCs are enucleate. Which of the following statement is/are most appropriate explanation for this feature?
- They do not need to reproduce
 - They are somatic cell
 - They do not metabolise
 - All their internal space is available for oxygen transport
- Only (1)
 - (1), (3) and (4)
 - (2) and (3)
 - Only (4)
37. The hepatic portal vein drain blood to liver from ?
- Stomach
 - Kidneys
 - Intestine
 - Heart
38. Name of blood cells, whose reduction in number can cause clotting disorder, leading to excessive loss of blood from the body ?
- Erythrocytes
 - Leucocytes
 - Neutrophils
 - Thrombocytes
39. serum differs from blood in
- lacking globulins
 - lacking albumins
 - lacking clotting factor
 - lacking antibodies
40. Blood pressure in the pulmonary artery is?
- More than that in the pulmonary vein
 - Less than that in the venae cavae
 - Same as that in the aorta
 - More than that in the carotid
41. A decrease in blood pressure/volume will not cause the release of
- Atrial natriuretic factor
 - Aldosterone
 - ADH
 - Renin
42. Which of the following statement is correct?
- The Descending limb of loop of henle is impermeable in water
 - The Ascending limb of loop of henle is permeable in water
 - The Descending limb of loop of henle is permeable to electrolyte
 - The Ascending limb of loop of henle is impermeable in water
43. The part of nephron involved in a active reabsorption of sodium is
- Distal convoluted tubule
 - Proximal convoluted tubule
 - Bowman's capsule
 - Descending limb of henle loop
44. Human urine is always acidic because
- Potassium and sodium exchange generate acidity
 - Hydrogen ions actively secreted into the filtrate
 - The sodium transporter exchanges one hydrogen ions for each sodium ion, in peritubular capillaries
 - Excreted plasma proteins are acidic
45. Which of the following does not favour the formation of large quantities of dilute urine?
- Renin
 - Artrial – natriuretic factor
 - Alcohol
 - Caffeine

46. The pivot joint between atlas and axis is a type of?
- Cartilaginous joint
 - Synovial joint
 - Saddle joint
 - Fibrous joint

47. Out of 'X' pair of ribs in human only 'Y' pair are true ribs. Select the option that are correctly represents value of X and Y and provide their explanation

a.X=12, Y=5

True ribs are attached dorsally to vertebral column and sternum the two end

b.X=24, Y=2

True ribs are attached dorsally to vertebral column but are free on ventral side

c.X=24, Y=12

True ribs are attached dorsally to vertebral column but are free on ventral side

d.X=12, Y=7

True ribs are attached dorsally to vertebral column and ventrally to the sternum

48. Name of the ion responsible for unmaking of active sites for myosin for cross-bridge activity during muscle contraction
- Calcium
 - Magnesium
 - sodium
 - potassium

49. Osteoporosis, an age-related disease of skeletal system, may occur due to
- immune disorder affecting neuromuscular junction leading to fatigue
 - high concentration of Ca^{++} and Na^+
 - decreased level of estrogen
 - accumulation of uric acid leading to inflammation of joints

50. Lack of relaxation between successive stimuli in sustained muscle contraction is known as
- Tetanus
 - Tonus
 - Spasm
 - Fatigue