



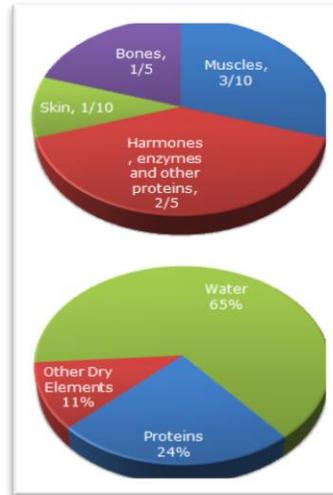
ARMY PUBLIC SCHOOL RATNUCHAK
MULTIPLE ASSESSMENT
SESSION 2020-21
CLASS X

ENGLISH

1. The following pie chart gives the information about the distribution of weight in the human body according to different kinds of components. Study the pie charts and answer the question.

(3)

Distribution of Weight in Human Body



2. Refer to the following graph and make a ANALYTICAL report.

(3)

The total values of food grains (rice and wheat) imported during these years are given below:

1971-72 : Rs. 123 crore

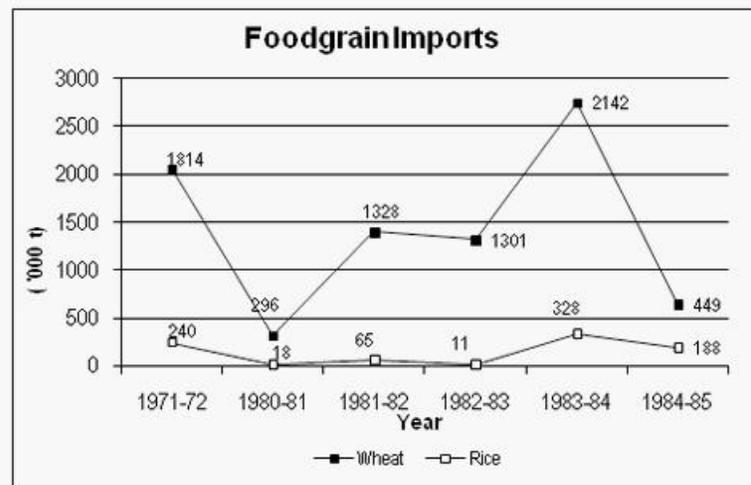
1980-81 : Rs. 80 crore

1981-82 : Rs. 314 crore

1982-83 : Rs. 295 crore

1983-84 : Rs. 587 crore

1984-85 : Rs. 158 crore



3. Each line of text contains an error Identify the error and correct it.

(4)

The smell of rotten eggs probably make you cringe, but for penguins
this smell should mean there's a meal nearby.
New research shows that penguins are attracting to
this rotten-egg smell and probably uses it when foraging for food
in the ocean. The study is one of the first showing
that penguins have a functioning sense for smell.
Although penguins can be smelly, they aren't know
for a keen sense of smell. New research suggest that they
can be able to detect certain odors to locate food.

4. CLOZE PASSAGE

(2)

Failure is probably one of the _____ discouraging moments in our lives. Failure _____ not, however, break our spirit. Instead, we should use the _____ learnt from our defeat to spur us _____ to greater achievements.

- A. most/much/many/more
- B. ought to/must/should/need to
- C. less /lesson/lessen/lessons
- D. on/at/over/in

5. In the following passage there are blanks, each of which has been numbered. These numbers are printed below the passage and against each, five words/phrases are suggested, one of which best fits the blank appropriately. Find out the appropriate word in each case. (5)

“Even after 60 years of independence it is disgraceful that we are yet to put our infrastructure in __ (1) __. There are two types of infrastructure in the country. One is the basic infrastructure such as water supply, drainage, education etc. The other is for comfort such as excellent roads, high speed trains etc. We have not __ (2) __ on either. What is the problem? Is it lack of money or funds ? It may not __ (3) __ be so. We simply do not know how to go about things. What we have done is that we have __ (4) __ a number of layers of decision making authorities and too __ (5) __ agencies and regulations. We must get a number of __ (6) __ to get anything done. We need leadership not only in politics but also in administration. We need definition of our objectives such as what we need, why we need, and when we need it. __ (7) __ important point is clarity of ideology. Lastly and most importantly identification of a right person for the job is __ (8) __. What we need is systematic change. Leadership and commitment make all the __ (9) __ in getting things done. There has to be an appreciation that __ (10) __ in infrastructure delivers a force multiplier for the economy.”

