Summer Holiday 2025

Home Assignment And project work

ENGLISH

1) Attempt five sample papers only grammar section.
2) Attempt two sample papers only for Unseen passages.
3) Read and Write Questions from the taught topics.

https://www.learncbse.in/cbse-sample-papers-for-class-10-english-communicative/

HINDI

1.) संज्ञा, सर्वनाम, विशेषण एवं क्रिया के प्रकारों की परिभाषा एवं उनके 2 -2 उदाहरण।

2). क्रिया विशेषण, संबंध बोधक अव्यय , समुच्चय बोधक अव्यय एवं विस्मयादि बोधक अव्यय की परिभाषा एवं उनके दो - दो उदाहरण ।

3). प्रविशेषण की परिभाषा एवं उनके उदाहरण ।

समस्त गृहकार्य व्याकरण कॉपी में ही लिखें।

संस्कृतम्

ग्रीष्मावकाश संस्कृत गृहकार्यम्।
1.ग्रीष्म ऋतु वर्णनं संस्कृते करिष्यन्ति।
2.वाङ्मयं तप पाठस्य श्लोका: अर्थ सहितं स्मरणं करिष्यन्ति।

MATHEMATICS

REAL NUMBERS- CASE STUDY

CASE STUDY 1.

To enhance the reading skills of grade X students, the school nominates you and two of your friends to set up a class library. There are two sections- section A and section

B of grade X. There are 32 students in section A and 36 students in section B.

1. What is the minimum number of books you will acquire for the class library, so that they can be distributed equally among students of Section A or Section B?

a) 144

b) 288

c) 272

d)128

2. If the product of two positive integers is equal to the product of their HCF and LCM is true then, the HCF (32 , 36) is

a) 2

b) 4

c) 6

d) 8

3. 36 can be expressed as a product of its primes as

a) $2^2 \times 3^2$

b) $2^1 \times 3^3$

c) $2^3 \times 3^1$

d) $2^0 \times 3^0$

4. $7\times 11 \times 13 \times 15 + 15$ is a

a) Prime number

b) Composite number

c) Neither prime nor composite

d) None of the above

5. If p and q are positive integers such that p = ab^2 and q= a^2b, where a , b are prime numbers, then the LCM (p, q) is

a) ab

b) a^2b^2

c) a^3b^2

d) a^3b^3

CASE STUDY 2:

A seminar is being conducted by an Educational Organization, where the participants will be educators of different subjects. The number of participants in Hindi, English and Mathematics are 60, 84 and 108 respectively.

1. In each room the same number of participants are to be seated and all of them being in the same subject, hence maximum number participants that can accommodated in each room are
   a) 14
   b) 12
   c) 16
   d) 18
2. What is the minimum number of rooms required during the event?
   a) 11
   b) 31
   c) 41
   d) 21
3. The LCM of 60, 84 and 108 is
   a) 3780
   b) 3680
   c) 4780
   d) 4680
4. The product of HCF and LCM of 60,84 and 108 is
   a) 55360
   b) 35360
   c) 45500
   d) 45360
5. 108 can be expressed as a product of its primes as
   a) $2^3 \times 3^2$
   b) $2^3 \times 3^3$
   c) $2^2 \times 3^2$
   d) $2^2 \times 3^3$

CASE STUDY 3:

A Mathematics Exhibition is being conducted in your School and one of your friends is making a model of a factor tree. He has some difficulty and asks for your help in completing a quiz for the audience.

Observe the following factor tree and answer the following:

1.What will be the value of x?

a) 15005

b) 13915

c) 56920

d) 17429

2. What will be the value of y?

a) 23

b) 22

c) 11

d) 19

3. What will be the value of z?

a) 22

b) 23

c) 17

d) 19

4. According to Fundamental Theorem of Arithmetic 13915 is a

a) Composite number

b) Prime number

c) Neither prime nor composite

d) Even number

5. The prime factorization of 13915 is

a) $5 \times 11^3 \times 13^2$

b) $5 \times 11^3 \times 23^2$

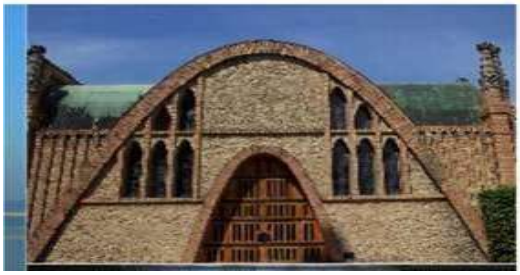
c) $5 \times 11^2 \times 23$

d) $5 \times 11^2 \times 13^2$

POLYNOMIALS- CASE STUDY

CASE STUDY 1:

The below picture are few natural examples of parabolic shape which is represented by a quadratic polynomial. A parabolic arch is an arch in the shape of a parabola. In structures, their curve represents an efficient method of load, and so can be found in bridges and in architecture in a variety of forms.



