

**Atomic Energy Education Society  
Periodic Test-II (2019-20)**

**Class: 10**

**Duration: 3hrs**

**Subject: English**

**For Rawatbhata Centre**

**Marks: 80**

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**General Instructions:**

1. This question paper is divided into three sections
  - **Section A: Reading (20 Marks)**
  - **Section B: Writing and Grammar (30 Marks)**
  - **Section C: Literature (Textbooks) (30 Marks)**
2. All the questions are compulsory.
3. All the questions of a particular section must be attempted in the correct order at one place.

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**SECTION A (READING - 20 MARKS)**

1. Read the passage below and answer the questions that follow: **(12 marks)**

Give me your tired, your poor, our huddled masses yearning to breathe free, The wretched refuse of your teeming shore. Send these, the homeless, tempest-tossed to me, I lift my lamp beside the golden door!

These are the words inscribed on the Statute of Liberty in New York. But ironically, those who go there are not the poor and the wretched but the skilled and the highly qualified doctors, engineers, nurses, scientists, and technicians, from other countries, including India.

The urge to go to the West has become compelling in India in the post-independence years. Both the world wars and the political upheavals like civil wars and revolutions, spawned large migrations during the first half of this century. The migration in the latter half stemmed from economic motivation. People in power like scientist and skilled persons have, from the beginning, played a key role in international migration. The conscious policy to encourage migration of high quality manpower from other regions and country is related to the positive contribution made by the immigrants to their country of adoption, resulting in a net advantage to it.

The earnings and remittances from the Indians settled abroad or their eventual return, are poor compensation for the lasting and serious loss inflicted by their outflow. The specific objectives of the anti-brain drain policy, within the framework of independent development, are to bring

back to a limited extent, the lost talents and skills from abroad and reduce the outflow in the short run and finally end it, except that necessitate by genuine, multilateral international dependents .

Brain drain means professionals going abroad to work. This is not good because nowadays all the good brains are going out to work for other countries. If they have efficiently utilized their brains in this country India could have been a better country. America has become a developed country, because their maximum number of employees consists of Indians only. So if those employees had worked for India, India would surely become America so brain drain is not good form the economic point of view.

1.1 On the basis of your reading of the passage answer the following questions: **(4x2m=8m)**

1. What kind of people go to America?
2. When did the urge to go abroad become compelling in India?
3. Who have played a key role in international migration?
4. What is meant by brain drain?

1.2 Write correct options to the following questions: **(4x1m=4m)**

1. What is meant by the word 'inscribed' (para 1)  
(i) designed (ii) written (iii) read (iv) painted
2. Find the word from the passage which means ' great changes or disturbances'(para 2)  
(i) wars (ii) immigrants (iii) migrations (iv) upheavals
3. Find the word opposite in meaning to 'earnings'(para 3)  
(i) expenses (ii) compensation (iii) policies (iv) skills
4. Find the word from the passage opposite meaning to 'minimum'(para 4)  
(i) developer (ii) economic (iii) maximum (iv) drain

2. Read the passage below and answer the questions that follow: **(8 marks)**

We give undue importance to our health and the treatment of diseases. A large number of medicines treat only the symptoms of the disease, and not the root cause. In fact, the cause of many chronic ailments is still being researched. It is here hat Yoga therapy comes to our assistance. Yoga emphasizes treatment of the root cause of an ailment. It works in a slow, subtle and miraculous manner. Modern medicine can claim to save a life at a critical stage, but, for complete recovery and regaining of normal health one must believe in the efficiency of yoga therapy. The yogic way of life includes a code of ethics, regulation, discipline and more, combined with prayer and meditation. Even a discussion of these subjects helps one relieve mental tensions and change attitudes. Simple Asanas help to stretch and relax the whole body

and neutralize tensions. The sincere practice of yoga postures benefits all levels of experience through continued practice, yoga postures can have a profound effect on the inner dimensions of life, establishing deep calm, concentration, emotional stability and confidence. Man is a physical; mental and spiritual being; yoga helps promote a balanced development of all the three. Other forms of physical exercises, like aerobics, assure only physical well being. They little to do with development of spiritual or astral body.

2.1 On the basis of your reading of the passage answer all the following questions : **(8x1m =8m)**

- (1) What do most of the medicine treat?
- (2) What does the phrase 'chronic ailments' refer to?
- (3) How is yoga different from other treatments?
- (4) What does yogic way of life include?
- (5) How do 'Simple Asanas' help?
- (6) How does sincere practice of yoga postures benefit us?
- (7) How does yoga therapy work?
- (8) Is yoga better than physical exercises?

### **SECTION B: WRITING AND GRAMMAR (30 MARKS)**

3. Write a **letter** in 100-150 words to the Superintendent of Police of your district complaining about the unauthorized construction of a block of three shops adjacent to the public park in your area. You are Sumit/Pooja, President of the Residents' Welfare Association of your area. **(8 Marks)**

**Or**

Many students from different parts of the country come to Delhi to study. Finding affordable accommodation is the main problem faced by them. Landlords charge high rates and in some cases refuse to rent rooms to them because of their different food habits and culture. The hostel facility provided by educational institutions is too inadequate to meet the demand. Write a **letter** in 100-150 words to the Editor of a local daily newspaper drawing attention of the authorities and requesting them to take appropriate action. You are Anita/Arun, 15, Gandhi Road, Delhi.

4. Write a short **story** in 150-200 words with the help of the clues given below in 150-200 words - **(10 Marks)**

Two twin sister...Riya and Tiya...bullied by Mohit...assigned task...Christmas tree...labour of love...crawled...God bless...heart melted...forgave him...both lived happily.

**Or**

Write a short **story** based on the beginning given below in about 150-200 words.

Once I was travelling in a passenger train with an old man.....

5. Fill in the blanks with words that you consider to be the most appropriate. **(1x4=4 M)**

Overeating is one of the most wonderful practices among those who think that ...

(a)...can afford it. In fact, authorities say... (b)...nearly all, who can get as much as they desire, overeat to their disadvantage. This class of people could save more food...

(c)...they miss one meal per week and ....(d)...the same time, they could improve their health.

6. In the following notice, there is an error in each line. Edit the following sentences.

**(1X4=4M)**

	Incorrect word	Correct word
This is to informed all the students that	Eg.: informed	Inform
the school is organized a Social Welfare Week,	a) _____	_____
between 12 to 19 December,2019 in the school premises.	b) _____	_____
The school invite active participation of students	c) _____	_____
to collect funds to orphans.	d) _____	_____

7. Rearrange the following words and phrases to form meaningful sentences. **(1x4=4M)**

a. Trilok Apartments/resident of/at Gandhi Nagar/I am a/New Delhi/in

b. If you/grateful/could kindly/be extremely/I would/help me.

c. Installation/please consider my/of a new/application for the/computer system.

d. I/a/new/of/am/region/inhabitant/this.

**SECTION C: LITERATURE (TEXTBOOKS) (30 MARKS)**

8. Read the following extract carefully and answer the questions that follow: **(4X1m=4m)**  
Not a leaf remained on the trees. The corn was totally destroyed. The flowers were gone from the plants. Lencho's soul was filled with sadness. When the storm had passed, he stood in the middle of the field and said to his sons, "A plague of locusts would have left more than this. The hail has left nothing".

- (a) Describe Lencho's feeling as shown in the passage.
- (b) What happened to the crop as the storm passed?
- (c) Find the word that means the opposite of 'restored' as used in the passage?
- (d) What do you mean by 'hail' in the last line?

**OR**

But he is locked in the concrete cell,  
His strength behind the bars,  
Stalking the length of his cage,  
Ignoring visitors.

- (a) What does the phrase 'his strength behind the bars' suggest?
- (b) Why does the tiger ignore the visitors?
- (c) What is the tiger doing in the cage?
- (d) What does the expression 'Stalking the length of the cage' imply?

9. Answer the following questions in 30 to 40 words. **(2x5=10M)**

- a. What did 'being free' mean to Mandela as a boy and as a student?
- b. Why does Anne think that 'paper' has more patience than 'people'?
- c. What conditions did Anil put forward before employing Hari as his servant?
- d. Why did Fowler want to meet Ausable? Why was he disappointed?
- e. What happened when Griffin didn't wake up in time? How did he escape from the London store?

10. Pen down the character sketch of Wanda Petronski. (word limit 100-150) **[8 Marks]**

**Or**

'Nelson Mandela: 'Long Walk to Freedom' describes freedom and what value it has for all living beings. Describe the value of freedom for human beings and how it is important for the growth of civilisation and humanism.

11. Imagine that you are the veterinary surgeon in the story, 'A Triumph of Surgery'. Write how you treated Tricki and handled Mrs. Pumphrey and her over-indulgent behaviour towards Tricki. **[8 Marks]**

**Or**

Would you do something wrong (i.e. commit a crime) if you thought that the ends justify the means? Do you think that there are certain situations you can be excused for acting dishonestly? Write your answer quoting the example from the chapter 'A Question of Trust'.

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**Atomic Energy Education Society**  
**Periodic Test-II (2019-20)**

**Class: X**

**For Other than Rawatbhata Centre**

**Time : 3 Hours**

**Subject: ENGLISH**

**Marks : 80**

**General Instructions:**

- (1) The question paper is divided into three sections:

Section A: Reading	20 marks
Section B: Writing and Grammar	30 marks
Section C: Literature	30 marks
  - (2) You may attempt any section at a time.
  - (3) All questions of a particular section must be attempted in the correct order.
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**SECTION A (READING - 20 MARKS)**

- 1 Read the following passage and answer the questions that follow: [8]**

On the way to Stok, the village ten miles outside Leh, there is a suspension bridge that spans the Indus. From the distance, it looks like a circus tent, it is so covered with prayer flags of every colour. I am sitting on the seat next to the driver, a young Ladakhi. I ask him, "Why are there so many prayer flags?" He looks at me as if I am mad. "If there are no prayer flags, the river would get angry." It is such a festive and exuberant gesture, covering the steel lines of the bridge with scarves and mantras and holy dragons that I want to sing. As the bus crosses the bridge, the prayer flags flap against it. The driver turns to me and smiles. "Every time I am crossing the bridge I am saying my prayers. It is holy, this bridge." He has no idea as to how old the bridge is. It is as if it had always been there like the pile of stones in the mountains, like the stupas, like the small wayside shrines. The spirit of Ladakh has changed it into a shrine, an object of worship. "Does the bridge have its guardian Buddha?" The driver smiled and did not answer. The rocks on the sides of the paths are sprinkled with small blue flowers, a fierce wild green grass grows between the boulders; with every quarter of an hour the heat increases and the rocks change, growing more and more fantastical, wings of cathedrals, falling into the river below, large fluted columns, like the hermit perches of Cappadocia, with golden moss spilling over from their height and yet it is not the rocks and their dazzling forms that move me the most. Resting

on the top of a mountain pass, I found that the rock I was sitting on was ringed by white stones, heaped there by travellers over many years; walking on and on into the highest parts of the pass. Just as I was too tired to go any further, I found that there was a deserted shepherd's hut, with its roof torn off by the wind, and a small rose-bush growing in the shelter of one of its walls. I sat in it and ate my bread and cheese. On the wall, the shepherd had written with charcoal from the fire 'Om', just one letter again and again. And under each letter he had sketched a rough Buddha's face.

**Complete the sentences given below:**

**[8 × 1 m = 8m]**

- (i) From the distance, the bridge looks like a circus tent because.....
- (ii) According to the driver, the river would get angry.....
- (iii) The driver prays while crossing the bridge because.....
- (iv) The rocks change and grow strangely beautiful as.....
- (v) The word 'deserted' means.....
- (vi) The bridge is covered with many prayer flags because.....
- (vii) What happens to the prayer flags when the bus crosses the bridge? .....
- (viii) The word 'exuberant' means.....

**2 Read the passage given below and answer the questions that follow :**

**[12]**

The most important trait of a leader is authenticity and self-knowledge. As a leader, you need to be clear about your values and belief system. The self-knowledge is a compass to navigate complex situations. Secondly, in order to lead, one should have clarity of vision and the ability to communicate it. The obstacle to good communication is not the lack of verbal skills alone. It is also the capacity to view one's targets and goals through a self-generated lens that sees the world on our own terms. Each of us is informed differently and our view of the world is seen through our own lens and that may be opaque to someone else. A great example of seeing through a different lens can be found in a family with different generations. The third trait for leadership is curiosity. Leadership is about 'Change'.

The ability to respond to change is particularly critical to business leaders as the pace of innovation in business is very rapid.

When it is a family running a business, family shareholders have to pro-actively learn best practices for sustaining a closely-held business over generations. The group must wrestle out issues to arrive at a solution that is in line with the overall vision of the company to benefit the business and its shareholders. It is inevitable to have conflicts as members are from different background and different age groups.

In a family-run business, most members are worried about transition. Generally, it is seen that up to the third generation, there is a clear view of the founder of the business, his values. The next generation, following the third, is not only larger but more distanced from the company's origins. Their challenges will include aligning with a smaller sub-set of the family members and balancing collective versus individual achievement.

In conclusion, we can say that leaders start out with a vision. Having a vision to lead requires clarity of purpose and direction. Also, leaders need to have the ability to communicate and motivate people to work towards a vision. It is also important that they should inspire others to trust and support them.

**i. On the basis of your reading of the passage, answer the following questions briefly:**

**[4 × 2m = 8m]**

- (a) What are the three traits of a leader?
- (b) Why are individual lens views different?
- (c) What are the secrets of running a successful family-run business?
- (d) Which generation is the most vulnerable in a family-run business? Why?

**ii. Do as directed:**

**[4 x 1m= 4m]**

- (a) The term 'compass' in the passage means.....
  - (i) an instrument to draw a circle
  - (ii) a ruler
  - (iii) work towards accomplishing something
  - (iv) include
- (b) The term 'trait' in the passage means.....
  - (i) the special feature of a person
  - (ii) a traitor
  - (iii) the short form of 'straight'
  - (iv) the old fashioned spelling of treat



- (c) The term 'transition' in the passage indicates.....
- (i) transformation (ii) the middle class in a school  
 (iii) a variety of formation (iv) a motor car racing terminology
- (d) The term 'aligning' in the passage means.....
- (i) making another lining (ii) falling in line  
 (iii) giving a different point of view (iv) joining with a particular group

**SECTION B (WRITING AND GRAMMAR - 30 MARKS)**

3. Write a letter to the editor of The Hindustan Times, Kasturba Gandhi Marg, New Delhi, advocating the need for people to obey traffic rules for safety to the law abiding citizens, to wear helmets and to put on seat belts when driving on roads. (100 to 150 words) **8m**

**Or**

A civilized and well groomed personality has a positive impact on others. Write an article in 100 -120 words for your school magazine on the 'Importance of education in Personality Development'. You are Ram / Rama.

