ARMY PUBLIC SCHOOL RATNUCHAK
MULTIPLE ASSESSMENT
SESSION 2021-22
CLASS X

ENGLISH

1. Choose the correct option and fill up the blanks. **3 M**

A number of my friends_____(i) riding bicycles, but neither my brother nor my sister___(ii) a bicycle. At 4 o‟clock, either my mother or father will be coming to ---------- (iii) me up (in a car).

a) love b) loves c) Loved	a) own b) owned c) Owns	a) picks b) pick c) picked

2. Read the conversation given below and complete the paragraph by choosing appropriate options given below: **5M**

i) Customer: Can I have a bottle of juice?
Shopkeeper: Sorry, we only have milk bottles.
Customer: When will it be available? Shopkeeper: I can give it to you tomorrow. Customer: Thank you, then I will come tomorrow. Shopkeeper: Will you come in the evening?
The customer asked the shopkeeper (i)…….The shopkeeper apologized and said (ii)…….The customer wanted to know (iii)……The shopkeeper said that (iv)…next day.The customer thanked him and said that (v) ……..The shopkeeper asked if he would come in the evening.

(i) a) if he could have a bottle of juice
b) if he could give a bottle of juice
c) That he could have a bottle of juice

(ii) a) they has only milk bottles

b) they could give only milk bottles

c) they only had milk bottles

(iii) a) where that would be available

b) When that would be available

c) If that would be available

(iv) a)he could give that to him the

b)He would give that to him the

c) He must give that to him the

(v) a)he would come the following day

b)he can come the following day

c)he should come the following day.

3. Fill in the blanks by choosing the correct options given for the sentences given below **4M**

The pair of shoes on the floor_____(i) mine. The shoes_____(ii) made in Italy. The 300 dollars I spent on them was worth it. The reasons for rise in the prices ---------- (iii) ----------many. I_____(iv) not regret such expensive purchase.

(i) a) are b) is c) Has

(ii) a) is b) are c) were

(iii) a) is b) are c) has

(iv) a) does b) did c) do

4. Choose the correct option to complete the narration : **3M**

Principal :What is your name?

Boy :My name is Anil.

Principal : Have you come for admission?

Boy: Yes sir.

The Principal saw a boy waiting at the door of his office. He asked him_____. He replied that his name was Anil. Then the Principal_come for admission. Anil replied in the affirmative that he_____.

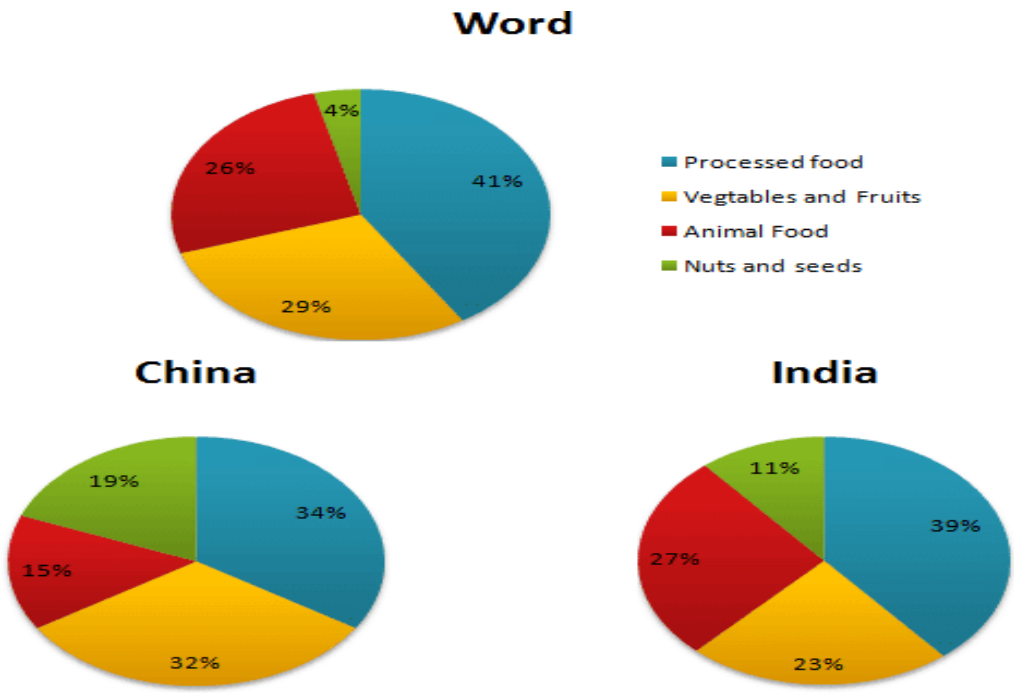
i) a) what his name was b) what his name is c) what is his name d) what was his name