1. In the standard form of quadratic polynomial, $ax^2 + bx + c$, a, b and c are

a) All are real numbers.

b) All are rational numbers.

c) 'a' is a non zero real number and b and c are any real numbers.

d) All are integers.

2. If the roots of the quadratic polynomial are equal, where the discriminant D = b^2 – 4ac, then

a) D > 0

b) D < 0

c) D ≥ 0

d) D = 0

3. If $\alpha \; and \; \frac{1}{\alpha}$ are the zeroes of the quadratic polynomial $2x^2 - x + 8k$, then k is

a) 4

b) $\frac{1}{4}$

c) $\frac{-1}{4}$

d) 2

4. The graph of $x^2+1=0$

a) Intersects x-axis at two distinct points.

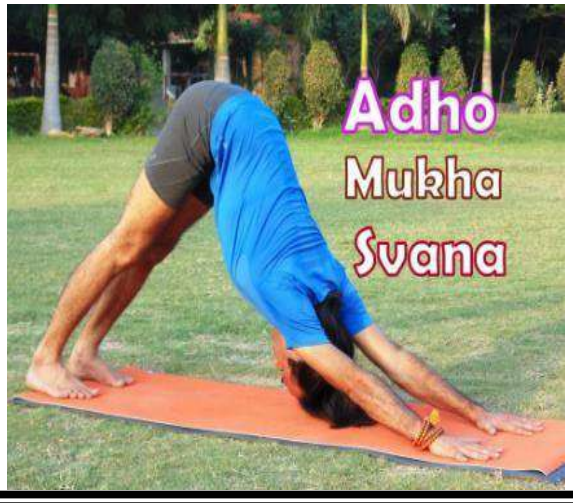
b) Touches x-axis at a point.

c) Neither touches nor intersects x-axis.

d) Either touches or intersects x- axis.

CASE STUDY 2

An asana is a body posture, originally and still a general term for a sitting meditation pose, and later extended in hatha yoga and modern yoga as exercise, to any type of pose or position, adding reclining, standing, inverted, twisting, and balancing poses. In the figure, one can observe that poses can be related to representation of quadratic polynomial.



1. The shape of the poses shown is

a) Spiral

b) Ellipse

c) Linear

d) Parabola

2. The graph of parabola opens downwards, if _____

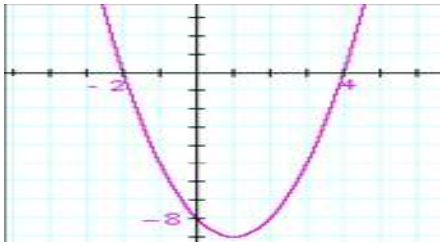
a) $a \geq 0$

b) $a = 0$

c) $a < 0$

d) $a > 0$

3. In the graph, how many zeroes are there for the polynomial?



a) 0

b) 1

c) 2

d) 3

4. The two zeroes in the above shown graph are

a) 2, 4

b) -2, 4

c) -8, 4

d) 2,-8

5. The zeroes of the quadratic polynomial $4\sqrt{3}x^2 + 5x - 2\sqrt{3}$ are

a) $\frac{2}{\sqrt{3}}, \frac{\sqrt{3}}{4}$

b) $-\frac{2}{\sqrt{3}}, \frac{\sqrt{3}}{4}$

c) $\frac{2}{\sqrt{3}}, -\frac{\sqrt{3}}{4}$

d) $-\frac{2}{\sqrt{3}}, -\frac{\sqrt{3}}{4}$

CASE STUDY 1:

Raj and Ajay are very close friends. Both the families decide to go to Ranikhet by their own cars. Raj's car travels at a speed of x km/h while Ajay's car travels 5 km/h faster than Raj's car. Raj took 4 hours more than Ajay to complete the journey of 400 km.

