Date: 25/08/2022

1. Which of these forces mandatorily requires a physical contact between two bodies

   ✗ **A.** Magnetic force

   ✓ **B.** Muscular force

   ✗ **C.** Electrostatic force

   ✗ **D.** Gravitational force

   Muscular force

2. When we press the bulb of a dropper with its nozzle kept in water, air in the dropper is seen to escape in the form of bubbles. Once we release the pressure on the bulb, water gets filled in the dropper. The rise of water in the dropper is due to:

   ✗ **A.** Pressure of water

   ✗ **B.** Gravity of the earth

   ✗ **C.** Shape of the rubber bulb

   ✓ **D.** Atmospheric pressure

   Atmospheric pressure

3. A ball travelled 10 cm on surface x and 50 cm on surface y. Identify the type of surfaces.

A. x - sandy floor , y - sandy floor

B. x - sandy floor , y - cemented floor

C. x - cemented floor , y - sandy floor

D. x - cemented floor , y - cemented floor

x - sandy floor , y - cemented floor

4. Two musical notes that have a frequency ratio of 2 : 1 are said to be separated by an octave.
A musical note that is separated by an octave from middle C (256 Hz) has a frequency of _____ .

A. 128 Hz

B. 254 Hz

C. 258 Hz

D. 345 Hz

128 Hz

5. Rajat wants to coat a metal 'X' with a metal 'Y'. He takes 'X' as the cathode and 'Y' as the anode in an electrolytic cell. Which metal's salt solution should he as an electrolyte?

- ✗ **A.** X
- ✓ **B.** Y
- ✗ **C.** Neither X nor Y
- ✗ **D.** A mixture of X and Y

Y

6. Which of these formulae correctly depicts the relationship between the angle between two plane mirrors and the number of images that will be formed within them if an object is placed between them?

- ✗ **A.** $n = 1- (360°/\theta)$
- ✓ **B.** $n = (360°/\theta) - 1$
- ✗ **C.** $n = (360°/\theta) + 1$
- ✗ **D.** $n = (360°/\theta)$

$n = (360°/\theta) - 1$

7. When an object is moved away from a convex mirror, the image

- ✗ **A.** becomes smaller
- ✗ **B.** moves closer to the focus
- ✗ **C.** becomes inverted
- ✓ **D.** both (A) and (D)

both (A) and (D)

8. The weight of a person on any celestial body depends on the gravitational force exerted by the body on the person. With reference to the above fact and the relative gravitational pulls of the earth and the moon, what will the weight of a person be on the moon, if his weight on earth is 96 units?

- ✔ **A.** Approximately 16 units
- ✘ **B.** Approximately 80 units
- ✘ **C.** Approximately 96 units
- ✘ **D.** Approximately 50 units

Approximately 16 units

9. A car starting from rest traveling along a straight path with uniform acceleration covers s_1, s_2 and s_3 distances in the first, second and third seconds of its travel. Then, the ratio of $\frac{s_2-s_1}{s_3-s_2}$ is _____

- ✘ **A.** 3 : 5
- ✘ **B.** 1 : 2
- ✘ **C.** 1 : 3
- ✔ **D.** 1 : 1

1 : 1

10. A body undergoes a displacement of 3 m in the 1st second, 4 m in the 2nd second, 5 m in the 3rd second and so on. The body is moving with a/an

- A. Uniform velocity
- B. Uniform acceleration
- C. Uniform deceleration
- D. None of these

Uniform acceleration

11. Two wires of same material and length have the radii of their cross sections as r and 2r, respectively. The ratio of their resistances

- A. 2 : 1
- B. 4 : 1
- C. 1 : 4
- D. 3 : 2

4 : 1

12. When a positively charged and another negatively charged bodies with equal magnitude of charge are brought simultaneously in contact with the cap of a positively charged electroscope, then the strips

- A. move apart
- B. come closer
- C. remain unaffected
- D. cannot be determined

come closer

13. A builder wants to construct a party hall and is looking for ways to reduce noise pollution due to parties in this hall. Which of these suggestions is incorrect?

A. The hall should not be built near schools or hospitals

B. The hall should use minimal carpets, cushions and curtains

C. The hall should not be used to host parties where music is played loud

D. The hall should not be used to host parties late at night

The hall should use minimal carpets, cushions and curtains

14. Rashmi, a class 6 teacher listed the given materials on the board and asked students to classify them on the basis of transparency.
(I) Window glass (II) Oily paper (III) Metal sheet (IV) Thin muslin cloth (V) Concrete wall
Which of the following represents the correct classification?

