RAVI MATHS TUITION & TEST PAPERS , WHATSAPP 8056206308

10TH CBSE SCIENCE BIOLOGY MCQS PREVIOUSLY ASKED

10th Standard

Science

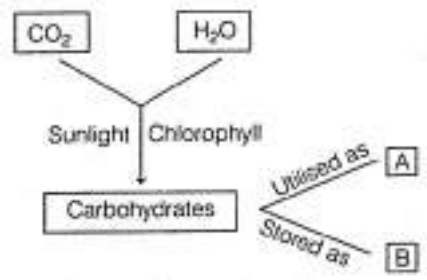
Multiple Choice Question 40 x 1 = 40

1) Opening and closing of the stomatal pore depends upon

(a) atmospheric temperature (b) oxygen concentration around stomata

(c) carbon dioxide concentration around stomata (d) water content in the guard cells

2) In the following flowchart showing autotrophic nutrition in green plants, A and B respectively are



(a) oxygen and energy (b) starch and oxygen (c) energy and starch (d) oxygen and water

3) One of the events that does not occur duting photosynthests is

(a) chlorophyll absorbs solar energy (b) carbon dioxide is released during the process

(c) oxygen is released during the process (d) carbon dioxide is absorbed during the process

4) An organism which breaks down the food material outside the body and then absorbs it is

(a) a plant parasite, Cuscuta (b) an animal parasite, Tapeworm (c) a bacteria, Rhizobium

(d) a fungi, Rhizopus

5) The function not performed by villi is

(a) to increase the surface area for absorption (b) to ensure rich supply of blood vessels (c) absorption of food

(d) egestion of food

6) During vigorous exercise the occurrence of cramps in the outer muscles of an athlete is due to the conversion of pyruvate to

(a) glucose (b) ethanol (c) lactic acid (d) lactose

7) The energy released during cellular respiration is used to synthesise

(a) ribosomes (b) RBC (c) ATP (d) mitochondria

8) As compared to terrestrial organisms, the rate of breathing in aquatic organisms is

(a) faster because they need more oxygen for their survival

(b) faster because the amount of dissolved oxygen in water is fairly low

(c) slower because the amount of dissolved oxygen in water is fairly low

(d) slower because the capacity of water of dissolving atmospheric air is limited

9) The function of the lining of mucus in the nasal passage of human beings is to

(a) increase the temperature of inhaled air (b) move the air in and out (c) filter the air that we breathe in

(d) absorb oxygen from the air

10) Which of the following statement(s) is (are) true about human heart?

(i) Right atrium receives oxygenated blood from lungs through pulmonary artery

(ii) Left atrium transfer oxygenated blood to left ventricle which sends it to various parts of the body.

(iii) Right atrium receives deoxygenated blood from different parts of the body through vena cava.

(iv) Left atrium transfers oxygenated blood to aorta which sends to different parts of the body.

(a) Only (ii) (b) (i) and (iv) (c) (ii) and (iii) (d) (ii) and (iv)

11) In which of the following groups of organisms, blood flows only once through the heart during one cycle of passage through the body?

(a) Rabbit, parrot, turtle (b) Frog, crocodile, pigeon (c) Whale, Labeo, penguin (d) Shark, dog fish, sting ray

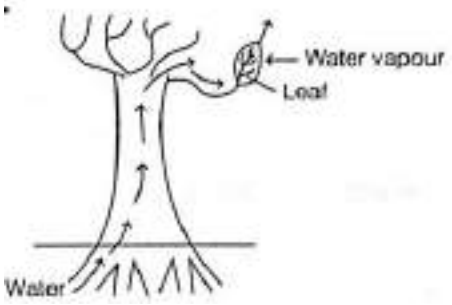
12) Water in the root enters due to

(a) the function of the root to absorb water

(b) difference in the concentration of ions between the root and the soil (c) excess water present in the soil

(d) diffusion of water in the roots

13) Observe the following diagram and identify the process and its significance from the following options.