1. What will be the distance covered by Ajay's car in two hours?

a) 2(x +5)km

b) (x – 5)km

c) 2(x + 10)km

d) (2x + 5)km

2. Which of the following quadratic equation describe the speed of Raj's car?

a) $x^2 - 5x - 500 = 0$

b) $x^2 + 4x - 400 = 0$

c) $x^2 + 5x - 500 = 0$

d) $x^2 - 4x + 400 = 0$

3. What is the speed of Raj's car?

a) 20 km/hour

b) 15 km/hour

c) 25 km/hour

d) 10 km/hour

4. How much time took Ajay to travel 400 km?

a) 20 hour

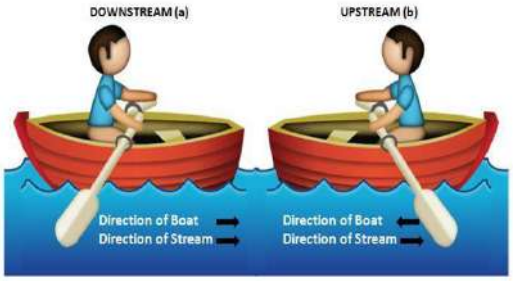
b) 40 hour

c) 25 hour

d) 16 hour

CASE STUDY 2:

The speed of a motor boat is 20 km/hr. For covering the distance of 15 km the boat took 1 hour more for upstream than downstream.



1. Let speed of the stream be *x* km/hr. then speed of the motorboat in upstream will be

a) 20 km/hr

b) (20 + *x*) km/hr

c) (20 - *x*) km/hr

d) 2 km/hr

2. What is the relation between speed, distance and time?

a) speed = (distance)/time

b) distance = (speed)/time

c) time = speed x distance

d) speed = distance x time

3. Which is the correct quadratic equation for the speed of the current?

a) $x^2 + 30x - 200 = 0$

b) $x^2 + 20x - 400 = 0$

c) $x^2 + 30x - 400 = 0$

d) $x^2 - 20x - 400 = 0$

SCIENCE

(i) PHYSICS

1. Draw the image formation for Concave Mirror.
2. Define focal length & radius of curvature.
3. Write mirror formula.
4. Define linear magnification.
5. Why is convex mirror preferred as rear view mirror?
6. The radius of curvature of a concave mirror is 60 cm. Find its focal length.
7. An object is kept at a distance of 30 cm from concave mirror of focal length 20 cm. Find the nature and position of the image.
8. Linear magnification produced by a mirror is +1. What does it mean?
9. Write any two uses of concave mirror.
10. State the sign convention for mirror.

(ii) CHEMISTRY

Q.1 Define chemical reaction and chemical equation with suitable examples.
Q.2 Discuss different types of reactions.
Q.3 What happens when-
A. Quick lime is treated with water?
B. Magnesium ribbon is burnt in the air and the compound so formed is collected in wet spoon?
Q.4 Balance the following equations-
A. $Na + O_2$ -----> Na_2O
B. $BaCl_2 + H_2SO_4$ ------> $BaSO_4 + HCl$
C. $Pb(NO_3)_2$ ------> $PbO + NO_2 + O_2$
D. $C_6H_{12}O_6 + O_2$ ------> $CO_2 + H_2O$ + Heat

(iii) BIOLOGY

Chapter- Life Processes

CASE STUDY 1

All living organisms have certain characteristics that distinguish them from non-living forms. The basic processes of life include organization, metabolism, responsiveness, movements, and reproduction. In humans, who represent the most complex form of life, there are additional requirements such as growth, differentiation, respiration, digestion, and excretion. All of these processes are interrelated. No part of the body, from the smallest cell to a complete body system, works in isolation. All function together, in fine-tuned balance, for the well being of the individual and to maintain life.

Q1 The steps for construction of a wall using stones as raw material is give below . Match them with the term used in our digestive system which best explain the steps involved .

1. Large rock brought into the industry
2. Part- 1 larger rock broken down into smaller rocks.

   Part -2 smaller rock used to make bricks and cement.
3. Bricks and cement sent to the construction site.
4. Bricks and cement are used to built a wall.
5. Wasted dust is thrown away.

(A) 1-> Ingestion; 2-> Absorption; 3-> Digestion; 4-> Assimilation;5-> Egestion

(B) 1-> Ingestion;2-> Digestion; 3-> Assimilation;4-> Absorption;5-> Egestion

(C)1-> Ingestion;2-> Assimilation;3-> Digestion;4-> Absorption;5-> Egestion

(D)1-> Ingestion;2-> Digestion;3-> Absorption;4-> Assimilation;5-> Egestion

Q2 There's a red blood cell present in the arteries of Shyam's brain . After some time , same cell was spotted in Shyam's fingers . Can you tell which path did this red blood cell take to go from brain to fingers ?