A. I, IV-transparent; II-translucent; III, V-opaque

B. I, II-translucent; III-opaque; IV, V-transparent

C. I-transparent; II, IV-translucent; III, V-opaque

D. V-opaque; II, III-translucent; I, IV-transparent

I-transparent; II, IV-translucent; III, V-opaque

15. Which of the following affects the solubility of a substance ?

I. Type of solvent

II. Temperature

III. Size of the particles

- **A.** I and II
- **B.** I and III
- **C.** II and III
- **D.** I, and III

I and II

16. Why is flame always pointed upwards ?

(i) Gases produced in flame are cold.

(ii) Gases produced in flame are hot

(iii) Hot gases are lighter and rise up.

- **A.** (i) and (ii) only
- **B.** (ii) and (iii) only
- **C.** (i) and (iii) only
- **D.** (i), (ii) and (iii) only

(ii) and (iii) only

17. Types of flame produced by a fuel depends upon :

- ✗ **A.** Calorific value
- ✓ **B.** Amount of oxygen
- ✗ **C.** Type of fuel and its chemical composition
- ✗ **D.** All of the above

Amount of oxygen

18. Which of the following is not a renewable energy ?

- ✓ **A.** Nuclear energy
- ✗ **B.** Hydropowder energy
- ✗ **C.** Geothermal energy
- ✗ **D.** Solar energy

Nuclear energy

19. Which one of the following is not a petroleum product ?

- ✗ **A.** Kerosene
- ✗ **B.** Gasoline
- ✗ **C.** Asphalt
- ✓ **D.** Bees wax

Bees wax

20. Sujata, Elina and Suhani bought new bicycles on the same day. After two years , whose bicycle will be in the worst condition due to rusting?

- ✔ **A.** Sujata's who lives near the sea coast in Mumbai.
- ✘ **B.** Elina's who lives in a hilly area with the cool and moist climate
- ✘ **C.** Suhani's who lives near a desert with hot and dry climate.
- ✘ **D.** Both B and C

Sujata's who lives near the sea coast in Mumbai.

21.

Metals are malleabe and ductile because :

- ✘ **A.** Metals can shine
- ✘ **B.** Metals produce sound
- ✔ **C.** Layers of metal atoms can slip over each other
- ✘ **D.** Atoms form close clusters

Layers of metal atoms can slip over each other

22. Which one of the following statements is correct?

- ✔ **A.** Metals lose electrons to become positive ions.
- ✘ **B.** Metals lose electrons to become negative ions.
- ✘ **C.** Metals gain electrons to become positive ions.
- ✘ **D.** Metals gain electrons to become negative ions.

Metals lose electrons to become positive ions.

23. Turmeric is a natural indicator. On adding its paste to acid and base separately, which colours would be observed?

A. Yellow in both acid and base

B. Yellow in acid and red in base

C. Pink in acid and yellow in base

D. Red in acid and blue in base

Turmeric is yellow in colour. It remains unaffected by acids but turns red upon the addition of bases.

24. Complete the following analogy.
Ant sting : Organic acid : : Methyl orange : _____

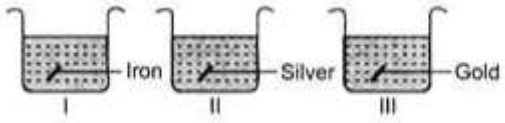
A. Visual indicator

B. Olfactory indicator

C. Inorganic acid

D. Alkali

25. Vishakha takes a few wire pieces made up of different metals and places them in a blue solution of copper sulphate. What changes does she observe in the colour of the solutions present in beakers I, II, and III? Which type of change is occur in which beaker?



A. I - Green; II - Blue; III - Green
Chemical change in II beaker

B. I - Blue; II - Green; III - Green
Physical change in I beaker

C. I - Green; II - Blue; III - Blue
Chemical change in I beaker

D. I - Blue; II - Blue; III - Blue
Chemical change in III beaker

As iron is more reactive than copper, it displaces copper from copper sulphate solution. A green solution of iron sulphate is formed.
$Fe + CuSO_4 \rightarrow FeSO_4 + Cu$

Silver and gold are less reactive than copper. So, they do not displace copper from copper sulphate solution. Hence, the solution remains blue in colour.