(a) Evaporation maintains water contents in the leaf cells

(b) Transpiration creates a suction force which pulls water inside the plant

(c) Excretion helps in excreting out wastewater from the plant

(d) Translocation helps in transporting materials from one cell to another

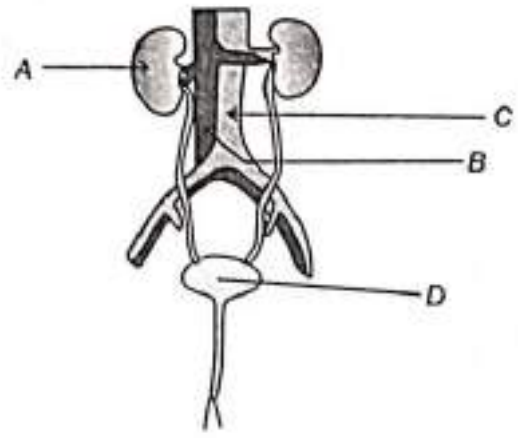
14) The process in which loss of water in the form of vapours from the aerial parts of plants takes place is X, which helps in Y. Here, X and Y respectively are

(a) transpiration and photosynthesis (b) transpiration and temperature regulation

(c) translocation and movement of soluble products of photosynthesis in phloem

(d) translocation and absorption of water and minerals from soil by roots

15) In the given diagram, A, B, C and D respectively are



(a) A - Left kidney; B - Aorta; C - Vena cava; D - Urethra

(b) A - Left kidney; B - Vena cava; C - Aorta; D - Urinary bladder

(c) A - Right kidney; B - Aorta; C - Ureter; D - Urethra

(d) A - Right kidney; B - Vena cava: C - Aorta; D - Urinary bladder

16) In the excretory system of human beings, some substances in the initial filtrate such as glucose, amino acids, salts and water are selectively reabsorbed in

(a) urethra (b) nephron (c) ureter (d) urinary bladder

17) In a person, the tubule part of the nephron is not functioning at all. What will be its effect on urine formation?

(a) The urine will not be formed (b) Quality and quantity of urine is unaffected (c) Urine is more concentrated

(d) Urine is more diluted

18) Plants use completely different process for excretion as compared to animals. Which one of the following processes is not followed by plants for excretion?

(a) They can get rid of excess water by transpiration

(b) They selectively filter toxic substances through their leaves

(c) Waste products are stored as resins and gums in old xylem

(d) They excrete waste substances into the soil around them

19) The part in which gustatory receptors are present in our body is

(a) inner ear (b) skin (c) tongue (d) inner lining of nose

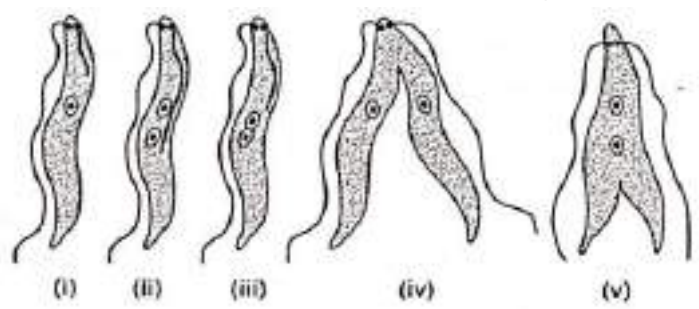
20) Sensory nerve of a reflex arc carries information from the receptor cells to the

(a) spinal cord (b) brain (c) muscles of the effector organ (d) bones of the receptor organ

21) Select from the following a plant hormone which promotes cell division.

(a) Gibberellins (b) Auxins (c) Abscissic acid (d) Cytokinins

22) Choose the correct order of the stages of binary fission in Leishmania.