ii) a) explained if he has b) questioned if he will c) said that he had d) enquired if he had

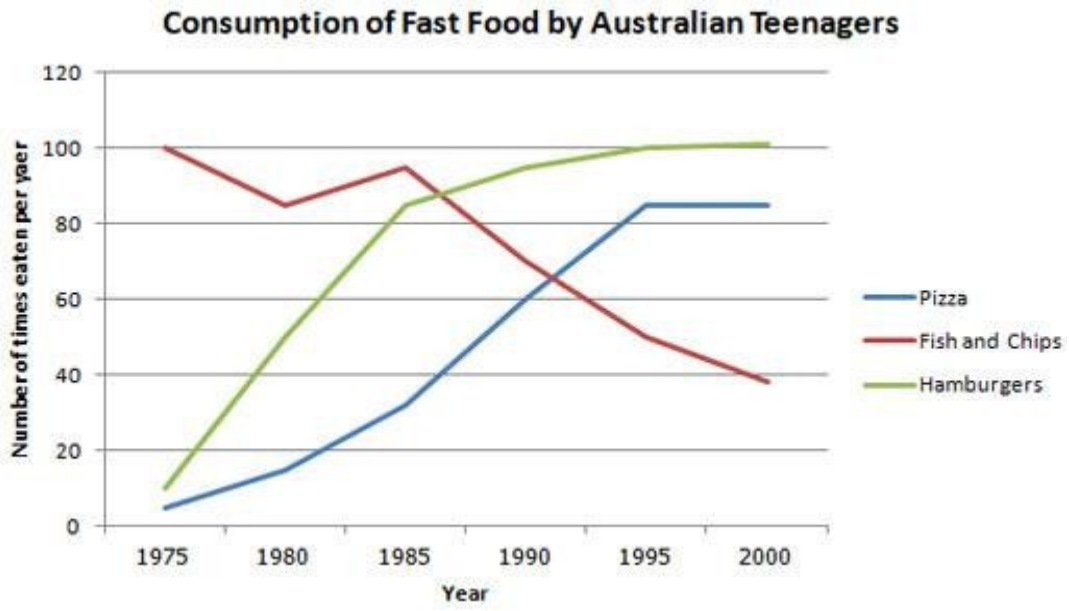
iii)a) has come for admission b) has came to admission c) had come for admission d) he was come for admission

5. The pie charts show the average consumption of food in the world in 2008 compared to two countries; China and India. Write a report to a university lecturer describing the data. Write at least 150 words.