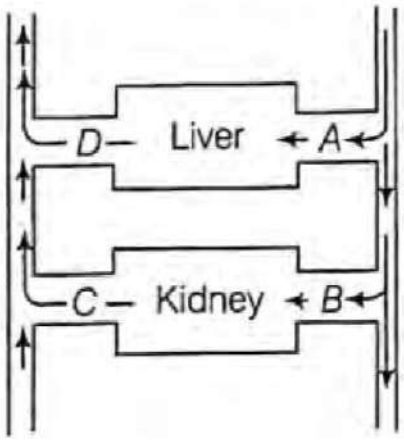
(A) Arteries of Brain -> Brain Cells ->Veins->Heart->Lungs->Heart->Arteries of Finger

(B)Arteries of Brain ->Arteries of Finger(no intermediate steps involved)

(C)Arteries -> Cells in brain ->Veins->Heart->Arteries of Finger

(D) Arteries of Brain -> Brain Cells ->Arteries ->Heart->Lungs->Heart->Arteries of Finger

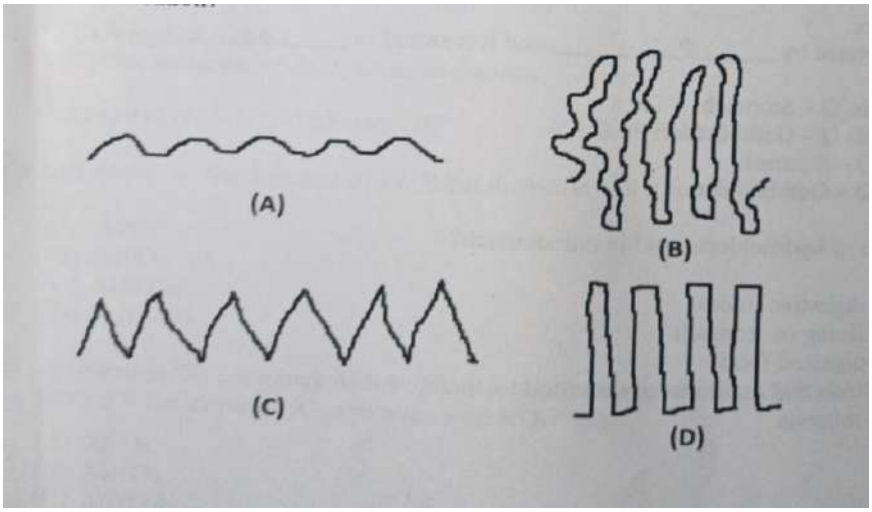
Q3 The diagram given below represents liver, kidney and some associated blood vessels.



Identify the blood vessels from labelled part A---> D in which blood will contain lowest concentration of urea.

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

Q4 Look at the structures in the figures . They are called villi. Suppose you could modify their design , which of the following is the best modification ?



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

Q5 Which of the following statement is NOT correct regarding respiration

(a) First step of anaerobic respiration takes place in cytoplasm.
(b) Pyruvate and energy are the product of aerobic respiration in cytoplasm.
(c) Due to lack of oxygen in the muscle cells ,lactic acid and carbon dioxide are main product formed in them.
(d) Aerobic respiration have more energy as comparison to anaerobic respiration.

Case study 2

The best way to distinguish a living organism from a non-living organism is to determine whether it does or does not have a metabolism. A metabolism is "the ongoing interrelated series of chemical interactions taking place in living organisms that provide the energy and nutrients needed to sustain life". Regulation, Growth, Nutrition, Excretion, Synthesis, Transport, Respiration, and Reproduction are the processes that make up the metabolism and are known as life's processes.

Q 1The diagram shows a fat globule (P) in one part of the alimentary canal and the same globule (Q) as it appears in another part of the alimentary canal. P Q

In which parts of the alimentary canal are P and Q found?

	P	Q
(a)	Liver	Large Intestine
(b)	Small intestine	Large intestine
(c)	Stomach	Small Intestine
(d)	Small Intestine	Stomach

Q2 The small intestines of cows are similar in general structure and function to the small intestines of humans. A disease in cows reduces the number of villi in their small intestines. The cows lose weight and become weak. What explains this?

(a) less amylase produced

(b) less peristalsis

(c) slower absorption of nutrients

(d) slower digestion of proteins

Q3 Which blood vessel has a high carbon dioxide concentration, a low oxygen concentration and a

high blood pressure?