(a) I, II, III, IV, V (b) I, III, II, V, IV (c) I, III, V, II, IV (d) I, II, III, V, IV

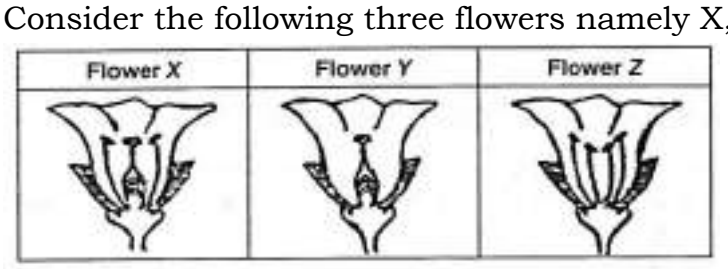
23) Which one of the following statement is true for Hydra, Amoeba and Spirogyra?

(a) They are multicellular (b) They are unicellular (c) They reproduce sexually (d) They reproduce asexually

24) Part(s) of a flower which attracts insects for pollination is (are)

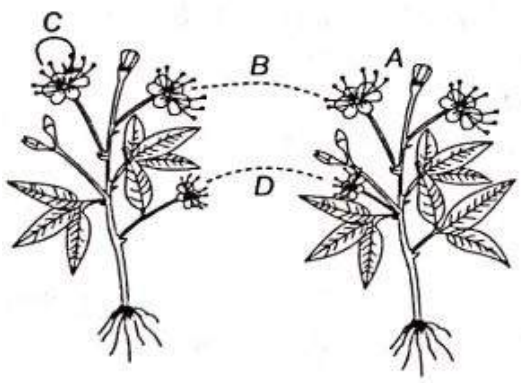
(a) petals and sepals (b) anther and stigma (c) petals only (d) sepals only

25) Consider the following three flowers namely X, Y and Z, which flower (s) would develop into a fruit?



(a) Only X (b) Only Z (c) X and Y (d) Y and Z

26) The diagram shown below depicts pollination. Choose the option, that will show a maximum variation in the offspring.



(a) A, B and C (b) B and D (c) B, C and D (d) A and C

27) During adolescence, reproductive phase starts and

(a) general growth rate begins to slow down (b) height becomes less (c) the body weight is reduced

(d) hair growth decreases

28) The bacterial and the viral infections that may be caused due to unsafe sex respectively are

(a) Warts and HIV-AIDS (b) HIV-AIDS and Warts (c) Gonorrhoea and Syphilis (d) Syphilis and Warts

29) Offsprings formed as a result of sexual reproduction produce more variations because

(a) genetic material is contributed by many parents (b) sexual reproduction is a lengthy process

(c) genetic material is contributed by two individuals of same species to produce a new generations

(d) DNA copying is not accompanied by the creation of cellular apparatus

30) Consider the following two statements

(i) The trait that expresses itself in F_1-generation.

(ii) The trait that keeps on passing from one generation to another.

The appropriate terms for the statements (i) and (ii) respectively are

(a)

(i)	(ii)
Recessive trait,	Dominant trait

(b)

(i)	(ii)
Dominant trait,	Recessive trait

(c)

(i)	(ii)
Dominant trait,	Inherited trait

(d)

(i)	(ii)
Recessive trait,	Inherited trait

31) A cross between pea plant with white flowers (vv) and pea plant with violet flowers (VV) resulted in F_2-progeny in which ratio of violet (VV) and white (vv) flowers will be

(a) 1 : 1 (b) 2 : 1 (c) 3 : 1 (d) 1 : 3

32) If a tall pea plant is crossed with a pure dwarf pea plant then, what percentage of F_1 and F_2-generation respectively will be tall?