Options:

- | | | | | |
|------------------|--------------|---------------|---------------|---------------|
| 1.A organize | B place | C vicinity | D commitment | E duty |
| 2.A accomplished | B attained | C established | D qualified | E delivered |
| 3.A quietly | B inevitably | C because | D necessarily | E voluntarily |
| 4.A created | B resulted | C caused | D invented | E influenced |
| 5.A great | B abundant | C many | D much | E manifold |
| 6.A hardships | B attempt | C bribe | D clearances | E skill |
| 7.A Another | B Different | C Others | D Moreover | E Distinctly |
| 8.A expected | B dependent | C awaited | D inherent | E essential |
| 9.A basics | B similarity | C difference | D rigidity | E modesty |
| 10A building | B investment | C developing | D generating | E modifying |

6. Fill in the blanks choosing the most appropriate words from the given options. (3)

Once upon a time, there (a)----- a young girl who was very proud of her beauty. One day she (b) ----- rudely to an angel who was really upset with her. The angel (c) ----- the girl that she would change into a dirty frog. The girl became sad and (d) ----- crying. She fell at the angel's feet and (e) ----- for her rude behaviour. The angel was very kind. She felt sorry for the girl and said that she could be free of the curse if she (f) ----- with other frogs for one month.

- a) (i) was living (ii) lives (iii) lived (iv) has lived

b)

- b) (i) speaking (ii) was speaking (iii) spoke (iv) speaks
c) (i) curses (ii) cursed (iii) was cursing (iv) cursing
d) (i) started (ii) starts (iii) has started (iv) had started
e) (i) apologize (ii) apologized (iii) was apologizing (iv) has apologized
f) (i) stays (ii) stayed (iii) was staying (iv) staying

7. Fill in the blanks choosing the most appropriate words from the given options. (3)

We (a) ----- Australia last summer. It was a very memorable experience. One day we (b) ----- hiking with some local boys. Hiking through the scrub, we (c) --- ----- lucky to see the Kangaroo. It (e) ----- quietly with only its ears moving. While he focused his camera my brother (f) ----- me to keep still. Suddenly the animal (g) ----- away.

- a) (i) visited (ii) visiting (iii) were visiting (iv) visit
b) (i) go (ii) went (iii) were going (iv) had gone
c) (i) are (ii) have (iii) were (iv) had
d) (i) sat (ii) is sitting (iii) was sitting (iv) had sat
e) (i) motioned (ii) was motioning (iii) motions (iv) had motioned
f) (i) bounds (ii) bounded (iii) was bounded (iv) bounding

8. Fill in the blanks

(2)

Multiple sclerosis (MS) is a diseasea..... (in / for / with) which, the patient's immune systemb..... (attacks / is attacking / attacked) the central nervous system. This canc..... (lead / leads / led) to numerous physical and mental systems,d..... (as / which / then) the disease affects the transmission of electrical signalse..... (between / among) the body and the brain.f..... (Therefore / However / Thus), the human body, being a flexible, adaptable system, can compensateg..... (with / for / to) some level of damage, so a person with MS can look and feel fineh..... (even though / because / despite) the disease is present.

HINDI

प्रश्न 1—विद्यालय में योग शिक्षा का महत्त्व बताते हुए किसी समाचार पत्र के संपादक को पत्र लिखिए। 5 अंक

प्रश्न 2—लॉकडाउन का उल्लंघन न करने का निर्देश देते हुए सरकार द्वारा एक विज्ञापन एवं सूचना जन हित में जारी कीजिए। 10 अंक

प्रश्न 3—'बड़े भाई साहब'पाठ में आए सभी मुहावरों को खोजकर लिखिए एवं उन मुहावरों का वाक्य में प्रयोग कीजिए। 10 अंक

MATHS

- Q1. Show that any numbers of the form 12^n , $n \in \mathbb{N}$ can never end with the digit 0.
Q2. Find the HCF and LCM of 6, 72 and 120, using the prime factorisation method.
Q3. Use Euclid's division lemma to show that the cube of any positive integer is of the form $9m$, $9m + 1$ or $9m + 8$.
Q4. Show that square of every odd natural number is of the form $8q + 1$ for some integer q .
Q5. Prove that $7\sqrt{5}$ is irrational.
Q6. Prove that $\sqrt{p} + \sqrt{q}$ is irrational, where p, q are primes.
Q7. Find all the zeroes of $2x^4 - 3x^3 - 3x^2 + 6x - 2$, if you know that two of its zeroes are $\sqrt{2}$ and $-\sqrt{2}$.