26. Match the contents of column I, II and III.

Column I	Column II	Column III
1. Fish	i) Spiracles	a) Lives on both land and water
2. Frog	ii) Gills	b) Lives on land
3. Cockroach	iii) Lungs and skin	c) Lives in water

A. 1-i-a, 2-ii-b, 3-iii-c

B. 1-i-c, 2-ii-b, 3-iii-a

C. 1-i-c, 2-ii-a, 3-iii-b

D. 1-ii-c, 2-iii-a, 3-i-b

• Different organisms have different respiratory organ depending upon their habitat and complexity of body organization.
• Fishes live in the aquatic habitat, and they have gills which are adopted for gaseous exchange in water.
• Frogs are called amphibians, they live on the land as well as water. They use their lungs on land and moist skin in water for gaseous exchange.
• Insects like cockroaches live on land. They have small openings on the sides of their body known as spiracles. The oxygen rich air rushes through the spiracles into the tracheal tubes and diffuses into the body tissues.

27. Which one of the following is Kharif crop?

A. Wheat

B. Maize

C. Rice

D. Mustard

Rice is Karif crop as it needs more water.

28. Citrus canker is caused by _____.

A. Virus

B. Bacteria

C. Fungi

D. Protozoa

Citrus canker is a plant fest. It is a bacterial disease that is causes significant damage to the citrus species. It ruins the crop. Furthermore, it is found in more than 30 countries in Asia and South America. It spreads due to the movement of water splash, movement of the infected plants and the insects. The bacteria that causes citrus canker is bacterium *Xanthimonas citri* subsp.

29. Keoladeo National Park is situated in _____.

A. Karnataka

B. Madhya Pradesh

C. Rajasthan

D. Gujarat

Keoladeo Ghana National Park (formerly known as the Bharatpur Bird Sanctuary) is located in the State of Rajasthan. It is India's important wintering area for large numbers of aquatic birds. It is also well known for its large assembly of non-migratory resident breeding birds and therefore is an important bird watching site. Different species from far-flung areas and countries like Afghanistan, Turkmenistan, Siberia and China visit the Sanctuary.

30. Read the following statements and select the option which correctly fills any three blanks.

(i) In ___(a)___ irrigation emitters let out trickling water near the roots.

(ii) Removing the chaff from the grain is called _____(b)___ , while separation of the grain from the crop is called ___(c)___.

(iii) The organic substance obtained from dead plants and animal wastes is ___(d)___.

(iv) Wheat and gram are rabi crops, while maize and ___(e)___ are kharif crops.

A. (b) – Winnowing, (d) – Manure, (e) – Oats

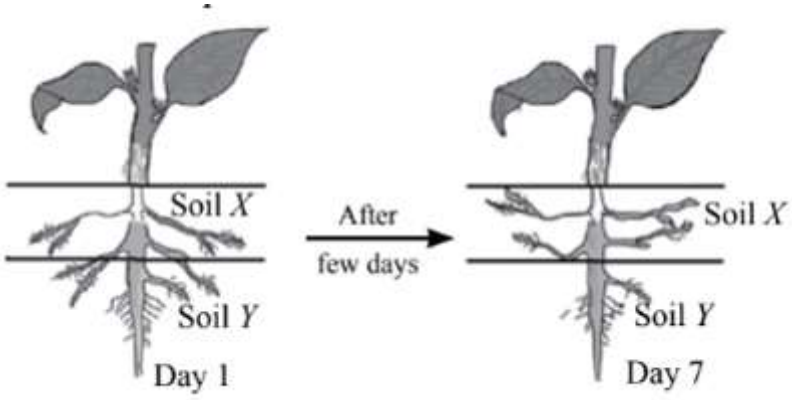
B. (b) – Winnowing, (c) – Threshing, (e) – Cotton

C. (a) – Drip, (d) – Fertilizer, (e) – Mustard

D. (a) – Sprinkler, (b) – Threshing, (c) – Winnowing

(b) – Winnowing, (c) – Threshing, (e) – Cotton

31. Tarun sets up a plant as shown in the figure. After a few days, he observed upward growth in the roots of the plant.



Based on his observations what can you conclude?

A. Soil X is clayey while soil Y is loamy.

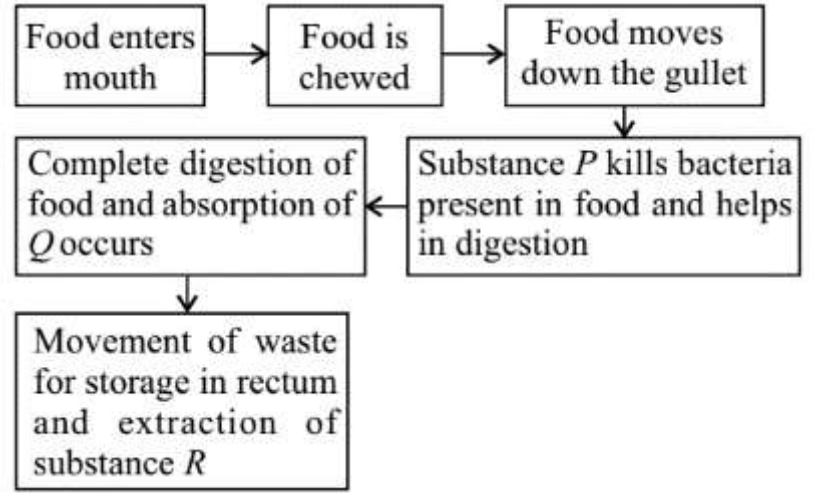
B. Soil X is sandy while soil Y is clayey.