4. Complete the following story using the outline given: (150-200 words)

A little girl--- was walking down the street. She saw a poor old man----shivering on the pavement. She .....

**Or**

**10m**

Seven year old Sunil---- alone at home ----rich locality---- three men---- suspicious looking----

5. Complete the paragraph given below with the help of the options that follow: **(4x1m=4m)**  
 Kanishka, the ruler of the Kushanas embraced Buddhism. He (a)----- invited to a Buddhist meeting (b)----- Kashmir during his reign. It was during his time that Buddhism (c)----- to Sri Lanka , Myanmar and Java. Buddhism (d)---- a peace loving religion during his time.

- (a) (i) is (ii) was (iii) had (iv) has  
 (b) (i) of (ii) on (iii) in (iv) for  
 (c) (i) spread (ii) spreads (iii) is spread (iv) will spread  
 (d) (i) will be (ii) but (iii) also (iv) was

6. The following passage has not been edited. There is one error in each line. Write the incorrect word and the correct word as shown in the example given below: **(4x1m=4m)**

	Incorrect word	Correct word
Katherine Mansfield was born at 1888 in	eg. at	in
Wellington, New Zealand. She moved from	a) -----	-----
London in 1903 and studied to Queen's	b) -----	-----
College, where she join the staff college	c) -----	-----
magazine. Katherine Mansfield is consider a	d) -----	-----
great writer.		

7. Rearrange the words and phrases given below to form meaningful sentences: (4x1m=4m)

- a) arrested/ criminals/ were/ in Varanasi/ four
- b) steal/ tried to/ they/ from/ museum /a Buddha/ statue/ the
- c) in place/ famous/ the/ is back/ statue
- d) department/ thanked/ the / museum/ the /authorities/ police

**SECTION C (LITERATURE - 30 MARKS)**

8. Read the following extract carefully and answer the following questions. (4x1m=4m)

He stalks in his vivid stripes,  
The few steps of his cage,  
On pads of velvet quiet,  
In his quite rage.

A. Name the poet and the poem.

- a) Leslie Norris and A Tiger in the Zoo
- b) Anita Desai and A Tiger in the Zoo
- c) Girish Karnad and A Tiger in the Zoo
- d) None of these

B. Where is the tiger at present?

- a) In the forest
- b) In the circus
- c) In a cage
- d) In a room

C. Which word in the stanza may also mean graphic or picturesque.

- a) Stripes
- b) Velvet
- c) Quiet
- d) Vivid

D. Why is the tiger in 'quite rage'?

- a) Movement restricted
- b) Freedom curtailed
- c) Not fed properly
- d) Both a) and b)

**Or**

Don't eat that chocolate, Amanda!

Remember your acne, Amanda!

Will you please look at me when I am speaking to you, Amanda!

A. Name the poet and the poem.

B. Why is Amanda not looking at the speaker?

C. What causes Acne according to the speaker?

D. Which word in the stanza is antonym of 'forget'?

**9. Answer the following questions in 30 to 40 words: (any Five) (5x2m=10m)**

1. What is a “dust of snow”? What does the poet say has changed his mood? How has the poet’s mood changed?
2. “The sight of food maddened him” What does this suggest? What compelled the young seagull to finally fly?
3. What made Mr. Keesing allow Anne to talk in class?
4. How is Wanda seen as different from other girls? How do they treat her?
5. What kind of person do you think the narrator, a veterinary surgeon is? Would you say he is tactful as well as full of common sense?
6. Why does not Anil hand over the thief over to the police? Do you think most people would have done so? In what ways is Anil different from other such employers?
7. How does Ausable manage to make Max believe that there is a balcony attached to his room? What makes it a convincing story?

**10. Answer any One in 100- 150 words: 8m**

Would you agree that the "depths of oppression" create "heights of character"? How does Mandela illustrate this? Can you add your own examples to this argument?

**Or**

Have you ever been alone or away from home during a thunderstorm? Narrate your experience taking inspiration from the chapter The ‘Black Aeroplane’

**11. Answer any One in 100- 150 words: 8m**

Excess of everything is bad. Comment in the wake of Mrs. Pumphrey’s love for Tricki.

**Or**

A calm mind can help tackle direst stress. Explain the statement with points taken from The Midnight visitor.

# Atomic Energy Education Society

## Periodic Test-II (2019 -20)

**Class: X**

**For Rawatbhata Centre**

**Time: 3 Hours**

**Subject: Mathematics**

**Marks: 80**

### General Instructions:

- (i) All questions are compulsory
- (ii) The question paper comprises of four sections, A, B, C and D
- (iii) Internal choice is given in section B, C and D
- (iv) Question 1 to 20 in Section - A carry 1 mark each.
- (v) Question 2 to 7 in Section - B carry 2 marks each.
- (vi) Question 8 to 15 in Section - C carry 3 marks each
- (vii) Question 16 to 21 in Section - D carry 4 marks each

### SECTION - A (Question numbers i to xx carry 1 mark each)

**1: Choose and write correct option in each of the following ( 20 x 1 = 20 )**

- (i) For some integer  $q$ , every odd integer is of the form
  - (a)  $q$                       (b)  $q + 1$                       (c)  $2q$                       (d)  $2q + 1$
- (ii)  $n^2 - 1$  is divisible by 8 if  $n$  is
  - (a) an integer    (b) a natural number    (c) an odd integer    (d) an even integer
- (iii) If  $(x - 2)$  is a factor of  $f(x) = x^2 - 5x + 6$ . Find  $f(2)$ 
  - (a) 2                      (b) 3                      (c) 0                      (d) none of these
- (iv) If 5 is zeros of the quadratic polynomial  $x^2 - kx - 15$  then the value of  $k$  is
  - (a) 2                      (b) 3                      (c) -2                      (d) 4
- (v) For what value of  $k$ , do the equation  $3x - y + 8 = 0$  and  $6x - ky + 16 = 0$  represent coincident line
  - (a)  $1/2$                       (b) 2                      (c) -2                      (d) 4
- (vi) The pair of line  $x = a$  and  $y = b$  graphically represent lines which are
  - (a) parallel    (b) intersecting at  $(b, a)$     (c) coincident    (d) intersecting at  $(a, b)$
- (vii) Sum of first five multiple of 3 is
  - (a) 45                      (b) 55                      (c) 65                      (d) 75

- (viii) If 18, a, b, - 3 are in AP, then a + b is equal  
 (a) 19                      (b) 7                      (c) 11                      (d) 15
- (ix) The distance of the point P (2, 3) from the x axis is  
 (a) 2                      (b) 3                      (c) 1                      (d) 5
- (x) The distance between points A (0, 6) and B (0 - 2) is  
 (a) 6                      (b) 8                      (c) 4                      (d) 2

**Very Short Answers**

- (xi) Write the Euclid's Division Lemma.
- (xii) If  $x^2 + 2x + 2 = 0$  then, comment on the roots.
- (xiii) D, E and F are the respectively the mid points of AB, BC and CA of  $\Delta ABC$ , what is the ratio of areas of  $\Delta DEF$  and  $\Delta ABC$ .
- (xiv) If the side of an equilateral Triangle is '2a' units, then find its altitude.
- (xv) Find the sum of first 'n' natural numbers.

**Fill in the blanks**

- (xvi): If the LCM of 12 and 42 is  $10m+4$ , then the value of m is.....
- (xvii): A cubic polynomial is of degree .....
- (xviii): An equation whose degree is one is known as .....equation
- (xix): Two triangles are said to be .....if corresponding angles of two triangles are equal.
- (xx): The distance of a point from the x axis is called its .....

**SECTION - B ( Question numbers 2 to 7 carry 2 marks each )**

**(6 x 2 = 12 )**

2. Solve the quadratic equation:  $x^2 - x - 6 = 0$
3. Find the distance between the points P (a+ b, a - b) and Q ( a - b, - a -b)
4. Find the value of k for which the equation:  $x^2 - 4x + k = 0$  has distinct real roots.
5. The perimeters of two triangles ABC and PQR are respectively 36cm and 24 cm . If PQ =10 cm, find AB .
6. If triangles ABC and DEF are similar and AB = 1.2 cm and DE = 1.4 cm ,find the ratio of

the areas of  $\Delta ABC$  and  $\Delta DEF$

7. Which term of the sequence  $-1, 3, 7, 11, \dots$  is 95

**OR**

Write the  $(n - 1)$ th term of the sequence  $1, 7, 13, 19, \dots$

**SECTION- C ( Question numbers 8 to 15 carry 3 marks each )**

**(8 x 3 = 24 )**

8. Show that  $5 - \sqrt{3}$  is an irrational number
9. If  $\alpha$  and  $\beta$  are the zeros of the quadratic polynomial  $f(x) = ax^2 + bx + c$ , find the value of  $\alpha^3 + \beta^3$
10. Find the values of  $p$  and  $q$  for which the following system of equation has infinite number of solutions:

$$2x + 3y = 7$$

$$(p + q)x + (2p - q)y = 21$$

11. If  $x = 2$  and  $x = 3$  are the root of the equation  $3x^2 - 2kx + 2m = 0$  find the value of  $k$  and  $m$

**OR**

Solve the quadratic equation,  $x^2 + 2\sqrt{2}x - 6 = 0$  by factorize method.

12. If 10<sup>th</sup> term of an A.P. is 52 and 17<sup>th</sup> term is 20 more than the 13<sup>th</sup> term, find A.P.
13. Determine the ratio in which the line  $3x + y - 9 = 0$  divides the segment joining points  $(1, 3)$  and  $(2, 7)$
14. ABC is an isosceles triangle with  $AC = BC$ . If  $AB^2 = 2AC^2$ , prove that  $\Delta ABC$  is a right triangle
15. In  $\Delta ABC$ ,  $\angle ACB = 90^\circ$  and  $CD \perp AB$ , then prove that  $\frac{BC^2}{AC^2} = \frac{BD}{AD}$

**SECTION D ( Question numbers 16 to 21 carry 4 marks each )**

**(6 x 4 = 24 )**

16. If a line is drawn parallel to one side of a triangle intersecting other two side, then it divides the two side in the same ratio.

**OR**

In right angled triangle, the square of the hypotenuse is equal to the sum of the square of other two sides

17. Use Euclid's division algorithm to find HCF of 4052 and 12576
18. If the zeros of the polynomial  $f(x) = x^3 - 3x^2 + x + 1$  are  $a - b$ ,  $a$ ,  $a + b$  find  $a$ ,  $b$
19. In a two digit number, the ten's digit is three times the unit's digit. When the number is decreased by 54, the digits are reversed. Find the number

OR

A fraction becomes  $\frac{4}{5}$ , if 1 is added to both numerator and denominator. If however 5 is subtracted from both numerator and denominator, the fraction becomes  $\frac{1}{2}$ , find the fraction

20. Solve the equation :  $\frac{x+3}{x-2} - \frac{1-x}{x} = \frac{17}{4}$

21. If in an A.P. the sum of  $m$  terms is equal to  $n$  and the sum of  $n$  terms is equal to  $m$ , then prove that the sum of  $(m + n)$  terms is  $-(m + n)$ .

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**PERIODIC TEST-II (2019-20)**

CLASS-X

For Other than Rawatbhata Centre

TIME: 3 HOURS

SUBJECT: MATHEMATICS

MARKS: 80

General Instructions:

- All questions are compulsory.
- The question paper consists of 40 questions divided into four sections- A,B,C and D.
- Section A contains 20 multiple choice questions each carrying 1 mark. Section B contains 6 questions of 2 marks each, Section C contains 8 questions of 3 marks each and Section D contains 6 questions of 4 marks each.
- There is no overall choices but internal choices are provided in some questions.
- Read the questions properly and copy the numbers correctly.

**SECTION-A**

(1m x 20 =20m)

1. If  $HCF(72, 120) = 24$ ,  $LCM(72, 120)$  is  
 a) 240                                      b) 360                                      c) 1728                                      d) 2880
2. If two positive integers a and b are written as  $a = x^3y^2$  and  $b = xy^3$ , where x and y are prime numbers, then  $HCF(a, b)$  is  
 a) xy                                      b)  $xy^2$                                       c)  $x^3y^3$                                       d)  $x^2y^2$
3. If n is a natural number, then  $8^n$  never ends with  
 a) 0                                      b) 2                                      c) 4                                      d) 6
4. If  $\alpha$  and  $\beta$  are the zeros of  $x^2 - 4x + 1$ , then  $\frac{1}{\beta} + \frac{1}{\alpha} - \alpha\beta$  is:  
 a) 3                                      b) 5                                      c) -5                                      d) -3
5. The sum and the product of zeros of a quadratic polynomial p(x) are -7 and -10 respectively. Then p(x) is :  
 a)  $x^2 - 7x - 10$                                       b)  $x^2 - 7x + 10$                                       c)  $x^2 + 7x - 10$                                       d)  $x^2 + 7x + 10$
6. The pair of linear equation  $3x = 7y + 4$  and  $14y = 6x - 8$  represent two lines which are  
 a) intersecting                                      b) coincident                                      c) parallel                                      d) either intersecting or parallel
7. The value of c for which the pair of equation  $cx - y = 2$  and  $6x - 2y = 3$  will have infinitely many solutions is  
 a) 3                                      b) -3                                      c) -12                                      d) no value



8. The age of a woman is four times the age of her daughter. Five years hence, the age of the woman will be three times the age of her daughter. The present age in years of the daughter is
- a) 40                      b) 20                      c) 15                      d) 10
9. The value of  $k$  for which the quadratic equation  $2x^2 - kx + k = 0$  has equal roots is(are)
- a) 0 only                      b) 4                      c) 8 only                      d) 0 and 8
10. If the product of two consecutive odd positive integers is 323, then the integers are
- a) 21,23                      b) 19,17                      c) 31,33                      d) 29,27
11. The quadratic equation  $2x^2 - \sqrt{5}x + 1 = 0$  has
- a. two distinct real roots                      b. two equal real roots  
c. no real roots                      d. more than two real roots
12. The distance of the point P (2, 3) from the x – axis is
- a) 2                      b) 3                      c) 1                      d) 5
13. The area of a triangle (sq. units) with vertices A(3,0) , B(7,0) and C(8,4) is
- a. 14                      b. 28                      c.8                      d. 6
14. The point A(9,0), B(9,6) C(-9,6) and D(-9,0) are the vertices of a
- a. rectangle                      b. square                      c. rhombus                      d. trapezium
15. The 30<sup>th</sup> term of the AP 10,7, 4,..... is
- a. 87                      b. 77                      c. -77                      d. -87
16. If  $k - 1$ ,  $k + 1$  and  $2k + 3$  are in AP , then the value of  $k$  is
- a) -2                      b) 0                      c) 2                      d) 4
17. If in two triangles ABC and PQR,  $\frac{AB}{QR} = \frac{BC}{PR} = \frac{CA}{PQ}$ , then
- a)  $\Delta PQR \sim \Delta CAB$       b)  $\Delta PQR \sim \Delta ABC$       c)  $\Delta PQR \sim \Delta CBA$       d)  $\Delta PQR \sim \Delta BCA$
18. It is given that  $\Delta PQR \sim \Delta ABC$  with  $\frac{BC}{QR} = \frac{1}{3}$ , then  $\frac{\text{area}(\Delta PQR)}{\text{area}(\Delta BCA)}$  is
- a) 9                      b) 3                      c) 1/3                      d) 1/9
19. If a side of a rhombus is 10 cm and one of the diagonals is 16cm, then the length of other diagonal is
- a) 6 cm                      b) 12 cm                      c) 20 cm                      d) 16 cm
20. A girl walks 200m towards east and then she walks 150 m towards north. The distance of the girl from the starting point is
- a) 350m                      b) 250 m                      c) 300 m                      d) 225m

**SECTION –B**

(2m x 6 =12m)

21. Express 23150 as a product of its prime factors. Is it unique?
22. Find the quadratic polynomial whose zeros are  $\sqrt{3} + 5$  and  $\sqrt{3} - 5$ .
23. Find the roots of the quadratic equation  $\sqrt{2}x^2 + 7x + 5\sqrt{2} = 0$

(or)

A natural number, when increased by 12, equals 160 times its reciprocal.  
Find the number.