Q8. If the polynomial $x^4 - 6x^3 + 16x^2 - 25x + 10$ is divided by another polynomial $x^2 - 2x + k$, the remainder comes out to be $x + a$, find k and a .

Q9. Divide $3x^3 + x^2 + 2x + 5$ by $1 + 2x + x^2$.

Q10. If the sum of the squares of zeroes of the quadratic polynomial $f(x) = x^2 - 8x + k$ is 40. Find the value of k .

SCIENCE

Chemical reactions and equations

Q1 A metal nitrate A on heating gives a yellowish brown metal oxide along with a brown gas B and a colorless gas C. aqueous solution of A on reaction with potassium iodide forms a yellow precipitate of compound D. identify A, B, C and D

Q2. Ferrous sulphate crystals decomposes with the evolution of a gas with a characteristic smell of burning sulphur. Write the chemical reaction involved and the type of reaction.

Q3. A solution of potassium chloride when mixed with silver nitrate solution, an insoluble white substance is formed. Write the type of chemical reaction and the corresponding balanced chemical equation.

Q4. In a solution of copper sulphate, a strip of metal M was inserted. After some time, the colour of copper sulphate solution faded away. Which metal is more reactive and which one is less? Give equation. Also mention the type of reaction.

Q5. Name one metal which can displace zinc from its salt solution and one metal which cannot displace zinc from its salt solution.

Q6. What happens when limestone is heated strongly? What type of reaction is this?

Q7. What happens when an aqueous solution of barium chloride is mixed with an aqueous solution of sodium sulphate? Write the equation also.

Q8. Give an example of a reaction which is both an exothermic and combination reaction.

Q9. Why does milkiness disappear when carbon dioxide is passed through lime water in excess?

Q10. Suggest any two observations in an activity which may suggest that a chemical reaction has taken place. Give example in support of your answer.

Q11. What is wrong with the following equation- $N_2 + 3H_2 \longrightarrow NH_3$

Q12. Solid calcium oxide was taken in a container and water was added to it slowly.

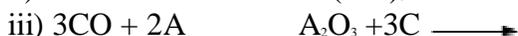
(i) State any two observations made in the experiment.

(ii) Write the name and chemical formula of the product.

HOTS

1. What change will you observe if white silver chloride is placed in sunlight? Write an equation for the reaction and the type of reaction.

2. A, B and C are three elements which undergo chemical reactions according to the following equations



Answer the following questions with reasons

a) Which element is the most reactive?

b) Which element is the least reactive?

c) What is the type of reactions listed above?

3. What is a redox reaction? Identify the substance oxidized and substance reduced in the following reactions



4. Write a balanced chemical equation to represent the following reaction

Carbon Monoxide reacts with hydrogen gas at 340 atm. To form methyl alcohol.

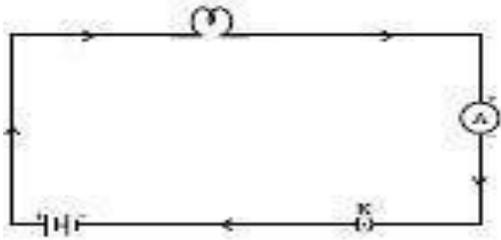
5. Write the observation with reaction for the following
Granulated zinc reacts with dilute sulphuric acid.
6. Name two salts that are used for black and white photography. Give reactions when they are exposed to sunlight.
7. What happens when an iron nail is put inside copper sulphate solution? Write reaction with observation.
8. (a) What do you see when a magnesium ribbon is burnt? Is magnesium oxidized or reduced in the reaction?
(b) Define corrosion.
9. A solution of potassium chloride when mixed with silver nitrate solution, an insoluble white substance is formed. Write the chemical reactions involved and also mention the type of reaction.
10. A substance X, which is an oxide of a metal, is used extensively in the cement industry. This element is present in bones also. On treatment with water, it forms a mixture which turns red litmus blue. Identify X and also write the chemical reaction involved.
11. Why do we store silver chloride in dark colored bottles?
12. Oxidation and reduction processes occur simultaneously. Justify the statement.