C. Soil X is loamy while soil Y is sandy.

D. It is not possible to tell.

Option C is the correct answer .

32. Study the given flow chart.



What are P, Q and R respectively?

- ✗ **A.** P - Saliva, Q - Nutrients, R - Hydrochloric acid
- ✗ **B.** P - Saliva, Q - Water, R - Waste
- ✓ **C.** P - Hydrochloric acid, Q- Nutrients, R - Water
- ✗ **D.** P - Bile, Q - Water, R - Waste

P - Hydrochloric acid, Q- Nutrients, R - Water

33. Global warming is believed to be the cause of:

- ✗ **A.** Depletion of forest cover
- ✓ **B.** Rise in sea levels
- ✗ **C.** Increase in earthquakes
- ✗ **D.** Population explosion

Global warming can cause rise in the sea levels.

34. Percolation rate of a soil which has large sized particles will be _____ as compared to a soil with small sized particle.

A. less

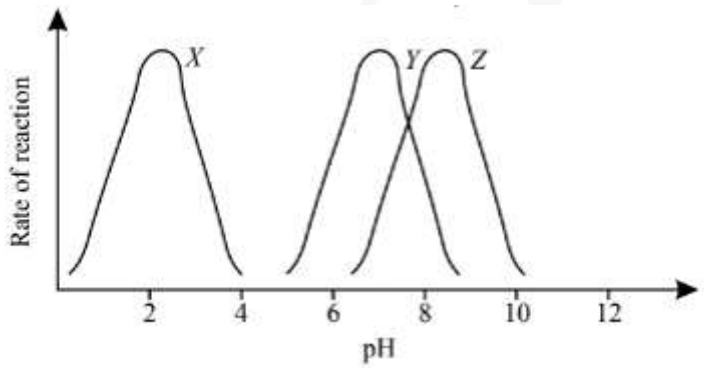
B. more

C. same

D. Percolation rate does not depend on the particle size.

Percolation rate of a soil which has large sized particles will be more as compared to a soil with small sized particle.

35. Refer to the given graph which shows the effect of pH on the activities of three enzymes, X, Y and Z.



A. X - Duodenum, Y - Mouth, Z - Stomach

B. X - Mouth, Y - Stomach, Z - Duodenum

C. X - Stomach, Y - Duodenum, Z - Mouth

D. X - Stomach, Y - Mouth, Z - Duodenum

Option D - X - Stomach, Y - Mouth, Z - Duodenum

36. Match the following and choose the correct option.

COLUMN – I		COLUMN – II	
a	Carbohydrate	(i)	Made up of amino acids
b	Protein	(ii)	Metabolic function
c	Fat	(iii)	Physiological and biological function
d	Vitamins	(iv)	Provides chief source of energy to the body

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

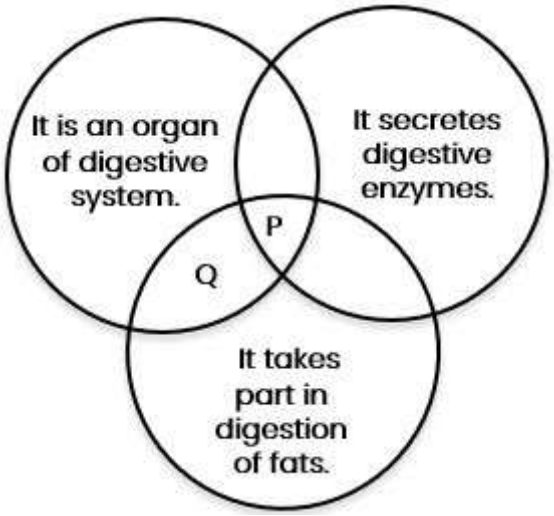
✗ **B.** (a) – (iii), (b) – (ii), (c) – (i), (d) – (iv)

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

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

Carbohydrate is the chief source of energy to the body. Proteins are made up of amino acids. Fats perform metabolic functions and Vitamins performs the physiological and biological functions.