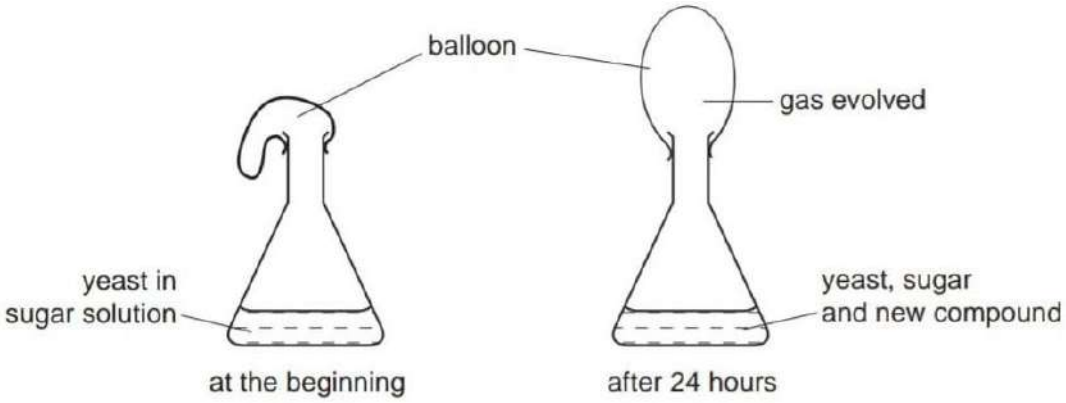
(a) aorta

(b) pulmonary artery

(c) pulmonary vein

(d) vena cava

Q 4The diagram shows an experiment to investigate the respiration of yeast.



Which gas is evolved and which new compound is present after 24 hours

	Gas evolved	New compound
(a)	Carbon dioxide	Ethanol (alcohol)
(b)	Carbon dioxide	Lactic acid
(c)	Oxygen	Ethanol (alcohol)
(d)	Oxygen	Lactic acid

Q5 What makes alveoli suitable as a gas exchange surface?

	large total surface area	well-supplied with blood vessels
(a)		
(b)		
(c)		
(d)		

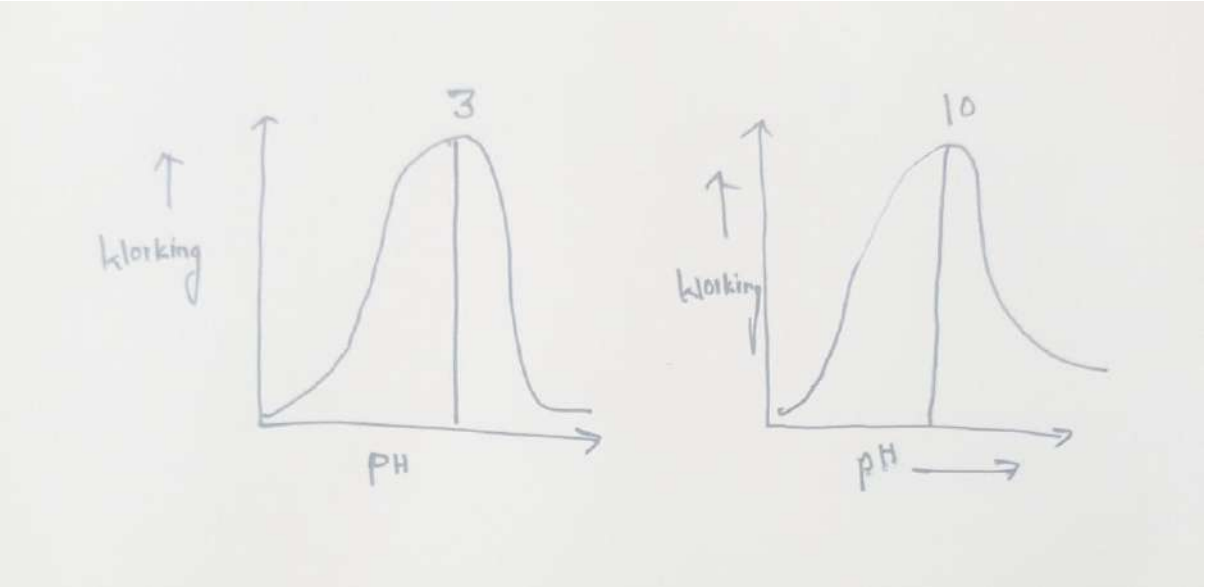
NORMAL MCQ

Q1 Which of the following when eaten will take lesser time than the other to get absorbed by our body?

Starch , Glucose

(a) Starch
(b) Glucose
(c) Both will take equal time to get absorbed
(d) These are not absorbable forms of carbohydrate.