24. Is 67 a term of the AP : 7, 10, 13,.....?

(or)

Find the sum:  $1 + (-2) + (-5) + \dots + (-236)$

25. In a rectangle ABCD, E is a point on AB such that  $AE = \frac{3}{4}$  of AB. If  $AB = 16$  cm and  $AD = 5$  cm, then find the length of DE. Also, find the ratio area (ADE): area (DCB).
26. If the point  $P(m,3)$  lies on the line segment joining the points  $A(\frac{-2}{5}, 6)$  and  $B(2,8)$ , find the value of m.

**SECTION C**

(3m x 8 =24m)

27. Show that the square of any positive integer is either of the form of  $3m$  or  $3m + 1$  for some integer.
28. Solve the following pair of linear equations:  $2(3x - y) = 5xy$ ;  $2(x + 3y) = 5xy$ ;  $x, y \neq 0$

(or)

The sum of a two digit number and the number obtained by interchanging the digits is 132. If the two digits differ by 2, find the number(s).

29. Solve for  $x$ :  $\frac{2}{x+1} + \frac{1}{x-1} = 1$ .  $x \neq 1, -1$ .
30. The sum of the 4<sup>th</sup> and the 8<sup>th</sup> terms of an AP is 24 and the sum of the 6<sup>th</sup> and the 10<sup>th</sup> terms is 44. Find the first three terms of the AP.
31. Prove that diagonals of a trapezium intersect each other in the same ratio.
32. If  $\alpha$  and  $\beta$  are the zeros of the polynomial  $x^2 - 3$ , then form a polynomial whose zeros are  $\frac{1}{\alpha}$  and  $\frac{1}{\beta}$
33. The sides of a triangle are 30cm, 70 cm and 80 cm. If an altitude is dropped upon the side of length 80 cm, find the larger segment cut off on the side.

34. Find the area of the quadrilateral whose vertices are A(1,0) , B(5,3), C(2,7) and D(-2,4) taken in order. Also, find the lengths of the diagonals AC and BD.

(or)

ABCD is a quadrilateral with vertices A(3,0), B(4,5), C(-1,4) and D(-2,-1). Check whether it is a square or a rhombus. Also, find its area.

### SECTION –D

(4m x 6 =24m)

35. Show that  $\sqrt{5}$  is an irrational number. Hence show that  $2 + 3\sqrt{5}$  is also an irrational number.

36. Given that  $x-\sqrt{5}$  is a factor of the polynomial  $p(x) = x^3 - 3\sqrt{5}x^2 - 5x + 15\sqrt{5}$ , find all the zeroes of the polynomial.

37. Solve the following pair of linear equations graphically.  $x + 3y = 6$  and  $2x - 3y = 12$ . Also, find the area of the triangle formed by the lines and the y-axis.

38. A sailor can row a boat 8 km down stream and return back to the starting point in 1 hour 40 minutes. If the speed of the stream is 2 km/hr, find the speed of the boat in still water.

(or)

300 oranges were distributed equally among a certain number of students. Had there been 10 more students each would have received one orange less. Find the number of students.

39. State and prove the Pythagoras theorem.

(or)

State and prove basic proportionality theorem.

40. Find the centre of a circle passing through the points (6,-6), (3,-7) and (3,3). Also, find its radius.

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**Atomic Energy Education Society**  
**Periodic Test II - (2019-20)**

**Class: X**  
**Subject: Science**

**Time: 3 Hours**  
**Max.Marks:80**

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**General Instructions**

1. The question paper consists of 36 questions divided into three sections A, B and C. You have to attempt all the sections.
  2. All questions are compulsory. However internal choice is given for 2 questions in section B and C each.
  3. Section A comprises of total 20 questions out of which 10 questions are multiple choice questions of 1 mark each, 3 questions are based on assertion and reasoning carrying 1 mark each and 7 questions are very short Answer Type questions of 1 mark each.
  4. Section B comprises of 10 Short Answer questions of 3 marks each.
  5. Section C comprises of 6 Long Answer Type questions of 5 marks each.
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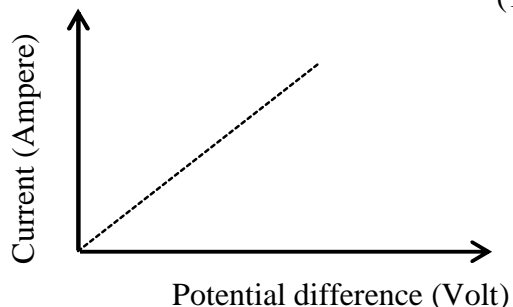
**Section A**

1. Rusting of iron and respiration (1)  
a) Both are endothermic  
b) Rusting is exothermic & respiration is endothermic  
c) Rusting is endothermic & respiration is exothermic  
d) both are exothermic
2. Which of the following is the first site for the exchange of inhaled air (1)  
a) Blood capillaries of lungs  
b) alveoli of lungs  
c) Blood capillaries adjacent to body cells  
d) left auricles of the heart
3. Which of the following term does not represent electric power in a circuit? (1)  
a)  $I^2R$       b)  $IR^2$       c)  $VI$       d)  $V^2/R$
4. Choose the correct option, the magnetic field inside a long straight current carrying solenoid (1)  
a) is zero  
b) decreases as we move towards its end  
c) increases as we move towards its end  
d) is same at all points
5. The blood leaving the tissues become richer in (1)  
a) Oxygen      b) Carbon di oxide      c) Water      d) Haemoglobin
6. Cerebrum: Forebrain      Cerebellum: \_\_\_\_\_. (1)  
a) Mid brain      b) Hind brain      c) Forebrain      d) None of these
7. A hormone that inhibits plant growth is (1)  
a) auxin      b) gibberellins      c) cytokinin      d) abscisic acid

8. In spherical mirror, the distance of the object from its pole is called the (1)  
(a) object distance (b) image distance (c) Focal length (d) none of these

9. The slope of the ohm's law shown in the graph gives (1)

- a) resistance
- b) resistivity
- c) conductance
- d) conductivity



10. All metal hydrogen carbonates are soluble in water and on heating gives \_\_\_\_\_, (1)  
\_\_\_\_\_ and \_\_\_\_\_.

- a) metal carbonate , CO<sub>2</sub> and H<sub>2</sub>O
- b) metal carbonate ,CO<sub>2</sub> and H<sub>2</sub>O
- c) metal Oxide, CO<sub>2</sub> and H<sub>2</sub>O
- d) metal Oxide, CO<sub>2</sub> and H<sub>2</sub>O

**Direction** (Q Nos. 11 to 13) In the following questions, a statement of Assertion is followed by a Statement of Reason. Mark the correct choice as

- (a) Both Assertion and Reason are true and Reason is the correct explanation of Assertion.
- (b) Both Assertion and Reason are true and Reason is not the correct explanation of Assertion.
- (c) Assertion is true, but reason is false
- (d) Reason is true, but Assertion is false
- (e) Both Assertion and Reason are false
- (f) Both Assertion and Reason are true.

11. Assertion: Plants close the stomata at night (1)  
Reason: The opening and closing of stomata is a function of guard cells.

12. Assertion: In electrolysis of water, the volume of Hydrogen liberated is twice the volume (1)  
of Oxygen formed  
Reason: It is because water has Hydrogen and Oxygen in the ratio of 1:2

13. Assertion: Electric appliance with metallic body have three pin connection, where as an (1)  
Electric bulb has two pin connection.  
Reason: Three pin connection reduce heating of connection wire.

14. What will happen if platelets are absent in the blood? (1)

15. Name the compound of calcium used for plastering of fractured bones. (1)

16. Mention one disadvantage of producing new plants by vegetative propagation. (1)
17. Name a mirror that can give an erect and enlarged image of an object. (1)
18. Why do ionic compounds in their aqueous solution conduct electricity? (1)
19. Which part of the brain is involved in i) reasoning and memory ii) muscular coordination? (1)
20. Will current flow more easily through a thick wire or a thin wire of the same material when connected to the same source? Why? (1)

### **SECTION B**

21. Explain double circulation of blood in human heart. Why is it necessary? (3)
22. What are precipitation reactions? Explain with examples. (3)
23. Explain the following statements. (3)
- (i) Adrenaline helps in dealing emergency situations.
  - (ii) Secretions of growth hormone should be specific in the human body.
24. (i) Why two magnetic field lines do not intersect with each other?  
(ii) Define right hand thumb rule and draw the magnetic field lines for a current carrying solenoid. (3)
25. (i) Name the enzyme present in the saliva? What is its importance? (3)  
(ii) What is emulsification of fats?  
(iii) Name the substance oxidized in human body during respiration.
26. Explain the following properties of acids with the help of balanced chemical equations (3)
- i) When an acid reacts with a base
  - ii) When an acid reacts with a metal oxide
  - iii) When an acid reacts with metal.
27. Draw a neat diagram of germination of pollen on stigma and label the following parts (3)
- i) pollen tube
  - ii) ovary
  - iii) pollen grain
  - iv) stigma
28. Why does the cord of an electric heater not glow while the heating element does? State any two safety measures commonly used in electric circuits and appliances. (3)

29. Do all metals combine with ordinary water to give the same products? If no, justify your answer supported by three balanced chemical equations. (3)

**OR**

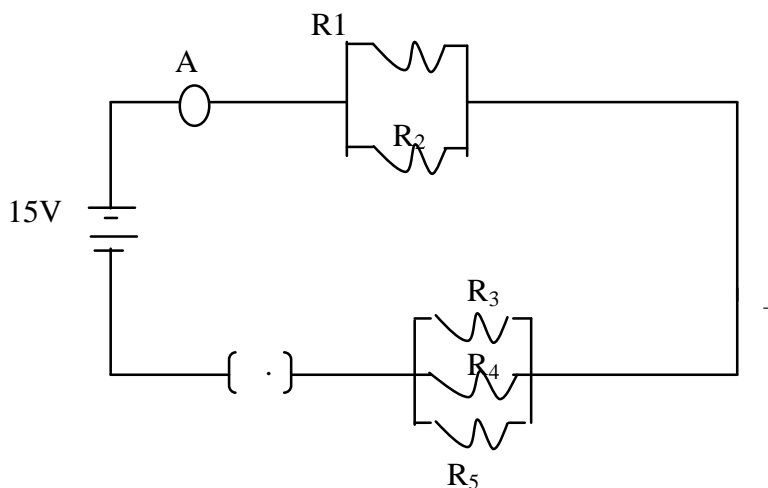
(i) You have three solutions - A, B, and C having a pH of 6, 2 and 9 respectively. Arrange these solutions in increasing order of hydrogen ion concentration. Which of the three is most acidic ? What happens to the hydrogen ion concentration in “A” as it is diluted?

(ii) Dry HCl gas doesn't change the colour of blue litmus to red. Why?

30. In the given figure  $R_1 = 5\ \Omega$ ,  $R_2 = 10\ \Omega$ ,  $R_3 = 15\ \Omega$ ,  $R_4 = 20\ \Omega$ ,  $R_5 = 25\ \Omega$  and a 15V battery is connected to the arrangement . Calculate

a) The total resistance in the circuit and

b) The total current flowing in the circuit. (3)



**OR**

An electric oven of 2kW is operated in a domestic electric circuit (220V) that has a fuse of current rating 5A. What result do you expect? Why?