37. Refer to the given Venn diagram. Identify P and Q and select the correct statement.



✔ **A.** Q produces a juice which gets mixed with fats present in food and converts it into small fat droplets.

✘ **B.** Q secretes a digestive juice which acts on carbohydrates, fats and proteins and converts them into glycerol, fatty acids and amino acids, respectively.

✘ **C.** P could be the smallest organ of digestive system whereas Q could be the longest portion of the alimentary canal.

✘ **D.** P absorbs water and salt from undigested food whereas Q is the site of absorption of digested food.

According to the Venn diagram given,

- P could be any organ that is involved in the digestion of fat and produces digestive enzymes. Thus, P could be liver, pancreas and small intestine.
- Q could be any organ that is involved in the digestion of fat but does not produce digestive enzymes. Thus, Q could be only liver since it does not produce any digestive enzyme.
- Liver secretes bile juice which helps in the emulsification of fats.
- However, pancreas and small intestine secretes lipase which helps in the digestion of fats.

38. Which of the following shows the correct match of seed and its mode of dispersal?

✗ **A.**  – Animal

✓ **B.**  – Water

✗ **C.**  – Explosion

✗ **D.**  – Wind

Here, Option A shows - Dandelion which is dispersed by wind Option B shows - Lotus which is dispersed by water Option C shows - Xanthium which is dispersed by animals Option D shows - Pea which is dispersed by explosion So, the answer is B.

39. Farheen soaked some bean seeds in water overnight. Next morning, she drained the water and kept the seeds moist till they started germinating. She boiled half of the seeds and then kept the germinating seeds in one thermos flask X and the boiled seeds in another thermos flask Y. She covered the mouth of both flasks with moist cotton wool. Then she inserted thermometers in both flasks and left them. What would be her observation after four hours?
Select the correct option regarding this.

✗ **A.** Temperature of flask X increases because it has photosynthesising seeds.

✓ **B.** Temperature of flask X increases because it has respiring seeds.

✗ **C.** Temperature of flask Y increases because it has boiled seeds.

✗ **D.** Both b and c

- During respiration, glucose is broken in to number of intermediate substances before it is completely burnt in to carbon-dioxide and water. During the whole process energy is released in the form of heat in small amounts at different steps.
- Boiled seeds can neither germinte nor respire.
- Therefore, only flask X shows rise in temperature because heat is generated by germinating seeds and not by boiled seeds.

40. Given below is a sequence of steps in the processing of wool. Which are the missing steps? Add them.
Shearing, _____(1)_____, Sorting, _____(2)_____, _____(3)_____, _____(4)_____.

A. 1-Dyeing; 2-Cleaning of burrs; 3-Scouring; 4-Rolling

B. 1-Scouring; 2-Cleaning of burrs; 3-Dyeing; 4-Rolling

C. 1-Rolling; 2-Cleaning of burrs; 3-Dyeing; 4-Scouring

D. 1-Rolling; 2-Dyeing; 3-Cleaning of burrs; 4-Scouring

- Once the sheep has developed a thick growth of hair, or fleece, it is shaved off and this process is called shearing.
- After shearing, the sheared fleece is thoroughly washed in tanks to remove grease, dust, and dirt. This process is called scouring. So, the missing step 1 is scouring.
- After scouring, the fibres are separated based on texture, fineness, and length. This process is called sorting.
- After sorting, the small fluffy fibres, called burrs, are picked out and removed. This process is called cleaning of burrs. Thus, the missing step 2 is cleaning of burrs.
- The fibres are then dyed in various colours by a process called dyeing. Hence, the missing step 3 is dyeing.
- The dyed fibres are twisted to form woollen yarns by the process of rolling. Thus, the missing step 4 is rolling.
- Therefore, the correct sequence is:
Shearing → Scouring → Sorting → Cleaning of burrs → Dyeing → Rolling.
- So, option B is the right answer.

NSEJS_CBSE_08

Question	Subject	Question	Subject	Question	Subject	Question	Subject	Question	Subject
1	Phy	11	Phy	21	Che	31	Bio	41	
2	Phy	12	Phy	22	Che	32	Bio	42	
3	Phy	13	Phy	23	Che	33	Bio	43	
4	Phy	14	Che	24	Che	34	Bio	44	
5	Phy	15	Che	25	Che	35	Bio	45	
6	Phy	16	Che	26	Bio	36	Bio	46	
7	Phy	17	Che	27	Bio	37	Bio	47	
8	Phy	18	Che	28	Bio	38	Bio	48	
9	Phy	19	Che	29	Bio	39	Bio	49	
10	Phy	20	Che	30	Bio	40	Che	50	