Q2



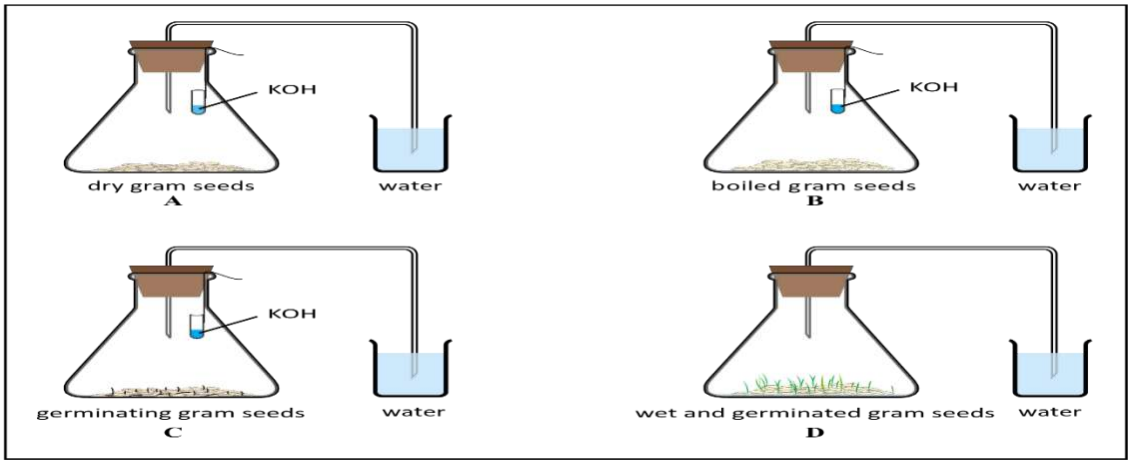
A. B

The graph representing working of two different enzymes A and B responsible for digestion of proteins present in human alimentary canal

Identify A and B respectively

A. Amylase and trypsin
B. Trypsin and pepsin
C. Pepsin and trypsin.
D. Both are pepsin at different pH level.

Q3 Given below are four different set ups to show that CO2 is released during respiration. The set up that will give the desired result is

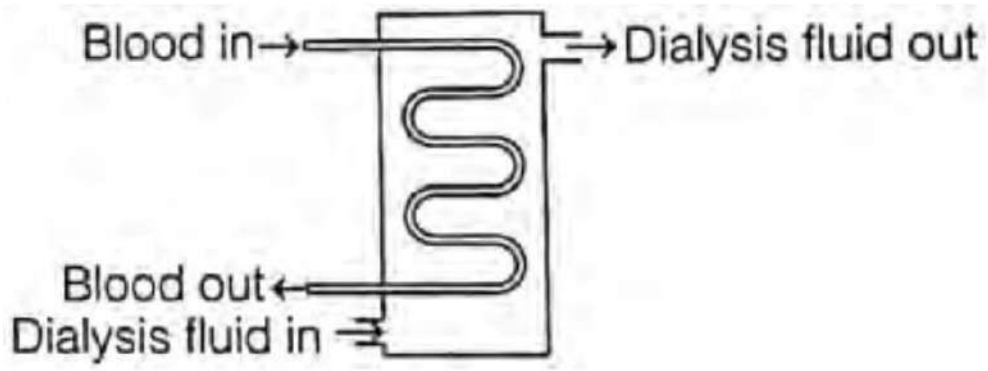


(a) A. (b) B. (c) C. (d) D

Q 4 How many CO_2 and H_2O molecules are required to make one molecule of glucose during Photosynthesis

(a) 6 CO_2 and 6 H_2O
(b) 12 CO_2 and 6 H_2O
(c) 6 CO_2 and 12 H_2O
(d) 12 CO_2 and 12 H_2O

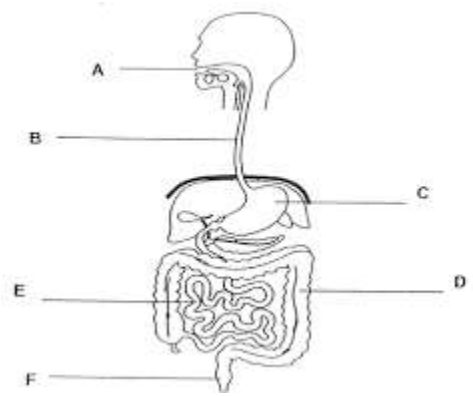
Q5 Figure given below representing the dialysis machine for removing nitrogenous waste in a patient with a kidney failure



Which substance out of the following in dialysis fluid should be at a lower concentration than in blood of the patient?

(a) Glucose and urea
(b) Glucose and amino acid
(c) Salts and urea
(d) Glucose and salts

Q6 Refer to the diagram of human digestive system to answer the following question



What would be the likely consequence of swapping E and D i.e. from the stomach food will pass through D to E?

