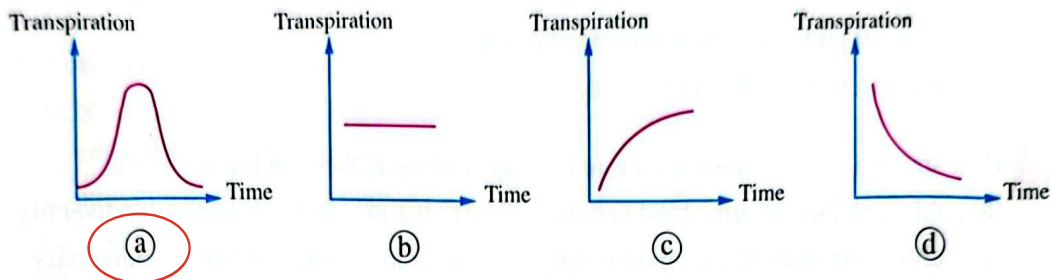


Exam 6 ? Answered

Choose the correct answer (1 : 20):

- 1 Which of the following graphs illustrates the relation between the transpiration and time of a plant over a whole day?



- 2 The ratio between the concentration of (H^+) ions in an acidic solution to their concentration in an alkaline solution

- (a) is greater than 1
 (b) is equal to 1
 (c) is less than 1
 (d) the answer can't be determined

- 3 Which of the following statements isn't applied to blood?

- (a) It is a specialized connective tissue.
 (b) It consists of intercellular substance called plasma.
 (c) It consists of four major types of cells.
 (d) It plays an important role in transporting nutrients and protecting the body against infection.

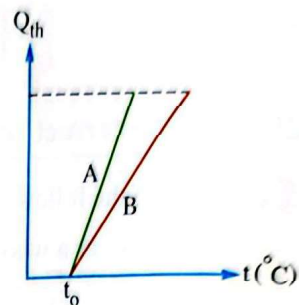
- 4 Increasing the percentage of CO_2 in water leads to

- (a) increasing the acidity of water
 (b) reducing the energy produced by aquatic plants
 (c) reducing the energy that reaches predators
 (d) increasing the pH value of water

- 5 Which chemical substance does shark fish keep in its blood to help in regulating its osmotic pressure?

- (a) Water.
 (b) Oxygen.
 (c) Urea.
 (d) Carbon.

6 Two quantities of two liquids A and B with the same mass were heated from a temperature t_0 and the opposite graph represents the relation between the amount of heat (Q_{th}) absorbed by each liquid and its temperature (t), so which liquid has a higher specific heat?

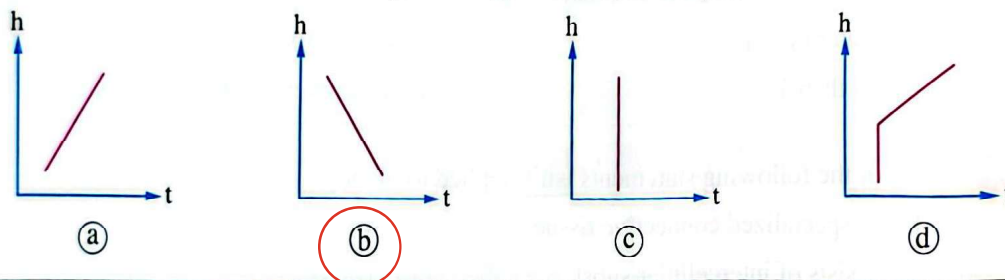


- (a) Liquid A.
- (b) Liquid B.
- (c) The two liquids have the same specific heat.
- (d) The answer cannot be determined.

7 Gulf stream is oceanic current that flows towards Western Europe and it

- (a) cold – enhances marine biodiversity
- (b) warm – reduces marine biodiversity
- (c) warm – enhances marine biodiversity
- (d) cold – reduces marine biodiversity

8 Which of the following graphs represents the relation between the altitude (h) above the Earth's surface and the air temperature (t) in troposphere layer?