5M



6. The line graph below shows changes in the amount and type of fast food consumed by Australian teenagers from 1975 to 2000. Summarize the information by selecting and reporting the main features and make comparisons where relevant. Write at least 150 words. (5)



HINDI

1. **कोरोना** काल में योग क्यूं आवश्यक है। इस विषय पर योग शिक्षा का महत्व बताते हुए अपने मित्र को 80-100 शब्दों में पत्र लिखें।

2. **'दो गज दूरी मास्क है जरूरी'** इस विषय पर एक विज्ञापन तैयार करें।

3. **बड़े भाई साहब** पाठ में प्राचीन शिक्षा प्रणाली की अनेक खामियों पर प्रकाश डाला गया है। प्राचीन और आधुनिक शिक्षा प्रणाली में क्या-क्या अंतर है 130-140 शब्दों में लिखें।

4. **कबीर के दोहों** को याद करें, किन्ही पाँच दोहों को सस्वर गाएं और विडियो बनाकर विषयाध्यापक को भेजें।

5. **बड़े भाई साहब** में आए किन्हीं 15 मुहावरों को खोजकर उनसे सुंदर- सा एक-एक वाक्य बनाएं।

MATHEMATICS

Q1. Show that any numbers of the form 12^n, n $\in$N can never end with the digit 0.

Q2. Show that$\sqrt{8}$ is an irrational number.

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. If $\sqrt{ab}$ is an irrational number, prove that $\sqrt{a} + \sqrt{b}$ is irrational.

Q5. If the zeroes of the polynomial $x^3 - 3x^2 + x + 1$ are $a - b$, a, $a + b$, find a and b.

Q6. Using Euclid's division algorithm, find which of the following pairs of numbers are co-prime: (i) 231, 396 (ii) 847, 2160

Q7. If the remainder on division of $x^3 + 2x^2 + kx + 3$ by $x - 3$ is 21, find the quotient and the value of k. Hence, find the zeroes of the cubic polynomial $x^3 + 2x^2 + kx - 18$.

Q8. 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.

Q9. Obtain all other zeroes of $x^4 - 3x^3 - x^2 + 9x - 6$, if two of its zeroes are $\sqrt{3}$ and $-\sqrt{3}$.

Q10. 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.

SCIENCE

CHEMISTRY

Q1. What happens chemically when quick lime is added to water?

Q2. How will you test for the gas which is liberated when HCL reacts with an active metal?

Q3. What is an oxidation reaction? Is it exothermic or endothermic? Give one example of oxidation Reaction.

Q4. Give an example of photochemical reaction.

Q5. Give an example of a decomposition reaction. Describe any activity to illustrate such a reaction by heating.

Q6. Why is respiration considered as exothermic process?

Q7. Balance the following chemical equation.

$Fe(s) + H_2O(g) = Fe_3O_4 + H_2(g)$

$MnO_2 + HCL = MnCl_2 + Cl_2 + H_2O$

$HNO_3 + Ca(OH)_2 = Ca(NO_3)_2 + H_2O$

Q8. On what basis is a chemical equation balanced?

Q9. State any two observations in an activity suggesting the occurrence of a chemical reaction.

Q10. Name a reducing agent which may be used to obtain manganese from manganese dioxide.

Q11. What change in colour is observed when silver chloride is left exposed to sunlight? Also mention the type of chemical reaction.

Q12. Define a combination reaction. Give one example of an exothermic combination reaction.

Q13. What is observed when a solution of potassium iodide is added to lead nitrate solution?
What type of reaction is this? Write a balanced chemical equation for this reaction.

Q14. Distinguish between an exothermic and an endothermic reaction.

Q15. Distinguish between a displacement and a double displacement reaction.

Q16. Identify the type of reaction in the following:

$Fe + CuSO_4(aq) = FeSO_4(aq) + Cu(s)$

$2H_2 + O_2 = 2H_2O$

Q17. In electrolysis of water, why is the volume of gas collected over one electrode double that of the other electrode?

Q18. What happens when water is added to solid calcium oxide taken in a container? Write a chemical formula for the same.

Q19. Give one use of quick lime.

Q20. Give three types of decomposition reaction.

Q21. Name the compound used for testing CO_2 gas.