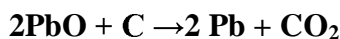
## SECTION C

31. i) A person is suffering from kidney failure. He is advised by the doctor to undergo the blood purification artificially. Identify that process. (5)
- ii) Draw the diagram of nephron and label the following parts  
(a) Bowmans capsule (b) Glomerulus (c) Collecting duct (d) Tubular Part

**OR**

- i) Draw the diagram of Human digestive system and label the parts where  
a) Absorption of digested food (b) absorption of water  
c) Organ which secretes bile juice (d) first chemical digestion occurs
32. (i) Write down the electronic configuration of Magnesium and Oxygen. (5)
- (ii) Give two general properties of the compound formed by combination of magnesium & Oxygen.
- (iii) Show the formation of this compound by the transfer of electrons.
- (iv) What is a redox reaction?
- (v) Identify the substance that is oxidised and the substance that is reduced in the

Following reaction:



**OR**

- i) What is meant by reactivity series of metals?
- ii) Give reasons to justify with chemical equations that aluminum oxide is an amphoteric oxide. Give another example of amphoteric oxide.
- iii) Why should water be never added drop wise to concentrated sulphuric acid?
33. (i) Write chemical formula for washing soda. How can it be obtained from baking soda?.  
Name an industrial use of washing soda other than washing clothes. (3)
- (ii) What happens when chlorine gas is passed through lime water? Give the chemical equation for the reaction. (1)
- (iii) Why tooth decay start when pH of mouth is lower than 5.5? (1)
34. Draw a labeled diagram of an electric motor. Explain its principle and working. What is the function of a split ring in an electric motor (5)
35. What is heating effect of an electric current? Find an expression for amount of heat produced .Name any four appliances based on heating effect of current. (5)
36. (i) State two different types of movement in plants. Mention two points of difference between them. (5)
- (ii) Draw the structure of gram seed germination and label the following parts  
a) plumule (b) radicle (c) cotyledons



**Atomic Energy Education Society**  
**Periodic Test-II (2019-20)**

**Class : X**

**For Rawatbhata Centre**

**Time : 3 Hours**

**Subject : SOCIAL SCIENCE**

**Marks : 80**

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**General Instructions:**

- I. The question paper is divided into four sections - Section A, Section B, Section C and Section D.
- II. The question paper has 36 questions in all.
- III. All questions are compulsory.
- IV. Marks are indicated against each question.
- V. Questions from serial number 1 to 20 are objective type questions. Each question carries one mark.
- VI. Questions from serial number 21 to 28 are 3 marks questions. Answer of these questions should not exceed 80 words each.
- VII. Questions from serial number 29 to 34 are 5 marks questions. Answer of these questions should not exceed 100 words each.
- VIII. Questions from serial number 35 to 36 are map questions of 3 marks each.

**Section –A**

**Choose the correct answer and write it.**

1. Who was the leader of militant Guerrilla Movement in the Gudem hills? 1  
a) Alluri Sitaram Raju    b) Bhagat Sing    c) Kunwar Singh    d) Motilal Nehru
2. 'When France sneezes, the rest of the Europe catches cold'. Who is the speaker of the line here? 1  
a) Napoleon    b) John Lock    c) J J Rousseau    d) Duke Metternich
3. Who was proclaimed the German Emperor after its unification? 1  
a) Garibaldi    b) Mazzini    c) Count Caur    d) The Prussian King William I
4. Name the type of resource which are obtained from biosphere and have life. 1  
a) Reserve Resource    b) Biotic resource    c) Natural Resource    d) Renewable Resource
5. Who proclaimed dams as the temple of modem India? 1  
a) Jawaharlal Nehru    b) DadabaiNaoroji    c) Lord Rippon    d) Subhash Chandrabose

6. What is the full form of HDI? 1  
a) Home Development Index      b) Housing development of India  
c) Human Development of India      d) Human Development Index
7. In which sector is seasonal and disguised unemployment most prevalent in India? 1  
a) Agriculture sector   b) Tertiary sector   c) Industrial Sector   d) Mixed Sector
8. Which Association took back the medals of Carlos, Smith and Norman? 1  
a) Indiana Olympic Association   b) African Olympic Association  
c) The U S Sports Council   d) The International Olympic Association
9. Which community was relatively rich and powerful in Belgium? 1  
a) Indian      b) American  
c) The minority French speaking community      d) The Dutch Speaking community
10. Which crops are grown with the onset of monsoon and are harvested in September-October? 1  
a) Kharif crops   b) Rabi crop   c) Plantation crop   d) None of them
11. What were the large landowners of Prussia known as? 1  
a) Kulaks      b) Pykars      c) Mahantas      d) Junkers
12. At which of the Congress Session was the Non-Cooperation Programme adopted? 1  
a) Nagpur      b) Madras      c) Delhi      d) Surat
13. Who is the author of the famous book, 'Hind Swaraj'? 1  
a) B. G. Tilak      b) Mahatma Gandhi      c) J L Nehru      d) Garibaldi
14. The black buck belongs to which of the following categories of fauna? 1  
a) Extinct species      b) Rarespecies      c) Endemic species      d) Endangered species
15. Biodiversity is very important for which of the following creatures? 1  
a) plants      b) earthworms      c) humans      d) aliens
16. A labourer working in a construction site is in \_\_\_\_\_ sector of employment. 1  
a) organised      b) unorganised      c) primary      d) none of the above
17. Which sector is also called the 'service sector'? 1  
a) Primary      b) Secondary      c) Tertiary      d) none of the above

18. In which Schedule of the Indian Constitution are the 22 scheduled languages included? 1  
 a) Tenth schedule b) Eighth schedule c) Twelfth schedule d) Ninth schedule
19. Who led the Civil Rights Movement in the USA? 1  
 a) Rosa Parks b) Nelson Mandela c) Abraham Lincoln d) Martin Luther King Jr.
20. Which is the first and the only state in India that has made roof top rainwater harvesting compulsory to all the houses across the state? 1  
 a) Tamil Nadu b) Gujarat c) Maharashtra d) Rajasthan

### Section - B

21. Why did the Non-Co-operation Movement gradually slow down in the cities? Explain. 3
22. How did the Salt March become an effective tool of resistance against colonialism? Explain. 3
23. What is meant by the term "resource"? List the types of resources classified on the basis of its ownership. 3
24. Describe the geographical conditions required for the growth of rice. 3
25. What is development? What are the two aspects of development? 3
26. Explain the objectives of implementing the NREGA 2005. 3
27. What were the majoritarian measures taken in Sri Lanka to establish Sinhala supremacy? 3
28. Write any three provisions of the Constitutional Amendment of 1992 that strengthened the third tier of government in India. 3

### Section - C

29. "Napoleon had destroyed democracy in France but in the administrative field, he had incorporated revolutionary principles in order to make the whole system more rational and efficient." Do you agree with the given statement? Why?. 5
30. Enlist the various institutional reform programmes introduced by the government in the interest of farmers. 5
31. Define per capita income. What are the limitations of the per capita income criterion of development? 5
32. Workers are exploited in the unorganised sector. Do you agree with this view? Give reasons in support of your answer. 5
33. What are the different forms of power-sharing in modern democracies? Give an example of each of these. 5
34. How are the powers (lists) divided between the states and centre? Explain with examples. 5

### Section–D

35. Three features A, B and C are marked on the given political outline 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. 3

(A) The city associated with the Jallianwala Bagh incident.

(B) The place associated with Indigo peasant's Satyagraha.

(C) The place where the Indian National Congress Session was held.

36. On the same map of India locate and label the following items with appropriate symbols: 3

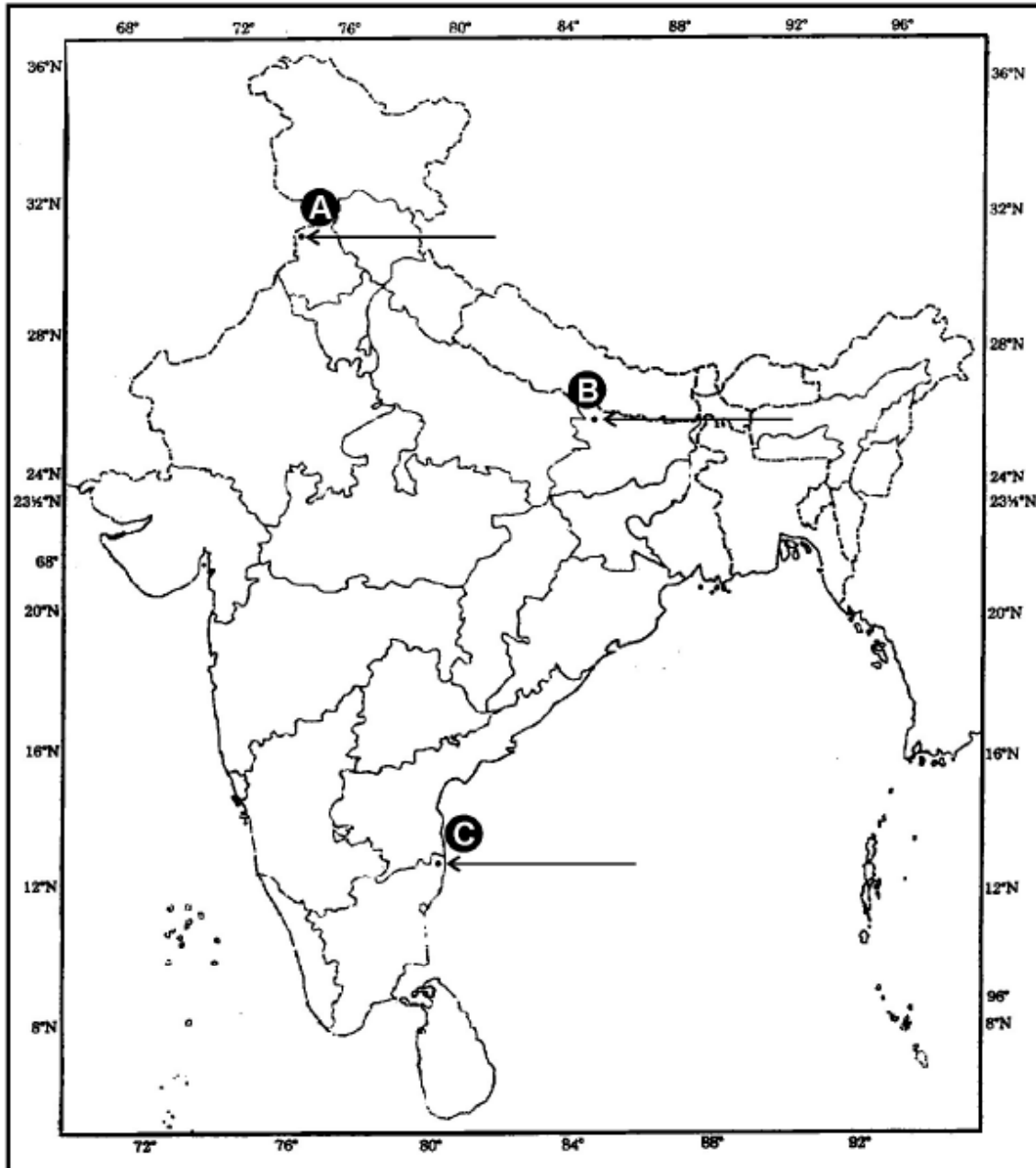
a) A leading Rubber producing state

b) Tehri dam

c) Arid soil

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# Outline Map of India (Political)



**Atomic Energy Education Society**  
**Periodic Test-II (2019-20)**

**Class: X****For Other than Rawatbhata Centre****Time: 3 hours****Subject: Social Science****Max. Marks: 80****General Instructions:**

- I. The question paper has 36 questions in all. All questions are compulsory.
- II. Questions from serial number 1 to 20 are objective type questions. Each question carries one mark.
- III. Questions from serial number 21 to 28 are 3 marks questions. Answer of these questions should not exceed 80 words each.
- IV. Questions from serial number 29 to 34 are 5 marks questions. Answer of these questions should not exceed 100 words each.
- V. Question number 35 and 36 are map question of 3 marks from History and 3 marks from Geography.

1. Why was the Treaty of Vienna (1815) drawn up?
  - a. To establish tariff barriers
  - b. To restore the monarchies
  - c. To divide the German confederation of 39 states
  - d. To establish democracy
2. The Independence of which country was recognized by the Treaty of Constantinople in 1932?
  - a. Turkey
  - c. Netherlands
  - b. Greece
  - d. Italy
3. Justice Party of Madras was a party of \_\_\_\_\_.
  - a. Non-Muslims
  - c. Non Brahmins
  - b. Non Tamils
  - d. Judas
4. In which session of the Indian national congress, the resolution of Poorna Swaraj was adopted?
  - a. Karachi
  - c. Lucknow
  - b. Haripur
  - d. Lahore
5. Where is Majoritarianism followed?
  - a. Belgium
  - c. England
  - b. Sri Lanka
  - d. Russia
6. Which one of the following systems of power sharing is called checks and balances?
  - a. Horizontal distribution of power
  - c. Separation of power
  - b. Federal division of power
  - d. Vertical division of power
7. Which one of the followings falls under residuary subject?
  - a. Police
  - c. Computer software
  - b. Trade
  - d. Banks
8. Name the state which was not created on linguistic basis?
  - a. Nagaland
  - c. Tamil Nadu
  - b. Andhra Pradesh
  - d. West Bengal
9. Name the local body whose head is called the Mayor ?
  - a. Municipal corporation
  - c. Panchayat
  - b. Municipality
  - d. Zila parishad
10. When power is taken away from Central and State Governments and given to the local government, then it is called \_\_\_\_\_.
  - a. Decentralisation
  - c. Reorganisation
  - b. Centralisation
  - d. Unification
11. Which one of the following crops is rich in Protein?
  - a) Pulses
  - c) Millets
  - b) Rice
  - d) Jowar
12. In which of the following states black soil is predominantly found?
  - a) Kerala
  - c) Rajasthan
  - b) Maharashtra
  - d) Jharkhand

13. Which state has witnessed land degradation due to over irrigation?
  - a) Punjab
  - b) Nagaland
  - c) West Bengal
  - d) Gujarat
14. In which state in India is the infant mortality rate lowest?
  - a) Bihar
  - b) Punjab
  - c) Kerala
  - d) Maharashtra
15. "There is enough for everybody's need and not for anybody's greed". Who among the following has given the above statement?
  - a) Vinoba Bhave
  - b) Mahatma Gandhi
  - c) Sarojini Naidu
  - d) Dr Manmohan Singh
16. Which one among the following soil types is the result of intense leaching due to heavy rainfall?
  - a. Red soil
  - b. Black soil
  - c. Laterite soil
  - d. Alluvial soil
17. What is the other name of rain water in semi-arid and arid regions of Rajasthan?
  - a. Guls pani
  - b. Palar pani
  - c. Johad pani
  - d. Ganga jal
18. When was the Project Tiger launched?
  - a. In 1913
  - b. In 1973
  - c. In 1974
  - d. In 1972
19. Which organisation calculates H D I ?
  - a. World Bank
  - b. IMF
  - c. UNDP
  - d. WHO
20. In which one of the following sectors, the production of a commodity is mostly through the natural process?
  - a. Primary
  - b. Secondary
  - c. Tertiary
  - d. Public
21. Explain the effects of non-cooperation movement on the economic front. [3]

**OR**

Explain the idea of Satyagraha.

22. Why did Gandhiji launch the Civil Disobedience Movement? [3]
23. Why do the Sri Lankan Tamils feel alienated in spite of their long stay in Srilanka? [3]
24. Explain the importance of local government for establishing grass root democracy. [3]
25. Multipurpose projects and large dams have also been the cause of many social movements. Explain. Name any two such movements. [3]

**OR**

Why is there a need to develop rainwater harvesting system in India?