(a) The digestive enzymes would be inactive.

(b) The intestinal content would be highly alkaline and would damage the walls of D

(c) The intestinal contents would be too dry and unable to pass through E properly.

(d) Water ansorption will be highly reduced.

Q7 What is transported in the phloem and what is the direction of transport?

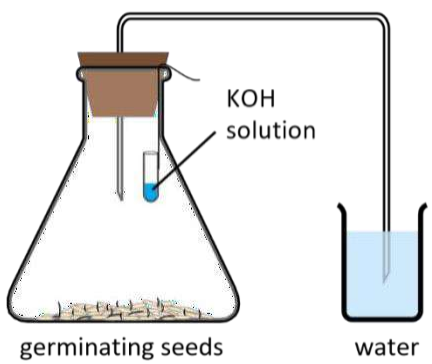
(a) starch, up and down

(b) starch, up only

(c) sucrose, down and up

(d) sucrose, down only

Q8 In the experiment shown in the figure, water is found to rise in the bent tube.

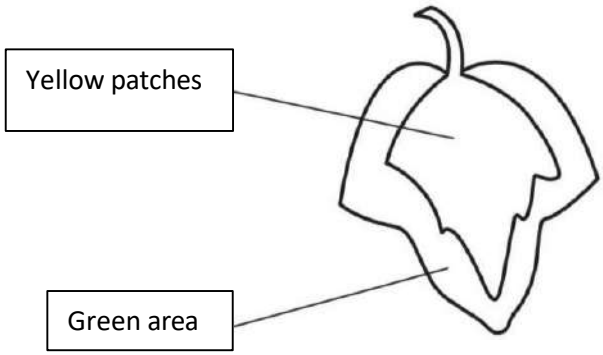


The reason is that

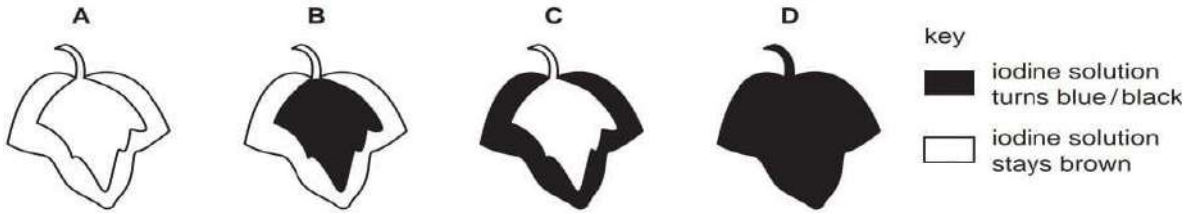
(a) seeds use up oxygen in the flask.
(b) carbon dioxide is given out by the germinating seeds.
(c) germinating seeds attract water from the beaker.
(d) seeds use oxygen and release carbon dioxide which is absorbed by potassium hydroxide.

Q 9 In a photosynthesis experiment, a plant is left in bright sunlight for several hours. A leaf is then removed from the plant and tested for starch, using iodine solution.

The diagram shows the leaf from the plant that was used in the experiment.



Which diagram shows the result of the experiment?



Q10 What is the function of the kidney?

(a) making glucose and reabsorbing urea
(b) making urea and removing salts
(c) removing glucose and reabsorbing salts
(d) removing urea and reabsorbing glucose

Q11 A child while playing on the ground falls and starts bleeding. What can you say about the pressure exerted by the blood on the walls of veins?

(A) Increases

(B)Decreases

(C)Remain Same

Q 12There's a red blood cell present in the arteries of Shyam's **brain .** After some time , same cell was spotted in Shyam's **fingers** . Can you tell which path did this red blood cell take to go from **brain to fingers** ?

(A) Arteries of Brain -> Brain Cells ->Veins->Heart->Lungs->Heart->Arteries of Finger

(B)Arteries of Brain ->Arteries of Finger(no intermediate steps involved)

(C)Arteries -> Cells in brain ->Veins->Heart->Arteries of Finger

(D) Arteries of Brain -> Brain Cells ->Arteries ->Heart->Lungs->Heart->Arteries of Finger

Q13 The Chapatis we eat are rich with carbohydrates, these carbohydrates are broken down inside our body to form glucose. Choose the option which correctly represents the relation between the sizes of the substances mentioned .

(A) Glucose **<** Carbohydrates

(B) Glucose **>** Carbohydrates

(C) Glucose **=** Carbohydrates

(D) None of the above are correct.