BIOLOGY

(1 mark questions)

1. What are the raw materials for photosynthesis?

2. What is the role of bile juice in digestion?

3. Write the equation for respiration?

4. Name three types of blood vessels used in the transport of blood.

5. Name the artificial method for the removal of liquid nitrogenous waste from body?

6. Write any two points of difference respiration in plants and respiration in animals.

7. How are the alveoli designed to maximize the exchange of gases?

8. Name the passage in sequence through which urine passes from kidneys to the in humans. How is urine prevented from flowing back into the ureters?

(3 mark questions)

9. State the role of the following in the human respiratory system

(i)Nasal cavity (ii) Diaphragm (iii) Alveoli

10. Leaves of a healthy potted plant were coated with Vaseline to block the stomata. Will this plant remain healthy for long? State three reasons for your answer

11. Give reasons for the following:

(i)The glottis is guarded by epiglottis.

(ii) The lung alveoli are covered with blood capillaries.

(iii) The wall of trachea is supported by cartilage rings.

(5 mark question)

12. (i) Name the blood vessel that brings oxygenated blood to the human heart.

(ii) Which chamber of human heart receives oxygenated blood?

(iii) Explain how oxygenated blood from this chamber is sent to all parts of the body

PHYSICS

1.In the following column, the position of an object is given in column I and the nature of the image formed in a concave mirror is given in column II. Choose the right option.

Column I (Position of object)		Column II (Nature of image)	
(A)	At infinity	(p)	Real
(B)	Between infinity and centre of curvature	(q)	Inverted
(C)	At centre of curvature	(r)	Diminished
(D)	At focus	(s)	Enlarged
		(t)	Same size

	A	B	C	D
(a)	p, q	q	r, s	q,r
(b)	r, s	q, r	s, t	p, q, r, s
(c)	p, s	q	r, s, t	r
(d)	p, q, r	p, q, r	p, q, t	p, q

2.Match the following column .

	Column I		Column II
1.	Reflection	(a)	The radius of that sphere of which the mirror is a part.
2.	Refraction	(b)	The bouncing back of light from a smooth surface.
3.	Incident ray	(c)	A mirror whose reflecting surface is the part of a hollow sphere.
4.	Spherical mirror	(d)	The bending of light, when it passes from one medium to another.
5.	Rarer medium	(e)	A ray of light that strikes the reflecting surface.
6.	Denser medium	(f)	It is the degree of convergence or divergence of light rays achieved by a lens.
7.	Radius of curvature	(g)	A medium in which the speed of light is less.
8.	Focal length	(h)	The centres of spheres which form the part of the surface of the lens.
9.	Optic centre	(i)	The distance of the principal focus from the pole of the mirror.
10.	Power of lens	(j)	A medium in which the speed of light is more.

3.Match the following columns .

Column I		Column II	
(A)	Power of convex mirror	(p)	Positive power
(B)	Power of concave mirror	(q)	Negative power
(C)	Power of plane mirror	(r)	Zero power
(D)	Power of convex lens	(s)	Infinite power

4. In the following questions ,a statement of **assertion (A**) is followed by a statement of **reason (R).** Mark the correct choice as:-

*(a)both **assertion A** and **reason R** are true and reason is the correct explanation of assertion .*

*(b)both **assertion A** and **reason R** are true but reason is not the correct explanation of assertion .*

*(c)**assertion A** is true and **reason R** is false*

*(d) **assertion A** is false but **reason R** is true.*

*(e)both **assertion** and **reason R** are false .*

(i) Assertion: A point object is placed at a distance of 26 cm from the convex mirror of focal length 26 cm .The image will not formed at infinity .

Reason: for above given system ,the equation 1/u + 1/v =1/f gives v = infinity .

(ii) Assertion: keeping a point object fixed ,if a plane mirror is moved ,the image will also move .

Reason: In case of plane mirror, the distance of object and its image is equal from any point on the mirror.

(iii) Assertion: if a spherical mirror is dipped in water, its focal length is remain unchanged .