26. Analyse the reasons for the decline in India's bio-diversity due to human activities. [3]
27. Describe the role of the tertiary sector in the development of a country. [3]
28. What is resource planning? Why is it essential? [3]
29. What changes did Napoleon introduce to make the administrative system more efficient in the territories ruled by him? [5]
30. Explain any five features of federalism. [5]
31. How can you say that democracy is a better form of government? [5]
32. Describe the institutional and technical changes introduced in the field of agriculture in India in the recent years. [5]
33. Mention the differences between developed countries and developing countries. [5]
34. Describe how communities have conserved and protected forests and wildlife in India. [5]

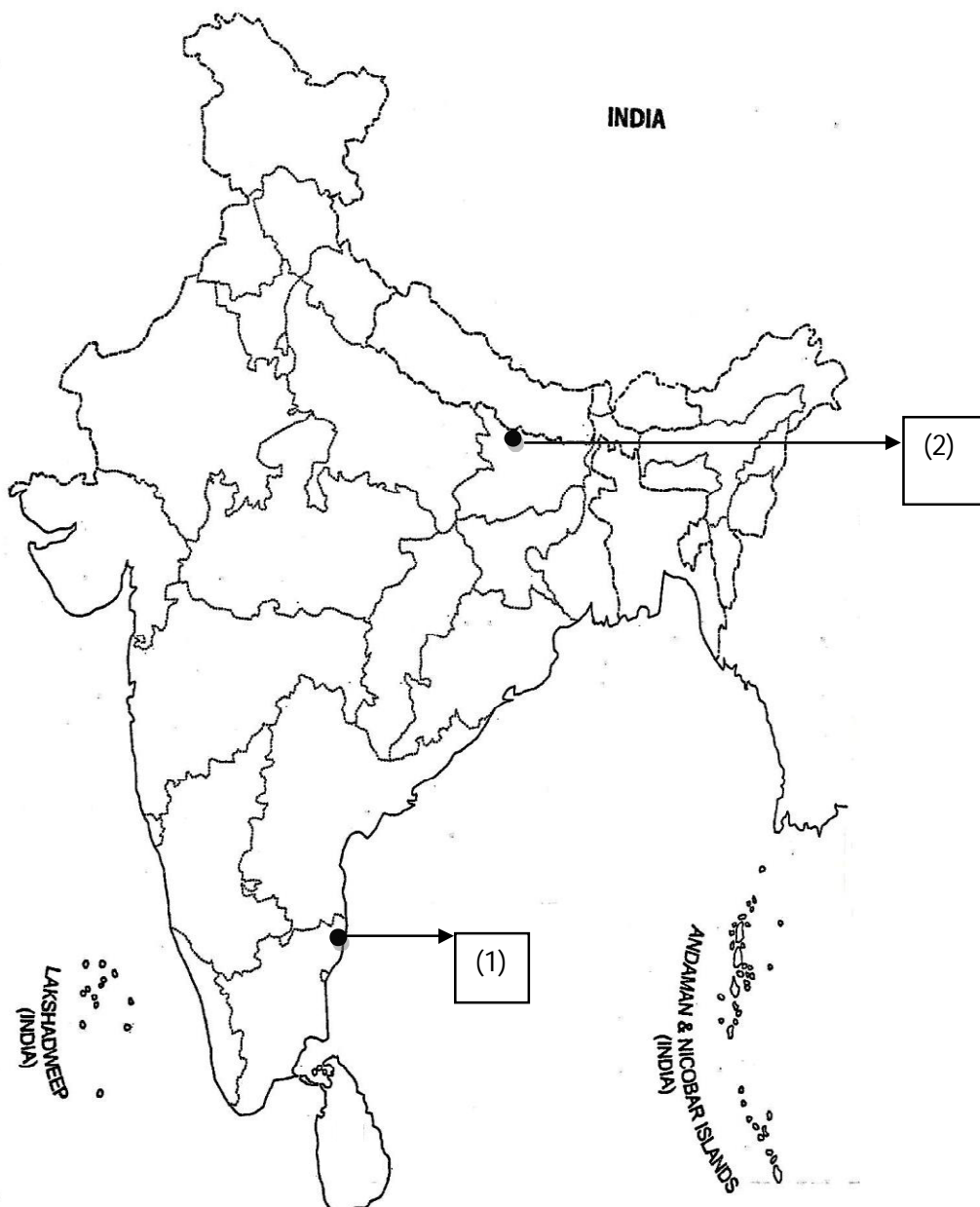
35. Items (1) and (2) are shown in the given political outline map of India. Identify these items with the help of following information and write their correct names on the lines marked on the map.

[1+1+1=3]

1. The place where the Congress session of 1927 was held.
2. The place from where the movement of Indigo planters was started.

On the same outline map of India, locate and label the following item with appropriate symbol.

3. The place where the Jallianwala Baug massacre took place.





36. Items (1) and (2) are shown in the given political outline map of India. Identify these items with the help of the following information and write their correct names on the lines marked on the map.

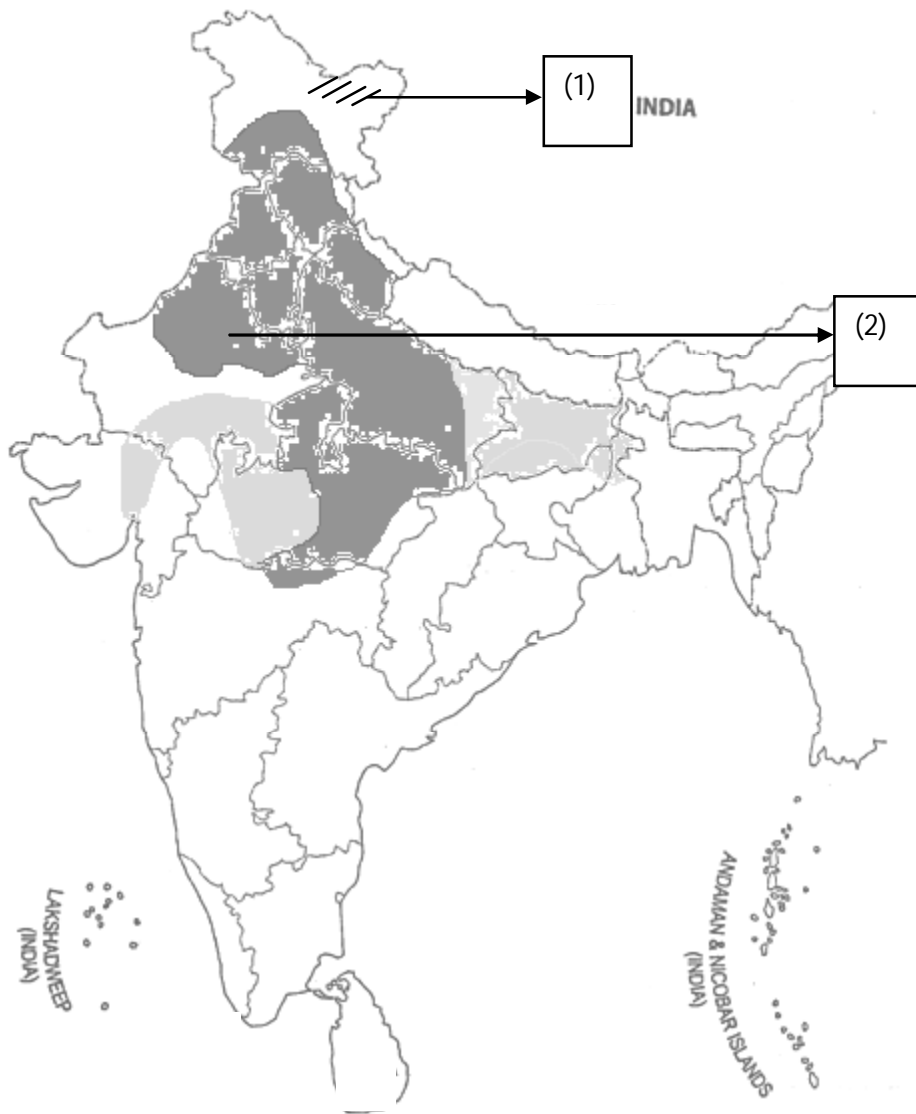
[1+1+1=3]

(1) A type of soil.

(2) Name the crop grown in the shaded areas.

On the same political outline map of India, locate and label the following item with the appropriate symbol.

(3) Hirakud Dam



\*\*\*\*\*

**परमाणु ऊर्जा शिक्षण संस्था**  
अणुशक्तिनगर, मुंबई  
आवधिक परीक्षा – 2, प्रश्न-पत्र (2019 - 20)

कक्षा – दसवीं अधिकतम अंक – 80

विषय – हिंदी (कोर्स- अ) समय – 3 घंटा

निर्देश – (1) प्रश्न-पत्र के चार खंड हैं – क,ख,ग,घ  
(2) सभी प्रश्नों के उत्तर यथा संभव क्रमानुसार लिखिए।

**(खंड – क)**

**प्र.1 निम्नलिखित गद्यांश को पढ़कर पूछे गए प्रश्नों के उत्तर लिखिए -**

इस बढ़ती हुई आबादी को खिलाने के लिए उसी मात्रा में अन्न, सब्जी, फल आदि चाहिए, रहने के लिए घर चाहिए, पहनने के लिए कपड़े चाहिए और इसी प्रकार की अन्य जरूरतों की पूर्ति के लिए विविध प्रकार की सामग्री चाहिए। खेती करने के लिए, घर बनाने के लिए, कल-कारखाने लगाने के लिए, सड़कें रेल पटरियाँ बिछाने के लिए धरती चाहिए। इसलिए बड़े पैमाने पर पेड़ काटे गए। इसके अलावा हमारे कल-कारखाने कच्चे माल के लिए जंगलों पर निर्भर करते हैं। इसलिए पिछले वर्षों जिस गति से जंगलों का सफाया हुआ है, वैसा कभी नहीं हुआ था। नई तकनीकों से पेड़ कटने की गति तो खूब बढ़ी, किंतु उतनी ही गति से कटे हुए पेड़ों की जगह नए पेड़ लगाने का प्रयत्न नहीं किया गया। बढ़ती हुई आबादी को खिलाने के लिए खेतों में रासायनिक उर्वरक चाहिए और पौधों को कीटाणु हानि न पहुँचाएँ, इसलिए कीटनाशी दवाइयाँ चाहिए। इन उर्वरकों और कीटनाशी दवाइयों के कारण मिट्टी प्रदूषण होती जा रही है।

- |   |   |
|---|---|
| (क) मनुष्य समुदाय को किन-किन आवश्यकताओं की पूर्ति के लिए धरती चाहिए ?     | 2 |
| (ख) बढ़ती आबादी के कारण कौन-कौन-सी समस्याएँ सामने आ रही हैं ?             | 2 |
| (ग) बढ़ती हुई आबादी को खिलाने के लिए खेतों में क्या करने की आवश्यकता है ? | 2 |
| (घ) मिट्टी प्रदूषित होने का मुख्य कारण क्या है ?                          | 1 |
| (ङ) 'प्रदूषित' शब्द में कौन-सा प्रत्यय प्रयुक्त हुआ है ?                  | 1 |

प्र.2 निम्नलिखित काव्यांश को पढ़कर पूछे गए प्रश्नों के उत्तर लिखिए –

जा रहा हूँ दूर दुनिया से बिछुड़कर  
देखकर आँख में आँसूँ न भरना,  
टूटती आवाज़ में फिर कह रहा हूँ  
साथियो ! अपने वतन से प्यार करना ।

काश! मेरी माँ यहाँ से देख पातीं  
घाव मैंने पीठ पर खाया नहीं है  
दूध का बदला चुकाकर जा रहा हूँ  
रक्तंजित गात मुरझाया नहीं है  
जन्म जितनी बार भी लूँ इस धरा पर  
दूध ऐसी सिंहनी का ही पिऊँ मैं  
चार दिन की जिंदगी या सौ बरस की  
देश का हित साधने को ही जिऊँ मैं  
मैं अमरता का कभी याचक नहीं हूँ  
देश के हित में सदा स्वीकार मरना ।

- (क) सैनिक अपने साथियों से क्या कह रहा है ? 2
- (ख) सैनिक अपनी माँ को याद करके क्या कह रहा है ? 2
- (ग) सैनिक किस चीज की याचना कभी नहीं करता ? 1
- (घ) इस काव्यांश में मनुष्य को क्या संदेश दिया गया है ? 1
- (ङ) काव्यांश का उपयुक्त शीर्षक बताइए ? 1

(खंड-ख)

प्र.3 (क) रचना के आधार पर वाक्य-भेद लिखिए -

1+1+1 =3

- (च) जो परिश्रम करते हैं उन्हीं को सफलता मिलती है ।
- (छ) ठीक से काम करो अथवा काम करना बंद कर दो ।
- (ज) मेहनत करने वाला व्यक्ति कभी असफल नहीं होता ।

(ख) निम्नलिखित वाक्यों को मिश्र वाक्य में बदलिए -

1+1=2

(अ) अध्यापिका ने छात्रा की प्रशंसा की तथा उसका उत्साह बढ़ाया।

(आ) गीता मेहनत करके पास होगी।

प्र.4 निर्देशानुसार वाच्य बदलिए -

5

(क) मैंने पत्र लिखा। (कर्मवाच्य में)

(ख) पक्षियों द्वारा आकाश में उड़ा जाएगा। (कर्तृवाच्य में)

(ग) क्या वे लिखेंगे? (भाववाच्य में)

(घ) अब पढ़े। (भाववाच्य में)

(ङ) राधा गीत सुनाएगी। (कर्मवाच्य में)

प्र.5 रेखांकित पद का पद परिचय दीजिए -

5

(क) हम विद्यालय जाएँगे।

(ख) मोहन बाजार गया।

(ग) गीता दसवीं कक्षा में पढ़ती है।

(घ) वह निबंध लिखेगा।

(ङ) यह कार किसकी है।

(खंड-ग)

प्र.6 निम्नलिखित गद्यांश को पढ़कर पूछे गए प्रश्नों के उत्तर लिखिए -

2+2+1= 5

फादर को याद करना एक उदास शांत संगीत को सुनना जैसा है। उनको देखना करुणा के निर्मल जल में स्नान जैसा था और उनसे बात करना कर्म के संकल्प से भरना था। मुझे 'परिमल' के वे दिन याद आते हैं जब हम सब एक पारिवारिक रिश्ते में बँधे जैसे थे जिसके बड़े फादर बुलके थे। हमारे हँसी- मजाक में वह निर्लिप्त शामिल रहते, हमारी गोष्ठियों में वह गंभीर बहस करते, हमारी रचनाओं पर बेबाक राय और सुझाव देते और हमारे घरों के किसी भी उत्सव और संस्कार में वह बड़े भाई और पुरोहित जैसे खड़े हो हमें अपने आशीषों से भर देते। मुझे अपना बच्चा

और फादर का उसके मुख में पहली बार अन्न डालना याद आता है और नीली आँखों की चमक में तैरता वात्सल्य भी-जैसे किसी ऊँचाई पर देवदारु की छाया में खड़े हों।

(क) फादर को याद करना कैसा है? लेखक फादर बुल्के के साथ कैसे रिश्ते को याद करते हैं ?