Q14 What will be the impact on fats digestion in the human liver not able to produce bile juice

A) Fats will be digested easily by the pancreas .
B) No impact on digestion of fats will be absorbed .
C) Lipase enzyme not able to digest fats properly because they are not emulsified.
D) Fats remain undigested always.

Q15 the energy reserve in case of animals is

a) Glucose
b) Glycogen
c) Sucrose
d) Starch

Q16 Which one is **NOT** a part of human alimentary canal

a) Oesophagous
b) Liver
c) Rectum
d) Colon

Q17 The conversion of glucose into pyruvate during aerobic respiration takes place in

a) Mitochondria
b) Cytoplasm

c) Yeast cell
d) Muscle cells

Q18 The *Paramoecium* have special groove having hair like structure to engulf food .These hair like structures is/are

a) Pseudopodia
b) Flagella
c) Cilia
d) Oral groove

Q19 double circulation is found in

a) Human being
b) Birds
c) Dogs
d) All of the above

Q20 viruses are non living outside because they are

a) Acellular
b) Do not show molecular movements.
c) Multiply inside the body of the host only.
d) All of the above.

ASSERTION REASON TYPE

Q 1 ASSERTION (A)- Pyruvic acid is the intermediate product for both aerobic and anaerobic respiration.

REASON (R)- During breakdown of respiratory substrate glucose pyruvate is formed in the mitochondria of a cell.

Q2 ASSERTION (A) – Lungs always contain residual volume of air.

REASON – (R)- It provide sufficient time for O_2 to be released and CO_2 to be absorbed.

Q3ASSERTION- The break down of fats into emulsified fats occur in liver.

REASON- Emulsification process facilitate the action of lipase enzyme secreted from pancreas.

Q4 **ASSERTION**- during various pathways of oxidation of glucose during respiration , carbon dioxide gas is not released.

REASON- This is due to incomplete oxidation of pyruvate in muscles during vigorous exercise.

Q5 **ASSERTION**- Fishes have higher respiration rate as comparison to human being.

REASON- it is necessary to meet oxygen requirements in them dissolved in water.

Q6 ASSERTION- Tubular part of nephron help in formation of urea and osmoregulation .

REASON- Tubular part help to maintain concentration of human urine.

Q7 ASSERTION- Diffusion is insufficient to meet oxygen requirement in case of multicellular organisms like human

REASON- all the body cells are not in direct contact with the environment.

Q8 ASSERTION- photosynthesis is the process in which light energy changes to chemical energy.

REASON- by using raw materials like carbon dioxide and water in presence of sunlight and chlorophyll ,glucose molecules are formed.

Q9 ASSERTION- residual volume is important in lungs.

REASON- it prevent the lungs from collapsing and provide sufficient time for oxygen to be released and carbon dioxide to be absorbed.

Q10 ASSERTION- Renal vein carry deoxygenated blood back to the heart and having less concentration of urea.

REASON- after glomerular filtration and tubular reabsorption the blood having less concentration of urea collected by renal vein.

SOCIAL SCIENCE

CBSE PROJECT

(1) Prepare a PROJECT REPORT on any topic from the following (Interdisciplinary)

(A) Consumer Rights
OR
(B) Social Issues
OR
(C) Sustainable Development

As per the following Guidelines:

(a) 15 to 20 handwritten pages
(b) Paste pictures on left hand side
(c) Beginning with Cover page with School name, Topic and Submitted to and Submitted by
(d) Acknowledgement
(e) Certificate
(f) List of Contents (Chapter no.and page no.)
(g) BIBLIOGRAPHY in the end of report

The distribution of marks over different aspects relating to Project Work is as follows:

S.No.	ASPECTS	MARKS
1.	Content accuracy and originality	1
2.	Presentation and creativity	1
3.	Process of Project Completion: Initiative, cooperativeness, participation and punctuality	1
4.	Viva	

(2) Complete your Home Assignment copies along with notes and questions and Answers.

(3) Learn all the content taught till date.

COMUPUTER SCIENCE

Personal attributes that contribute to overall employability include commitment, adaptability, honesty and integrity, reliability, ability to deal with pressure, motivation, and cultural fit with the employing organization.

Artificial intelligence (AI) is a set of technologies that enable computers to perform a variety of advanced functions, including the ability to see, understand and translate spoken and written language, analyze data, make recommendations, and more.

Information technology (IT) is the use of computers to store, retrieve, transmit, and manipulate data or information. IT is considered to be a subset of information and communications technology (ICT).

In order to explore these skills & technology, perform the following:

- Choose a topic from your textbook & create a pictorial poster on a chart paper demonstrating the message.
- Complete the notes in your notebook & prepare Unit 1: Communication Skills - I