(a) 25%, 25% (b) 50%, 50% (c) 75%, 100% (d) 100%, 75%

33) A cross between two tall pea plants resulted in offsprings having a few dwarf plants. The gene-combination of the parental plants must be

(a) Tt and Tt (b) Tt and tt (c) TT and tt (d) TT and Tt

34) The statement that correctly describes the characteristic of a gene is

(a) in individuals of a given species, a specific gene is located on a particular chromosome

(b) a gene is not the information source for making proteins in the cell

(c) each chromosome has only one gene located all along its length

(d) all the inherited traits in human beings are not controlled by genes

35) Sex determination depends upon the environment in

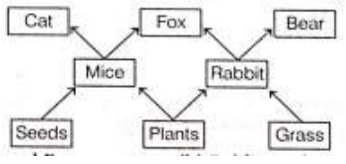
(a) birds (b) amphibians (c) reptiles (d) fishes

36) Which statement shows Interaction of an a biotic component with a biotic component in an ecosystem?

(a) A mouse fighting with another mouse for food (b) A grasshopper feeding on a leaf

(c) An earthworm making a burrow in the soil (d) Rainwater running down into the lake

37) Study the given figure of a food web and identify the primary consumer in the food web.



(a) Mice and Bear (b) Rabbit and Cat (c) Rabbit and Fox (d) Mice and Rabbit

38) Consider the following statements about ozone.

(A) Ozone is a poisonous gas.

(B) Ozone shield the earth surface from the infrared radiations in the Sun.

(C) Ozone is a product of UV radiation acting on oxygen molecules.

(D) At the lower level of the earth atmosphere ozone performs most essential function.

The correct statements are

(a) (A) and (B) (b) (A) and (C) (c) (B) and (C) (d) (B) and (D)

39) United Nations Environment Programme forged an agreement to

(a) control CO_2 emissions in the environment (b) conserve biodiversity (c) control water pollution

(d) reduce CFC production

40) A food chain will be more advantageous in terms of energy if it has

(a) 2 trophic levels (b) 3 trophic levels (c) 4 trophic levels (d) 5 trophic levels

Assertion and reason 17 x 1 = 17

41) **Assertion (A)** Amoeba takes in food using finger-like extensions of the cell surface.

Reason (R) In all unicellular organisms, the food is taken in by the entire cell surface

(a) If both A and R are true and R is the correct explanation of A

(b) If both A and R are true, but R is not the correct explanation of A

(c) If A is true, but R is false

(d) If A is false, but R is true

42) **Assertion (A)** The inner walls of the small intestine have finger-like projections called villi which are rich in blood.

Reason (R) These villi have a large surface area to help the small intestine in completing the digestion of food.

(a) If both A and R are true and R is the correct explanation of A

(b) If both A and R are true, but R is not the correct explanation of A

(c) If A is true, but R is false

(d) If A is false, but R is true

43) **Assertion (A)** The rate of breathing in aquatic organisms is much slower than that seen in terrestrial organisms.

Reason (R) The amount of oxygen dissolved in water is very low as compared to the amount of oxygen in air.

(a) Both A and R are true and R is the correct explanation of A

(b) Both A and R are true, but R is not the correct explanation of A

(c) A is true, but R is false

(d) A is false, but R is true

44) **Assertion (A)** The walls of atria are thicker than those of the ventricles.

Reason (R) Ventricles have to pump blood into various organs at high pressure.

(a) Both A and R are true and R is the correct explanation of A

(b) Both A and R are true, but R is not the correct explanation of A

(c) A is true, but R is false

(d) A is false, but R is true

45) **Assertion (A)** Left atrium receives oxygenated blood from pulmonary vein.

Reason (R) Right atrium transfers deoxygenated blood to the right ventricle, which pumps it to the lungs for oxygenation.

(a) Both A and R are true and R is the correct explanation of A

(b) Both A and R are true, but R is not the correct explanation of A

(c) A is true, but R is false

(d) A is false, but R is true

46) **Assertion (A)** Capillaries have walls that are just one cell thick.

Reason (R) Exchange of material between the blood and surrounding cells takes place across the capillaries.