9 As the concentration of dissolved substances in water increases, all of the following are correct, except

- (a) the vapor pressure decreases
- (b) the freezing point decreases
- (c) the osmotic pressure increases
- (d) the boiling point decreases

10 The type of chemical bonds of water in its vapor state is

- (a) hydrogen bonds
- (b) double covalent bonds
- (c) single covalent bonds
- (d) both covalent and hydrogen bonds

11 Nitrogen gas represents 78% of

- (a) the mass of the atmosphere
- (b) the weight of the atmosphere
- (c) the volume of the atmosphere
- (d) the mass and weight of the atmosphere

12 At which of the following temperatures does pure water exist in its liquid state under normal conditions?

- (a) 4°F
- (b) 25°F
- (c) 122°F
- (d) 300°F

- 13** How does the thorny devil lizard adapt to the high temperatures and dry environment of the desert?
- (a) It changes the color of its skin to reflect more sunlight and reduce the heat absorption.
 - (b) It increases its heartbeats rate to increase the blood flow to the skin to cool it.
 - (c) It collects moisture from the air and directs it to its mouth through small channels on the surface of its skin.
 - (d) It stores small amounts of fats to cool its body.
- 14** At one stage of ozone formation, an oxygen molecule undergoes photodissociation, where the bond of the molecule is broken as a result of
- (a) emission of visible light photons
 - (b) emission of ultraviolet photons
 - (c) absorption of visible light photons
 - (d) absorption of ultraviolet photons
- 15** What happens to the area of ice cap on Earth as a result of global warming?
- (a) Increases.
 - (b) Decreases.
 - (c) Doesn't change.
 - (d) The answer can't be determined.
- 16** What is the most active organelle during practicing physical activities?
- (a) Vacuole.
 - (c) Mitochondrion.
 - (b) Endoplasmic reticulum.
 - (d) Nucleus.
- 17** The ratio between the solubility of carbon dioxide gas to the solubility of oxygen gas in water
- (a) is greater than 1
 - (b) is less than 1
 - (c) is equal to 1
 - (d) the answer can't be determined
- 18** Which of the following is not from the effects of gas oxides and acid rain?
- (a) Deformation of plant stomata.
 - (b) Increased soil fertility.
 - (c) Reduction of respiratory capacity.
 - (d) Corrosion of historic buildings.
- 19** Which of the following is correct about viperfish?
- (a) It exists in polar regions.
 - (b) It has an air bladder.
 - (c) It has high levels of haemoglobin.
 - (d) It has breathing openings.
- 20** How does the over consumption of small fish affect the aquatic ecosystem?
- (a) It participates in improving the aquatic plants growth.
 - (b) It leads to a disturbance in the numbers of zooplankton.
 - (c) It improves the energy balance among living organisms.
 - (d) It increases the water quality due to decreased pollution.

Answer the following questions (21 & 22):

- 21** Mention one of the reasons for the formation of ocean currents, and what is the importance of these currents?

Differences in temperature cause water to move.
They redistribute heat and nutrients

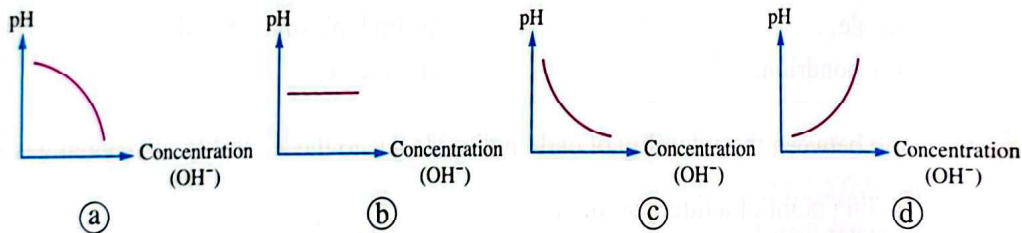
- 22** Mention two biological adaptations for the aquatic organisms that live at deep-depths to adapt with the high pressure in these depths.

Flexible bodies and slow metabolism

Exam 7 ? Answered

Choose the correct answer (1 : 20):

- 1** Which of the following graphs expresses the relation between the pH value and the concentration of (OH⁻) ions?



- 2** A quantity of pure water has a volume of 1 m³ at a temperature of 4°C, its temperature dropped to the freezing point, then the volume of this quantity when it turns into ice with a density of 917 kg/m³ is approximately equal to
- (a) 1.03 m³ (b) 1.05 m³ (c) 1.09 m³ (d) 1.04 m³

- 3** Which of the following statements is correct about collenchyma tissue?

- (a) It is composed of non-living rigid cells.
(b) It provides some strength in addition to elasticity and flexibility to the plant.
(c) It forms most of the soft tissues in the plant.
(d) Its cell walls consist of cellulose and lignin.

- 4** The ratio between the osmotic pressure of fresh water to the osmotic pressure of body fluids inside fish that live in this water is

- (a) greater than 1 (b) equal to 1
(c) less than 1 (d) the answer can't be determined