(ख) घर के उत्सवों में फादर का क्या योगदान होता था?लेखक ने फादर की वात्सल्य की तुलना किससे की है ?

(ग) 'परिमल' क्या थी ?

**प्र.7 निम्नलिखित प्रश्नों में से किन्हीं पाँच के उत्तर लिखिए -**

**2x5=10**

(क) 'नेताजी का चश्मा' कहानी के आधार पर पानवाले के चरित्र पर प्रकाश डालिए।

(ख) कैप्टन कौन था ? उसे कौन-सी बात आहत करती थी ?

(ग) भगत ने अपने बेटे की मृत्यु पर अपनी भावनाएँ किस तरह व्यक्त कीं ?

(घ) नवाब ने अपनी नवाबी का परिचय किस प्रकार दिया ?

(ङ) नम आँखों को गिनना स्याही फैलाना है। आशय स्पष्ट कीजिए।

(च) आपके विचार से फादर बुल्के ने भारत आने का मन क्यों बनाया होगा?

(छ) लेखिका 'मन्नू भंडारी' के व्यक्तित्व पर किन-किन व्यक्तियों का किस रूप में प्रभाव पड़ा ?

**प्र.8 प्रस्तुत काव्यांश को पढ़कर पूछे गए प्रश्नों के उत्तर लिखिए -**

**1+2+2=5**

बादल, गरजो !

घेर घेर घोर गगन, धराधरा ओ!

ललित ललित, काले घुँघराले,

बाल कल्पना के-से पाले,

विद्युत- छवि उर में, कवि, नवजीवन वाले!

वज्र छिपा, नूतन कविता

फिर भर दो-

बादल, गरजो!

(क) बादल के हृदय में किस प्रकार की शोभा छिपी हुई है ?

(ख) 'विद्युत-छवि उर में' कवि नवजीवन वाले' का आशय स्पष्ट कीजिए।

(ग) बादलों को किस रूप में प्रस्तुत किया गया है ? विस्तार से लिखिए।

- (क) उधदव के व्यवहार की तुलना किस-किस से की गई है ?  
(ख) गोपियों के अनुसार राजा का धर्म क्या होना चाहिए ?  
(ग) परशुराम के क्रोध करने पर लक्ष्मण ने धनुष के टूट जाने के लिए कौन-कौन से तर्क दिए?  
(घ) लक्ष्मण ने वीर योद्धा की क्या-क्या विशेषताएँ बताई ?  
(ङ) कवि बादल से फुहार, रिमझिम या बरसने के स्थान पर 'गरजने' के लिए कहता है, क्यों?  
(च) कविता में बादल किन-किन अर्थों की ओर संकेत करता है ?  
(छ) फागुन में ऐसा क्या होता है जो बाकी ऋतुओं से भिन्न होता है ?

प्र.10 आपके विचार से भोलानाथ अपने साथियों को देखकर सिसकना क्यों भूल जाता है ?

2

अथवा

'माता का आंचल' पाठ में बच्चों की जो दुनिया रची गई है वह आपके बचपन की दुनिया से किस प्रकार भिन्न है?

प्र.11 'और देखते ही देखते नई दिल्ली का कायापलट होने लगा'- नई दिल्ली के कायापलट के लिए क्या-क्या प्रयत्न किए गए होंगे ?

3

अथवा

जार्ज पंचम की लाट की नाक को पुनः लगाने के लिए मूर्तिकार ने क्या-क्या यत्न किए ?

(खंड-घ)

प्र.12 किसी एक विषय पर संकेत बिंदुओं के आधार पर निबंध लिखिए -

10

(अ) बीता समय फिर लौटता नहीं

\* भूमिका \* समय का महत्त्व \* समय नियोजन \* समय गंवाने से हानियाँ \* उपसंहार

(आ) स्वच्छ भारत अभियान

\* भूमिका \* स्वच्छ भारत अभियान का आरंभ \* स्वच्छता का महत्त्व \* उपसंहार

(इ) विद्यार्थी और अनुशासन

\* अनुशासन का शाब्दिक अर्थ \* प्राचीनकाल के विद्यार्थी \* छात्रों में अराजकता

\* विद्यार्थी में अनुशासन होने के लिए आवश्यक गुण \* उपसंहार

प्र.13 प्रातः कालीन भ्रमण का लाभ बताते हुए अपने छोटे भाई को पत्र लिखिए।

5

अथवा

पर्याप्त और नियमित रूप से पानी न मिलने की शिकायत करते हुए अपने नगर के जलापूर्ति अधिकारी को पत्र लिखिए।

Atomic Energy Education Society

Periodic Test-II (2019-20)

Class: 10th

For Rawatbhata Centre

Time: 3hrs

Subject: English

Marks: 80

MARKING SCHEME

1. Reading passage (1 Mark each)

1. Read the passage below and answer the questions that follow: (12 marks)

1.1 On the basis of your reading of the passage answer the following questions: (4x2m=8m)

1. What kind of people go to America?

Ans. doctors, engineers, nurses, scientists, and technicians

2. When did the urge to go abroad become compelling in India?

Ans. in the post-independence years

3. Who have played a key role in international migration?

Ans. People in power like scientist and skilled persons

4. What is meant by brain drain?

Ans. professionals going abroad to work

1.2 Write correct options to the following questions: (4x1m=4m)

1. What is meant by the word 'inscribed' (para 1)

(i) designed (ii) written (iii) read (iv) painted

2. Find the word from the passage which means 'great changes or disturbances'(para 2)

(i) wars (ii) immigrants (iii) migrations (iv) upheavals

3. Find the word opposite in meaning to 'earnings'(para 3)

(i) expenses (ii) compensation (iii) policies (iv) skills

4. Find the word from the passage opposite meaning to 'minimum'(para 4)

(i) developer (ii) economic (iii) maximum (iv) drain

2. Read the passage below and answer the questions that follow: (8 marks)

2.1 On the basis of your reading of the passage answer all the following questions : (8x1m =8m)

(1) What do most of the medicine treat?

Ans. medicines treat only the symptoms of the disease, and not the root cause

(2) What does the phrase 'chronic ailments' refer to?

Ans. Diseases that last for a long time.

(3) How is yoga different from other treatments?

Ans. It removes the root cause of the disease.

(4) What does yogic way of life include?

Ans. regulation, discipline, combined with prayer and meditation.

(5) How do 'Simple Asanas' help?

Ans. to stretch and relax the whole body and neutralize tensions.

(6) How does sincere practice of yoga postures benefit us?

Ans. profound effect on the inner dimensions of life, establishing deep calm, concentration, emotional stability and confidence.

(7) How does yoga therapy work?

Ans. It works in a slow, subtle and miraculous manner.

(8) Is yoga better than physical exercises?

Ans. Yes with development of spiritual or astral body.

Objective: To use an appropriate style to write a formal letter.

Marking Scheme:

Content – 4

Expression –4 (Fluency + Accuracy)

OBJECTIVE- To plan and organise one's thoughts with fluency, accuracy and without grammatical errors.

Marking Scheme:

Content- 5 marks

Fluency -2 marks

Accuracy-2 marks

Title: 1 marks

3. Fill in the blanks (1M Each)

a. they

b. that

c. if

d. at

4. Edit (1M Each)



- a. organized- organizing
- b. between- from
- c. invite-invites
- d. to- for

5. Jumbled words (I M each)

- A. I am a resident of Trilok Apartments at Gandhi Nagar in New Delhi.
- B. I would be extremely grateful if you could kindly help me.
- C. Please consider my application for the installation of a new computer system.
- D. I am a new inhabitant of this region.

8. Read the following extract carefully and answer the questions that follow: **(4x1m=4m)**

- (a) Lencho was filled with sadness when the storm passed away.
- (b) The corp was completely destroyed
- (c) Destroyed
- (d) It is a ball of ice that falls from the sky in the form of rain.

**OR**

- (a) He is helpless as he is locked in the cage
- (b) Because he feels they will not help him to get out of the prison
- (c) The tiger is moving slowly and quietly along the length of the cage
- (d) Walking to and fro helplessly

9. SAQ (2 Marks each)

- a. As a boy Mandela meant by being free to wander in the fields near his hut. It was to swim, to run through the village. Also it was to roast mealies at night and to ride the bulls. As a student he meant to be free to stay out at night. It was to read what he pleased to read and to go where he chose. It was also to be as per his potential. These were the 'transitory freedom'. But the 'basis and honorable freedoms' were the freedom for the people.
- b. Anne thinks so because paper is lifeless. One can do anything to it. It can be torn or thrown. But these things cannot be done to people because they are humans. She feels paper does not react but people do.
- c. Hari Singh needed a place to leave in and a source of food. When he met Anil

he told him that he wanted to work for him, but Anil replied that he could not pay him. However, he told Hari Singh, if he could cook, he could feed him.

- d. Fowler was a writer. He wanted to meet Ausable to cover him up for writing for his publication. He expected Ausable to look like a spy. But he was disillusioned because he didn't look like that. He was fat. In fact, he had nothing to look like a spy
- e. The day dawned. Griffin did not wake up in time. The shop assistants opened the store. Griffin got scared. He began to run. The shop assistants ran after him to capture him. So he panicked and tried to escape. He took off his new found clothes and escaped.

**A.10**      Extrapolation

(a)	Content	-	4 marks	<b>[8]</b>
	Expression	-	4 marks	
	11. Extrapolation			
(b)	Content	-	4 marks	<b>[8]</b>
	Expression	-	4 marks	

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**Atomic Energy Education Society  
Half Yearly Examination- 2019-20**

**Class: X** **Marking Scheme** **Time : 3 Hours**  
**Subject: ENGLISH** **For Other than Rawatbhata Centre** **Marks : 80**

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**SECTION A (READING - 20 MARKS)**

1.

- (i) It has many prayer flags of different colours. [1]
- (ii) If the prayer flags weren't there [1]
- (iii) It is holy. [1]
- (iv) Wings of cathedrals, falling into the river below, large fluted columns, like the hermit perches of Cappadocia, with golden moss spilling over from their height. [1]
- (v) Abandoned [1]
- (vi) It is considered to be holy. [1]
- (vii) They flap against the bus. [1]
- (viii) Lively [1]

2.

i

- (a) The traits (qualities) of a leader are the following: [2]  
First, the self-knowledge to navigate difficult situations.  
Secondly, he must have clarity of vision. Thirdly, he must be curious in order to respond to change.
- (b) Individual lens views differ because the lens view gives us the ability to examine targets in business on our own terms. These terms which are clear to us might be opaque to another who is brought up under different circumstances. [2]
- (c) A successful family-run business must pro-actively learn best practices for sustaining a closely-held business over generations. The group must wrestle out issues together and reach solutions in line with the overall vision of the company. Their decisions must benefit the business and its shareholders. [2]

- (d) The third generation in a family-run business is most vulnerable because the next generation is not only larger but more distanced from the company's origins. They have to face a smaller sub-set of the family and thereby balance collective and individual achievement. (Even if the student mentions that the fourth generation is vulnerable, mark may be given.) [2]

ii

- (a) (iii) work towards accomplishing something [1]  
(b) (i) the special feature of a person [1]  
(c) (i) transformation [1]  
(d) (iv) joining with a particular group [1]

**SECTION B (WRITING AND GRAMMAR - 30 MARKS)**

3. Write a letter Write an article **8 marks**  
Format 3 Marks Content 4 Marks  
Content 3 Marks OR Accuracy 2 Marks  
Fluency 2 Marks Fluency 2 Marks
4. Complete the following story using the outline given: (150-200 words) **10 marks**  
Content 6 Marks  
Accuracy 2 Marks  
Fluency 2 Marks
5. Complete the paragraph given below with the help of the options that follow: **(4x1m=4m)**  
a) (i) is (ii) was (iii) had (iv) has  
b) (i) of (ii) on (iii) in (iv) for  
c) (i) spread (ii) spreads (iii) is spread (iv) will spread  
d) (i) will be (ii) but (iii) also (iv) was
6. The following passage has not been edited. There is one error in each line. Write the incorrect word and the correct word as shown in the example given below: **(4x1m=4m)**  
Incorrect word      Correct word  
Eg. At                      in  
a) from                      to  
b) to                          in  
c) join                        joined  
d) consider                  considered
7. Rearrange the words and phrases given below to form meaningful sentences: **(4x1m=4m)**  
a) Four criminals were arrested in Varanasi.  
b) They tried to steal a Buddha statue from the museum.  
c) The famous statue is back in place.  
d) The museum authorities thanked the Police Department.

**SECTION C (LITERATURE - 30 MARKS)**

8. Extract (1 Mark each)

- A. Leslie Norris and A Tiger in the Zoo
- B. In a cage
- C. Vivid
- D. Both a) and b)

**Or**

- A. Amanda and Robin Klein
- B. Lost in her thoughts
- C. Eating chocolates
- D. Remember

9. Answer the following questions in 30 to 40 words: (any Five) **(5x2m=10m)**

- i. Dust of snow means fine particles or flakes of snow. The sudden shower of dust of snow changed the mood of the poet. The mood of the poet changed from sadness to happiness.
- ii. the young seagull was afraid to fly. His family left him alone, he was hungry. His mother brought food for him, flew close to him but did not go nearer. Mad by hunger he dived to catch the fish and then his wings spread and he began to fly.
- iii. Anne's last essay in the form of a poem showed the lighter side of the naughty child. It helped in bridge the gap between the teacher and student.
- iv. Wanda is a Polish girl, she always wears the same blue faded dress and has mud on her feet. Thus the other students make fun of her and tease her after school hours.
- v. The narrator is a capable surgeon and handles Tricky properly. He does not operate upon the dog unnecessarily but make some changes in diet and other activities.
- vi. Anil was glad that Hari has realized his mistake and the importance of education. He wanted Hari to become literate and lead a respectable life. Anil is different from others because he is very understanding. And Hari's return gave him the hope of a change in him.
- vii. Ausable creates a detailed description of how his office was a part of a bigger apartment and how the next room had a direct connection with the balcony. His statement that someone else has broken into his office through the balcony made a convincing story.