(a) Both A and R are true and R is the correct explanation of A

(b) Both A and R are true, but R is not the correct explanation of A

(c) A is true, but R is false

(d) A is false, but R is true

47) **Assertion (A)** Amphibians can tolerate mixing of oxygenated and deoxygenated blood.
Reason (R) Amphibians are animals with two-chambered heart.
(a) Both A and R are true and R is the correct explanation of A
(b) Both A and R are true, but R is not the correct explanation of A
(c) A is true, but R is false
(d) A is false, but R is true

48) **Assertion (A)** Receptors are usually located in our sense organs and perceive a particular stimulus.
Reason (R) Different sense organs have different receptors for detecting stimuli.
(a) Both A and R are true and R is the correct explanation of A
(b) Both A and R are, but R is not the correct explanation of A
(c) A is true, but R is false
(d) A is false, but R is true

49) **Assertion (A)** Offspring produced by asexual reproduction are genetically similar to the parents.
Reason (R) Asexual reproduction involves a single parent.
(a) If both A and R are true and R is the correct explanation of A
(b) If both A and R are true, but R is not the correct explanation of A
(c) If A is true, but R is false
(d) If A is false, but R is true

50) **Assertion (A)** Human populations show a great deal of variations in traits.
Reason (R) All variations in a species have equal chances of surviving in the environment in which they live.
(a) Both A and R are true and R is the correct explanation of A
(b) Both A and R are true, but R is not the correct explanation of A
(c) A is true, but R is false
(d) A is false, but R is true

51) **Assertion (A)** Dominant allele is an allele whose phenotype expresses even in the presence of another allele of that gene.
Reason (R) It is represented by a capital letter, e.g. T.
(a) Both A and R are true and R is the correct explanation of A
(b) Both A and R are true, but R is not the correct explanation of A
(c) A is true, but R is false
(d) A is false, but R is true

52) **Assertion (A)** A geneticist crossed a pea plant having violet flowers with a pea plant having white flowers, he got all violet flowers in first generation.
Reason (R) White colour gene is not passed on to next generation.
(a) Both A and R are true and R is the correct explanation of A
(b) Both A and R are true, but R is not the correct explanation of A
(c) A is true, but R is false
(d) A is false, but R is true

53) **Assertion (A)** In humans, if gene (B) is responsible for black eyes and gene (b) is responsible for brown eyes, then the colour of eyes of the progeny having gene combination Bb, bb or BB will be black only.
Reason (R) The black colour of the eyes is a dominant trait.
(a) Both A and R are true and R is the correct explanation of A
(b) Both A and R are true, but R is not the correct explanation of A
(c) A is true, but R is false
(d) A is false, but R is true

54) **Assertion (A)** Height in pea plants is controlled by efficiency of enzymes and is thus genetically controlled.
Reason (R) Cellular DNA is the information source for making proteins in the cell.
(a) Both A and R are true and R is the correct explanation of A
(b) Both A and R are true, but R is not the correct explanation of A
(c) A is true, but R is false
(d) A is false, but R is true

55) **Assertion (A)** In human beings, males have 'XX' sex chromosomes and females have 'XY' sex chromosomes.
Reason (R) Sex of the child is determined at the time of fertilisation when male and female gamete fuse to form a zygote.
(a) Both A and R are true and R is the correct explanation of A
(b) Both A and R are true, but R is not the correct explanation of A
(c) A is true, but R is false
(d) A is false, but R is true

56) **Assertion (A)** The waste we generate daily may be biodegradable or non-biodegradable.
Reason (R) The waste generated, if not disposed off properly may cause serious environmental problems
(a) Both A and R are true and R is the correct explanation of A
(b) Both A and R are true and R is not the correct explanation of A
(c) A is true, but R is false
(d) A is false, but R is true

57) **Assertion (A)** Producers are capable of using light energy from the sun to make food available in an ecosystem.
Reason (R) All food chains in an ecosystem start with a producer.
(a) Both A and R are true and R is the correct explanation of A
(b) Both A and R are true, but R is not the correct explanation of A
(c) A is true, but R is false
(d) A is false, but R is true

Case Study Questions 7 x 4 = 28

58)