Reason : a laser light is focused by a converging lens. There will be a significant chromatic aberration .

(iv) Assertion : plane mirror may form real image .

Reason: plane mirror form virtual image,if objects is real.

(v) Assertion: if the rays are diverging after emerging from a lens; the lens must be concave.

Reason:the convex lens can give diverging rays .

(vi) Assertion: light travel faster in glass than air.

Reason: glass is denser than air .

(vii)Assertion: the height of the object is always take as positive.

Reason: an object is always placed above the principal axis in the upward direction.

(viii)Assertion: As light travels from one medium to another, the frequency of light does not change.

Reason: because the frequency is the characteristics of source.

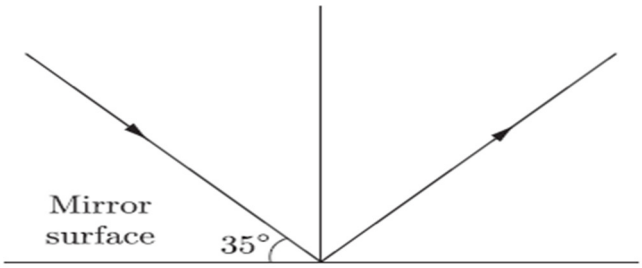
(ix) Assertion: the mirror used in search light are concave spherical.

Reason: in a concave spherical mirror ,the image formed is always virtual.

(x) Assertion: mirror formula can be applied to a plane mirror .

Reason: A plane mirror is a spherical mirror of infinite focal length.

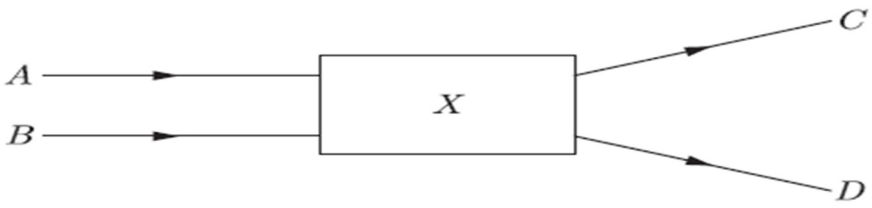
5.Find the angle of incident and angle of reflection from the given diagram :



6. An object is placed 60 cm in front of the concave mirror . the real image formed by mirror is located 30 cm infront of the mirror . what is the objects magnification ?

7.A man is 6 ft. tall. What is the smallest size plane mirror he can use to see his entire image

8.The light rays A and B fall on optical component X and come out as C and D. Write the name of optical components



9.Read the following questions and write your answer **as true or false** .

(i)A lens of power 1 dioptre must have a focal length of 1cm.

(ii) the principal focus of the spherical mirror lies midway between the pole and the centre of curvature .

(iii) When ray of light travel from air to water ,its speed up .

(iv) Mirror formula is valid only if the aperture of the mirror is small .

(v) The law of reflection are valid for plane mirror and not for spherical mirror.

(vi)A concave mirror is always produce a real image .

(vii)All the distance measured in a direction opposite to that of incident rays as negative .

(viii) A glass slab can produce lateral displacement which occurs in the direction of light .

(ix)A convex lens always forms a real image for a real object .

(x) Reflectig surfaces of all types ,obey the law of reflectio .

10.Complete the following statement with an appropriate word **to be filled in the blank space**:

(i)The power of convex lens is ……..and that of a concave lens is……..

(ii)Light seems to travel in a ……..

(iii)Powwer of the lens is the reciprocal of its ……..

(iv)The SI unit of refractive index is……

(v)the centre of the reflecting surface of a spherical mirror is a point called the …….

(vi)the mirror used in the construction of shaving glass is ……mirror

(vii)The dentists use ……mirror to see the large image of the teeth of the patient.

(viii)The degree of …….of light rays achieved by lens is expressed in terms of its power.

(ix)The speed of light is ……for different media .