10. Answer any One in 100- 150 words: **8m**

Refer text chapter Nelson Mandela Long Walk to Freedom.

**Or**

Any relevant answer

11. Answer any One in 100- 150 words: **8m**

Refer supplementary reader chapter A Triumph of Surgery.

**Or**

Refer to supplementary reader chapter The Midnight Visitor. Or any relevant answer.

ATOMIC ENERGY EDUCATION SOCIETY

ANSWER KEY , PERIODIC TEST-II (2019 - 20)

For Rawatbhata Centre

CLASS : X, SUBJECT : MATHEMATICS

1:

- (i) d 1 mark
- (ii) c 1 mark
- (iii) c 1 mark
- (iv) a 1 mark
- (v) c 1 mark
- (vi) d 1 mark
- (vii) a 1 mark
- (viii) d 1 mark
- (ix) b 1 mark
- (x) b 1 mark
- (xi) If a and b are any two real numbers  $a > b$ , there exists two integers q and r such that  
 $a = bq + r, 0 \leq r < b$  1 mark
- (xii) No real roots, since  $D < 0$  1 mark
- (xiii) 1:4 1 mark
- (xiv)  $\sqrt{3}a$  units 1 mark
- (xv)  $S_n = \frac{n(n+1)}{2}$  1 mark
- xvi.  $m=8$  1 mark
- xvii. Three 1 mark
- xviii. Linear 1 mark
- xix. Equiangular 1 mark
- xx. Ordinate 1 mark

2.  $x^2 - 3x + 2x - 6 = 0$  1 mark

$x(x - 3) + 2(x - 3) = 0$  ½ mark

$x = -2, 3$  ½ mark

3.  $PQ = \sqrt{(a - b - a - b)^2 + (-a - b - a + b)^2}$  1/2 mark

$= \sqrt{(4a^2 + 4b^2)}$  1 mark

$= 2\sqrt{(a^2 + b^2)}$  ½ mark

4.  $D = 16 - 4k$  1 mark

$K < 4$  1mark

5.  $\frac{AB}{PQ} = \frac{BC}{QR} = \frac{AC}{PR} = \frac{36}{24}$  1 mark

$\frac{AB}{10} = \frac{36}{24}$  ½ mark

$AB = 15 \text{ cm}$  ½ mark

6.  $\frac{\text{area}\Delta ABC}{\text{area}\Delta DEF} = \frac{AB^2}{DE^2}$  ½ mark

$\frac{\text{area}\Delta ABC}{\text{area}\Delta DEF} = \frac{1.44}{2.96}$  1 mark

$= \frac{36}{49}$  ½ mark

7.  $T_n = a + (n - 1)d$  ½ mark

$95 = -1 + (n - 1)4$  ½ mark

$n = 25$  1 mark

OR

$a = 1, d = 6$  1/2 mark

$t_{n-1} = a + (n - 2)d$  ½ mark

$t_{n-1} = 6n - 11$  1 mark

8. let  $5 - \sqrt{3} = p/q$ , where p and q are integer, having no common factor,  $q \neq 0$  1 mark

$$\sqrt{3} = \frac{5q-p}{q} \quad 1 \text{ mark}$$

$= \frac{5q-p}{q}$  is a rational number as p and q are integers, thus our assumption is wrong 1 mark

9.  $\alpha + \beta = -b/a$  and  $\alpha \beta = c/a$   $\frac{1}{2}$  mark

$$\alpha^3 + \beta^3 = (\alpha + \beta)^3 - 3\alpha\beta(\alpha + \beta) \quad 1 \text{ mark}$$

$$= \frac{3abc - b^3}{a^3} \quad 1 \frac{1}{2} \text{ mark}$$

10.  $2/(p+q) = 3/(2p-q) = 7/21$   $\frac{1}{2}$  mark

$$P + q = 6 \text{ and } 2p - q = 9 \quad 1 \text{ mark}$$

$$\text{Getting } p = 5 \text{ and } q = 1 \quad 1 \frac{1}{2} \text{ mark}$$

11. 2 and 3 are roots

$$12 - 4k - 2m = 0 \text{ and } 27 - 6k + 2m = 0 \quad 1 \frac{1}{2} \text{ mark}$$

$$\text{Getting } k = 15/2 \text{ and } m = 9 \quad 1 \frac{1}{2} \text{ mark}$$

OR

$$x^2 + 3\sqrt{2}x - \sqrt{2}x - 6 = 0 \quad 1 \text{ mark}$$

$$x(x + 3\sqrt{2}) - \sqrt{2}(x + 3\sqrt{2}) = 0 \quad 1 \text{ mark}$$

$$x = -3\sqrt{2}, \sqrt{2} \quad 1 \text{ mark}$$

12.  $a + 9d = 52$  and  $a + 16d = a + 12d + 20$  1 mark

$$a = 7 \text{ and } d = 5 \quad 1 \frac{1}{2} \text{ mark}$$

$$\text{A. P. } 7, 12, 17, \dots \quad \frac{1}{2} \text{ mark}$$

13. let the line divides in  $k : 1$  at point C, then coordinates of C are



$$\left( \frac{2k+1}{k+1}, \frac{7k+3}{k+1} \right)$$

1 mark

C lies on line  $3x + y - 9 = 0$  therefore

$$3\left(\frac{2k+1}{k+1}\right) + \left(\frac{7k+3}{k+1}\right) - 9 = 0$$

½ mark

$$K = 3/4$$

1 ½ mark

14.  $AC = BC$  and  $AB^2 = 2AC^2$

$$AB^2 = 2 AC^2$$

$$= AC^2 + AC^2$$

1 mark

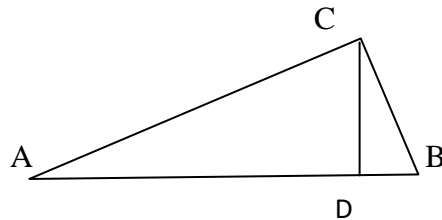
$$= AC^2 + BC^2$$

1 mark

$\Delta ABC$  is a right triangle

1 mark

15.



Proof:  $\Delta ACD$  similar to  $\Delta ABC$ .

$$\frac{CD}{BC} = \frac{AC}{AB} = \frac{AD}{AC}$$

$$AC^2 = AB \times AD$$

$\Delta BCD$  similar to  $\Delta ABC$ .

$$\frac{CD}{AC} = \frac{BC}{AB} = \frac{BD}{BC}$$

$$BC^2 = AB \times BD$$

$$BC^2 / AC^2 = AB \times BD / AB \times AD = BD / AD$$

16. Given : In  $\Delta ABC$ ,  $DE \parallel BC$ , and intersect it AB in D and AC in E ½ mark

To prove :  $\frac{AD}{DB} = \frac{AE}{EC}$

Construction: Join BC, CD and draw EF perpendicular BA and DG perpendicular CA ½ mark

Poof;  $\frac{\text{Area } \triangle ADE}{\text{Area } \triangle DBE} = \frac{AD}{DB}$  1 mark

$$\frac{\text{Area } \triangle ADE}{\text{Area } \triangle DEC} = \frac{AE}{EC}$$

1 mark

$$\frac{\text{Area } \triangle ADE}{\text{Area } \triangle DBE} = \frac{\text{Area } \triangle ADE}{\text{Area } \triangle DEC}$$

$$\frac{AD}{DB} = \frac{AE}{EC}$$

1 mark

OR

Given , In triangle ABC ,  $\angle B = 90^\circ$

To prove :  $AC^2 = BC^2 + AB^2$

Construction : BD perpendicular AC 1/2 mark

$\triangle ADB \sim \triangle ABC$  and  $AB^2 = AD \times AC$  1 1/2 mark

$\triangle BDC \sim \triangle ABC$  and  $BC^2 = AC \times DC$  1 1/2 mark

$AC^2 = BC^2 + AB^2$  1mark

17. 12576 > 4052 1/2 mark

$$12576 = 4052 \times 3 + 420 \quad 1/2 \text{ mark}$$

$$4052 = 420 \times 9 + 272 \quad 1/2 \text{ mark}$$

$$420 = 272 \times 1 + 148 \quad 1/2 \text{ mark}$$

$$272 = 148 \times 1 + 124 \quad 1/2 \text{ mark}$$

$$148 = 124 \times 1 + 24 \quad 1/2 \text{ mark}$$

$$124 = 24 \times 5 + 4 \quad 1/2 \text{ mark}$$

$$24 = 4 \times 6 + 0$$

HCF of 4052 and 12576 is 4 1/2 mark

18.  $a - b + a + a + b = \frac{-3}{1}$  1 mark

$$3a = 3 \text{ or } a = 1 \quad 1/2 \text{ mark}$$

$$(a - b) a (a + b) = -1 \quad 1 \text{ mark}$$

$$1 - b^2 = -1 \quad 1/2 \text{ mark}$$

$$b = \sqrt{2}, -\sqrt{2} \quad 1 \text{ mark}$$

19. Let unit place is x and tenth place is y

$$\text{Number} = 10y + x \quad \frac{1}{2} \text{ mark}$$

$$y = 3x \quad \frac{1}{2} \text{ mark}$$

$$10y + x - 54 = 10x + y \quad \frac{1}{2} \text{ mark}$$

$$x - y = -6 \quad \frac{1}{2} \text{ mark}$$

$$x = 3, y = 9 \quad 1 \frac{1}{2} \text{ mark}$$

$$\text{number} = 93 \quad \frac{1}{2} \text{ mark}$$

OR

$$\frac{x+1}{y+1} = \frac{4}{5}, \quad \text{and} \quad \frac{x-5}{y-5} = \frac{1}{2} \quad 1 \frac{1}{2} \text{ mark}$$

$$5x - 4y = 0, \text{ and } 2x - y - 5 = 0 \quad 1 \text{ mark}$$

$$x = 7, \text{ and } y = 9, \text{ fraction} = \frac{7}{9} \quad 1 \frac{1}{2} \text{ mark}$$

20.  $\frac{x+3}{x-2} - \frac{1-x}{x} = \frac{17}{4}$

$$9x^2 - 34x - 8 = 0 \quad 2 \text{ marks}$$

$$(x-4)(9x+2) = 0 \quad 1 \text{ mark}$$

$$x = 4, -\frac{2}{9} \quad 1 \text{ mark}$$

21.  $S_m = \frac{m}{2} [2a + (m-1)d] = n \quad \frac{1}{2} \text{ mark}$

$$S_n = \frac{n}{2} [2a + (n-1)d] = m \quad \frac{1}{2} \text{ mark}$$

$$2a + (m+n-1)d = -2 \quad 2 \text{ mark}$$

$$S_{m+n} = -(m+n) \quad 1 \text{ mark}$$

AEES

ANSWER KEY

CLASS : X

HALF-YEARLY 2019-20

SUB: MATHEMATICS

## SECTION A

- |      |      |      |      |      |
|------|------|------|------|------|
| 1. b | 2. b | 3. a | 4.a  | 5.c  |
| 6. b | 7.d  | 8.d  | 9.d  | 10.b |
| 11.c | 12.b | 13.c | 14.a | 15.c |
| 16.b | 17.a | 18.a | 19.b | 20.b |

## SECTION B

21.  $23150 = 2 \times 5 \times 5 \times 463$ ; yes (1 ½ m + ½ m)

22. sum of the zeroes =  $2\sqrt{3}$ . Product =  $-22$ :

$$P(x) = x^2 - 2\sqrt{3}x - 22 \quad (1m + 1m)$$

23. Factorisation :  $(\sqrt{2}x + 5)(x + \sqrt{2}) = 0$ ;

$$x = -5/\sqrt{2}, -\sqrt{2} \quad (1 \frac{1}{2} m + \frac{1}{2} m)$$

(or)

$$x + 12 = \frac{160}{x}; \quad x^2 + 12x - 160 = 0 \quad (1m)$$

$$x = -20, 8. \text{ Deleting } -20, \text{ the required no. is } 8. \quad (1m)$$

24.  $n=21$ , a positive integer, yes. (2m)

(or)

$$a = 1, d = -3, n = 80$$

$$S_{80} = -9400 \quad (1m + 1m)$$

25.  $DE = 13 \text{ cm}$ ; Ratio =  $\frac{\frac{1}{2} \times 5 \times 12}{\frac{1}{2} \times 5 \times 16} = \frac{3}{4}$  (1m + 1m)

26. equating area = 0, we get  $m = -4$  (2m)

## SECTION C

27. Applying Euclid's division lemma to  $a$  and  $3$ ,  $a = 3q + r$ ,  $0 \leq r < 3$ .

$$a = 3q, 3q+1 \text{ and } 3q+2 \text{ whose squares are}$$

$$a^2 = 9q^2 = 3m, \text{ where } m = 3q^2, \text{ when } a = 3q$$

$$= 9q^2 + 6q + 1 = 3m + 1, \text{ where } m = 3q^2 + 2q, \text{ when } a = 3q + 1$$

$$= 9q^2 + 4q + 4 = 3m + 1, \text{ where } m = 3q^2 + 4q + 1, \text{ when } a = 3q + 2 \quad (3m)$$

28.  $x = 2, y = 1$  (3m)

(or)

$$(10x + y) + (10y + x) = 132 \Rightarrow x + y = 12$$

$$X - y = 2 \text{ or } y - x = 2$$

solving and getting the required numbers as 57 or 75 (3m)

29.  $x = 0, 3$  (3m)

30. getting  $d = 5, a = -13$ : required AP =  $-13, -8, -5$  (2m+1m)

31. Proving that the two triangles are similar. Showing the proportionality (2m + 1m)

32.  $\alpha + \beta = 0; \alpha\beta = -3; \frac{1}{\alpha} + \frac{1}{\beta} = 0; \frac{1}{\alpha} \times \frac{1}{\beta} = \frac{-1}{3}$

$$P(x) = x^2 - \frac{1}{3}. \text{ Or } 3x^2 - 1 \quad (2m+1m)$$

33. correct figure;  $70^2 - x^2 = 30^2 - (80-x)^2; x = 65 \text{ cm}$  ( $\frac{1}{2} + 1 + 1\frac{1}{2}$ )