BIOLOGY

- Q1: Mention the raw materials required for photosynthesis.
- Q2: Name the green dot like structures in some cells observed by a student when a leaf peel was viewed under a microscope. What is this green color due to?
- Q3: What is saliva? State its role in digestion of food.
- Q4: What are the final products after digestion of carbohydrates and proteins?
- Q5: Why do herbivores have longer, small intestine than carnivores?
- Q6: State the role of the following in human digestive system
a) Digestive enzymes b) hydrochloric acid c) villi
- Q7: i) Draw a diagram to show open stomatal pore and label on it: a) guard cells b) chloroplast
ii) State two functions of stomata.
iii) How do guard cells regulate the opening and closing of stomatal pore?
- Q8: i) Leaves of a healthy potted plant were coated with Vaseline to block the stomata. Will this plant remain healthy for long time? State three reasons for your answer.
ii) State any two differences between autotrophic and heterotrophic nutrition.
- Q9: State the three events that occur during the process of photosynthesis. Explain the role of stomata in the process.
ii) Describe an experiment to show that "sunlight is essential for photosynthesis".
- Q10: i) Draw a diagram depicting human alimentary canal and label on it: gall bladder, liver and pancreas.
ii) State the role of liver and pancreas
iii) Name the organ which performs the following function in humans:
- absorption of digested food
- absorption of water
- Q11: Explain the process of digestion in mouth, stomach and small intestine in human body.
- Q12: Draw a diagram to show nutrition in Amoeba and label the parts used for this purpose. Mention any other purpose served by this part other than nutrition.
- Q13: a) Name the glands associated with digestion of starch in human digestive system and mention its role.
b) How is pH maintained in stomach and small intestine?
- Q14: a) Name the enzyme present in saliva?
b) What is emulsification?

PHYSICS

- Q1. The amount of charge in a material is $20 \times 10^{-19} \text{ C}$. Find the number of electrons in that material
- Q2. Connect the voltmeter across the electric bulb which is shown in the given figure



Q3. Write the name of device which is used to maintain the potential difference across the ends of the conductors .

Q4. The resistivity of material X is $10 \times 10^{-8} \Omega\text{m}$ and material Y has $44 \times 10^{-6} \Omega\text{m}$. Which material is a good conductor of electricity .

Q5. Will current flow more easily through a thick wire or a thin wire of same material, when connected to the same source .

Q6. Why are the coils of electric toaster and electric iron are made of an alloy rather than a pure metals. Explain ?

Q7. Why series arrangement not used for connecting domestic electrical appliances in a circuit .

Q8. Write one important advantages of using alternating current over the direct current.

Q9. A wire of resistance 5 ohm is bend in the form of closed circle . What is the effective resistance between the two points at the ends of any diameter of circle.

Q10. Which uses more energy , a 250 W TV set in 1 hour or 1200 W toaster in 10 minutes

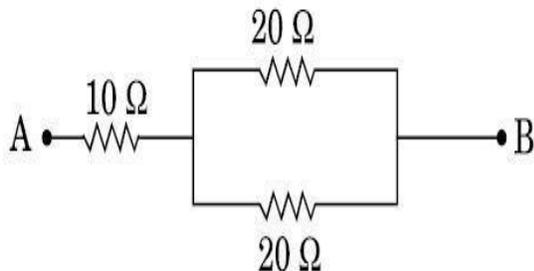
Q11. Two lamps , one rated 100 W at 220 V and the other 60 W at 220 V are connected in parallel to the electric main supply . What current is drawn from the line if the supply voltage is 220 V.

Q12. A piece of wire of resistance R is cut into five equal parts . These parts are then connected in parallel. If the equivalent resistance of this combination is R^* . Find the ratio of R and R^* .

Q13. An electric refrigerator rated 400 W operated 8 hour /day. What is the cost of the energy to operate it for 30 days at 3.00 per kWh.

Q14. Three resistors R_1, R_2 and R_3 are connected in parallel and the combination is connected to the battery, ammeter , voltmeter and key. Draw a suitable diagram and obtain an equivalent resistance in parallel combination.

ii. Calculate the equivalent resistance of the following network :-



Q15. Two wires A and B are of equal length , different cross sectional area and made of the same metal.

i. Name the property which is same for both the wires.

ii. Name the property which is different for both the wires.

iii. If the resistance of wire A is four times the resistance of wire B . Calculate the a. ratio of the cross sectional area of the wire.

b. the ratio of the radii of the wire.

Q16. How does the resistance of wire changes when

i. Its length is double.

ii. Its radius is double.

iii. Its material is changed to one whose resistivity is three times.

iv. List of two reasons why nichrome is used for making heating element of electrical appliances.

SOCIAL SCIENCE

1. Write a detail report on “JallianwalaBagh Massacre”
Or
Write a detail report on “ Non-Cooperation Movement”

NOTE:

Students complete their Multiple Assessment on their class work notebook. Each Assessment consists of 25 marks per subject and it is compulsory.