(x)A transparent material bound by two surfaces, of which one or both surfaces are spherical, form a

……

SOCIAL SCIENCE
HISTORY

1. Which one of the following is not true regarding the impact of the First World War on India? (1)
   a. Defense expenditure resulted in increased taxes
   b. Income tax was introduced and customs duties increased
   c. The hardships ended with the war as the British introduced the Rowlatt Act
   d. Forced recruitment of soldiers was introduced in the villages
2. The refusal to deal and associate with people, or participate in activities, or buy and use things; usually a form of protest refers to: (1)
   a. opposing
   b. struggle
   c. Boycott
   d. withdrawal
3. In 1905, who painted the image of Bharat Mata shown as dispensing learning, food and clothing? (1)
   a. Bankim Chandra Chattopadhyay
   b. Abnindranath Tagore
   c. Rabindranath Tagore
   d. Ravi Verma
4. What did the Rowlatt Act, 1919 presume? (1)
   a. Equal pay for equal work
   b. Forced recruitment in the army
   c. Detention of political prisoners without trial
   d. Forced manual labour
5. Who was the first writer to create the image of 'Bharat Mata' as an identity of India and how? (1)
   a. Bankim Chandra Chattopadhyay in 1870, by writing the song “Vande Mataram” and later including it in his novel 'Anand Math'
   b. Rabindranath Tagore through his collection of ballads, nursery rhymes and myth
   c. Mahatma Gandhiji during his salt march and satyagraha.
   d. Abanindranath Tagore by his paintings of a mother figure in 1905
6. Who gave the call for 'Purna Swaraj'?(1)
7. By what name were the Dalits referred by Gandhiji?(1)
8. In which year Ahmedabad mill worker's Satyagraha was organized?(1)

9. Which Muslim leader was willing to give up the demand for separate electorates?(1)

10. How did Gandhiji convert the National Movement into a Mass Movement?(3)

11. What is separate electorate? Why do you think Gandhiji was against the demand of separate electorate by B R Ambedkar?(3)

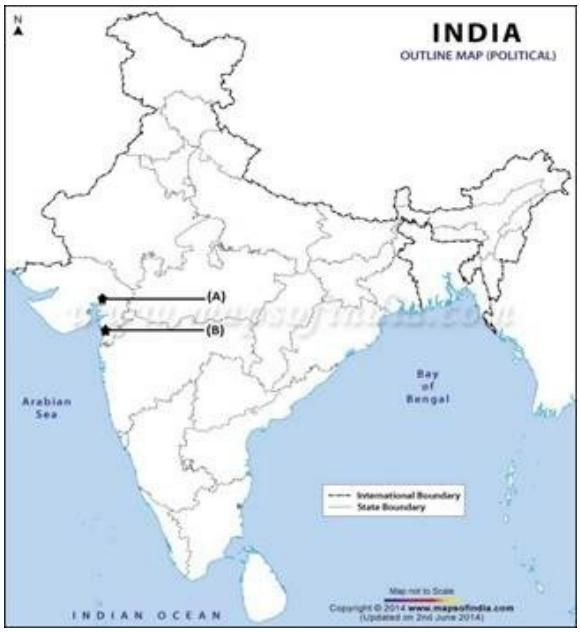
12. What were the causes of the withdrawal of the Non-Cooperation Movement? Explain. (3)

13. i. Two features A and B are marked in the given political map of India. Identify these features with the help of the following information and write their correct names on the lines marked on the map.

a. The place of Peasants Satyagraha.

b. The place associated with the Civil Disobedience Movement

ii. Locate and Label Madras-the place where the Indian National Congress session held in 1927 with appropriate symbols on the same map given for identification (3)



14 .How did a variety of cultural processes play an important role in the making of nationalism in India? Explain with examples. (5)

15 “Ideas of nationalism also developed through a movement to revive Indian folklore" - Support the statement with suitable examples. (5)