34. Area = 25 sq. units: diagonals =  $5\sqrt{2}$  units each; (2m+1m)  
(or)

All sides =  $\sqrt{26}$  units, diagonals =  $\sqrt{32}$  and  $\sqrt{72}$ . Area = 24 sq. units (2m + 1m)

### SECTION D

35.  $\sqrt{5}$  is irrational;  $2 + 3\sqrt{5}$  is irrational. ( $2\frac{1}{2} + 1\frac{1}{2} \text{ m}$ )

36. correct division and getting quotient =  $x^2 - 2\sqrt{5}x - 15$  (2½m)

Getting other zeroes  $x = 3\sqrt{5}$  and  $-\sqrt{5}$  (1½m)

37. Drawing the graph correctly; solution (6,0); area 18 sq. units ( $3 + \frac{1}{2} + \frac{1}{2}$ )

38.  $\frac{8}{x+2} + \frac{8}{x-2} = 1\frac{2}{3}$

$$\Rightarrow 5x^2 - 48x - 20 = 0$$

$X = 10, -2/5$ ; deleting  $x = -2/5$ , speed is 10kmph (3m+1m)

(or)

$$\frac{300}{x} - \frac{300}{x+10} = 1$$

$$X^2 + 10x - 3000 = 0; (x + 60)(x - 50) = 0$$

No. of students is 50 (1+2+1)

39. Given, to find, figure and construction, proof ( $\frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} + 2\text{m}$ )

40. Equating PA, PB and PC. Solving for x and y and getting the centre as (3,-2) (3m)

Radius = 5 units (1m)

**ATOMIC Energy Education Society**

**Periodic Test – II (2019-20)**

**Class: X**

**Subject: Science**

**Answer Key**

**SECTION -A**

**Multiple Choice Questions(1 Mark Each)**

1. (d) Both are exothermic
2. (b) Alveoli of lungs
3. (b)  $IR^2$
4. (d) is same at all points.
5. (b) Carbon di oxide
6. (b) Hind brain
7. (d) abscisic acid
8. (a) Object distance
9. (c) conductance
10. (a) metal carbonate,  $CO_2$  and  $H_2O$

**Assertion-Reason (1 Mark Each)**

11. b. Both Assertion and Reason are true and Reason is not the correct explanation of Assertion.
12. c) Assertion is true, but reason is false
13. b) Both Assertion and Reason are true and Reason is not the correct explanation of Assertion

**Very Short answer (1 Mark Each)**

14. The blood will not clot
15. Plaster of Paris or  $CaSO_4 \cdot \frac{1}{2} H_2O$
16. i. Since vegetative reproduction produces an exact copy of the parent, some undesired qualities of the parent plant also pass on to the plants of new generation. (Answer any one -1 )
  - ii. It induces over crowding
  - iii. There is no genetic variation. so there is less adaptability to the environment.
  - iv. The disease of parent plant gets transferred to the offspring.
  - v. The plants lose vigor.
17. Concave mirror
18. Because of free irons or any other relevant answer

19. (i) Cerebrum (ii) Cerebellum (½ +½)
20. thick wire (½)  
Resistance is inversely proportional to area of cross section of the wire /More area, less resistance, more current (½)

### SECTION –B

21. Blood passes twice through the heart in order to complete one cycle. Oxygenated blood passes from lungs to heart and then to tissues and deoxygenated blood passes from tissues to the heart and finally to the lungs.  
This prevents mixing of blood and ensures highly efficient supply of oxygen. (1+1+1)
22. When two compounds in their aqueous state react to form an insoluble residue as one of the products, the residue is called precipitate and the reaction is called precipitation reaction. (1)  
When a solution of AgNO<sub>3</sub> is added to solution of NaCl a white ppt of AgCl and NaNO<sub>3</sub> is formed (1)  
$$\text{NaCl} + \text{AgNO}_3 \longrightarrow \text{AgCl} \downarrow + \text{NaNO}_3 \quad (1)$$
- 23.i) Adrenaline increases the heart beat and breathing rate which results in the supply of more oxygen to muscles. It reduces the blood to the digestive system and skin; as a result the blood further reaches the skeletal muscles. All these responses together prepare the body to deal with the emergency situations. (½ +½)
- ii) Secretion of growth hormones should be specified in human beings as if it is secreted in extensive amount, it may result in gigantism and if released quite less, then it may result in dwarfism. Therefore it should be secreted in a normal amount
24. (i) If two magnetic lines of force intersect each other, it would mean that there are two directions of the magnetic field at that point of intersection which is not possible. (1)  
(ii) Right hand thumb rule and figure 13.10 page 229 from NCERT text book (1 + 1)
25. (a) Salivary amylase enzyme is present in saliva. It is important because it breaks down starch to give sugar (maltose/ partial digestion). (1+1+1)  
(b) Emulsification is the process in which there is a break-down of large fat globules to smaller globules.  
(c) Glucose is the substance that is oxidized in the body during respiration.
26. Any three relevant balanced chemical equations (1+1+1)
27. NCERT Text book page 135 figure 8.8 correct diagram (1) for each correct label (½) each.
28. The heating element of an electric heater is a resistor. The amount of heat produced by it is proportional to its resistance. The resistance of the element of an electric heater is very high. As current flows through the heating element, it becomes too hot and glows red. On the other hand,

the resistance of the cord (very good conductor is low. It does not become red when current flows through it. (1½)

- i. Using proper fuse
- ii. Earthing is a must to prevent electric shocks. Any leakage of current in an electric appliance is transferred to the ground and people using the appliance do not get the shock  
Or any other correct answer like MCB, ELCB etc. (1½)

29. All metals combine with water under different conditions like ordinary water, hot water and steam. Metals when combined with cold water and hot water form metal oxides and hydrogen is evolved. Metals when combined with steam form metal hydroxides and hydrogen is evolved. (1½)  
Example equation under three conditions (1½)

OR

- i)  $B > A > C$  ( $\frac{1}{2}M$ ) , B is most acidic ( $\frac{1}{2} M$ ) ,  $H^+$  ion concentration will be coming down (1)
- ii) Acids need an aqueous medium to show their acidic behavior (1)

30.  $\frac{1}{R_6} = \frac{1}{R_1} + \frac{1}{R_2}$   
 $= \frac{1}{5} + \frac{1}{10} = \frac{3}{10}$   
 $R_6 = \frac{10}{3} = 3.33 \Omega$  -----(1/2)  
 $\frac{1}{R_7} = \frac{1}{R_3} + \frac{1}{R_4} + \frac{1}{R_5}$   
 $= \frac{1}{15} + \frac{1}{20} + \frac{1}{25} = \frac{47}{300}$   
 $R_7 = \frac{300}{47} = 6.38 \Omega$  -----(1/2)

$R = R_6 + R_7 = 3.33 + 6.38 = 9.71 \Omega$  ---(1)

b) current =  $\frac{15}{9.71} = 1.544A$  or 1.5 A ----- (1)

OR

Numerical problem:

Current drawn by the electric oven,  $I = P/V$  [½]

Power,  $P = 2 \text{ kW} = 2000 \text{ W}$  [½]

Current,  $I = \frac{2000}{220} = 9.09 \text{ A}$

Correct Answer & Unit [ ½ + ½]

The rated current in the fuse wire is 5A, but the current drawn by the oven is found to be 9.09A which is greater than 5A. So the fuse wire will melt and break the circuit. [1]



### SECTION –C

31.a) Dialysis (1), Diagram (2), Correct labeling (2 )

OR

Diagram (3) , Correct labeling (2 )

32. i) Correct Electronic configuration of Magnesium and Oxygen (½ +½ )  
ii) Two general properties (2)  
iii) Formation of this compound by the transfer of electrons (1)  
iv) 2PbO is reduced to 2Pb, C is oxidizing to CO<sub>2</sub> (½ +½ )

**OR**

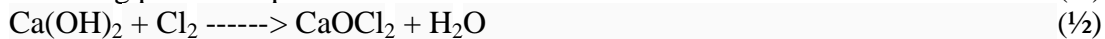
- i. Reactivity series are those which are in ascending order from the most reactive metal to the least reactive one. (1)  
ii. Amphoteric metal oxides react with both acids as well as bases to produce salt and water. (1)  
Aluminum oxide is an amphoteric oxide because it reacts with acids as well as bases and form salts and water (1)  
ZnO (1)  
iii. Reaction is highly exothermic (1)

33. (i) washing soda-Na<sub>2</sub>CO<sub>3</sub>.10 H<sub>2</sub>O (½)



It is used in textile and paper industry (½)

(ii) Bleaching powder is produced (½)



(iii) Acid released will react with enamel, and tooth decay starts (1)

34. labeled diagram (1)  
Principle (1)  
Working (1 ½)  
Function of split ring (½)

35. Definition (1)

Deriving Expression (2)

Any four correct examples (2)

Refer textbook page-216/217

36. i) Nastic movement- these are non-directional movements which are neither towards nor away from the stimulus. (½+½ +1+1)

Eg.-drooping of leaves

Curvature movement-in such movement plant organs move towards or away from the stimulus.

Eg.-bending of plant toward the light (phototropism), movement of root away from the sunlight (geotropism)

ii) Refer NCERT Text Book Page No 135 figure 8.9 (½ x 4)

**Atomic Energy Education Society**  
**Periodic Test-II (2019-20)**

**Class : X**  
**Subject : SOCIAL SCIENCE**

**Time : 3 Hours**  
**Marks : 80**

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**Answer key with marking scheme**

**Section A**

- |   |  |                                 |
|---|--|---------------------------------|
| 1. Alluri Sitaram Raju                    | 2. Duke Metternich                       | 3. The Prussian King William I. |
| 4. Biotic resource                        | 5. Jawaharlal Nehru                      | 6. Human Development Index      |
| 7. Agriculture sector                     | 8. The International Olympic Association |                                 |
| 9. The minority French speaking community | 10. Kharif crops                         |                                 |
| 11. Junkers                               | 12. Nagpur                               | 13. Mahatma Gandhi              |
| 14. Endangered species                    | 15. humans                               | 16. unorganised                 |
| 17. Tertiary                              | 18. Eighth schedule                      | 19. Martin Luther King Jr.      |
| 20. Tamil Nadu                            |  |                                 |

(Each correct answer carries 1 mark)

**Section B**

21. i) Khadi cloth was more expensive than mass-produced mill cloth and poor people could not afford to buy it.

ii) The boycott of British institutions posed a problem as alternative Indian institutions had to be set up in place of British ones. The government institutions were slow to come up.

iii) Students and teachers began joining back to schools and lawyers joined govt. courts.

**22. The 'Salt March' acted as an effective tool of resistance against colonialism because of the following reasons:**

i. Mahatma Gandhi found in salt a powerful symbol that could unite the nation.

ii. Salt was something consumed by the rich and the by the rich and the poor alike. The tax on salt and the government monopoly over its production revealed the most oppressive face of British rule.

iii. Gandhiji sent a letter to Viceroy Irwin stating eleven demands. The most stirring of all

was the demand to abolish the salt tax. But Irwin was unwilling to negotiate, so to peacefully defy the British, Mahatma Gandhi started his famous salt march accompanied by 78 of his trusted volunteers.

iv. On 6 April he reached Dandi, and ceremonially violated the law, manufacturing salt by boiling sea water.

This march developed the feeling of nationalism, people in different parts of the country broke the salt law and manufactured salt and demonstrated in front of government salt factories.

23. **Resource:** Everything available in our environment, which can be used to satisfy our needs, provided, it is technologically accessible, economically feasible and culturally acceptable, is known as a resource.

**Types of resources on the basis of ownership are:**

Individual- These are owned privately by individuals.

Community- There are resources which are accessible to all the members of the community.

National--The resources within the boundaries of a country are called national resources.

International--International resources means the resources which belong to all the countries of the world.

(1+2, any two types)

24. The geographical conditions required for the growth of rice are:

i) It requires high temperature (above 25°C).

ii) It requires high humidity with annual rainfall above 100 cm.

iii) In the areas of less rainfall, it grows with the help of irrigation.

iv) It is grown in the plains of north and north-eastern India, coastal areas and the deltaic regions.

(Any three points and any other suitable point.)

25. Development is such a situation that can fulfill the aspirations or desires of people. It is the progress or improvement in the lifestyle of the people. Two aspects of development are:

i. Different persons can have different developmental goals.

ii. What may be development for one may not be development for the other.

26. i) All those who are able to and in need of work will get guaranteed 100 days work.

ii) If the govt. fails to do so, it will give unemployment allowances to them.

iii) The type of work that would help in future to increase the production from land will be given preference under this Act.

27. i) In 1956, an act was passed which declared Sinhala as the only official language, thus disregarding Tamil.

ii) Preferences were given to Sinhala applicants for university positions and government jobs.

iii) A new constitution stipulated that the state shall protect and promote Buddhism.

28. (Any three)

i) To hold panchayat elections regularly at the lapse of every 5 years.

ii) One-third seats are reserved for women.

iii) To provide reservation of seats for SCs, STs and OBCs

iv) To appoint state election commission to conduct panchayat and municipal elections.

v) the state govts. Are required to share some powers and revenue with local govt. bodies.

### Section C

29. Napoleon had destroyed democracy in France but in the administrative field, he had incorporated revolutionary principles in order to make the whole system more rational and efficient. Revolutionary principles of administration by Napoleon are as follows:

i. The Napoleonic Code of 1804 removed privileges by birth. Everyone was equal before the law and got the right to property. The code was used in regions under French control.

ii. Simplified administrative divisions.

iii. Feudal system was abolished and freed peasants from serfdom and manorial dues.

iv. Guild restrictions were removed in towns. Artisan, peasants, businessmen, and workers found new freedom for doing their work.

v. Uniform laws, standardized weights, and measures along with a common currency made exchange and movement of goods far easier.

vi. Transport and communication systems were improved.

30. i) Collective farming was introduced where farmers are joined together and members – owners engage jointly in farming activities.

ii) Landholdings were consolidated. Fragmented lands due to inheritance were again consolidated into single unit to increase its economic viability.

- iii) Provision for crop insurance against drought, flood, cyclone, fire, disease etc.
  - iv) Establishment of Grameen banks, cooperative societies and bank for providing loan facilities to the farmers at a lower rate of interest. Government also announces Minimum Support Price.
  - v) Subsidy on agricultural inputs and resources such as power and fertilisers.
  - vi) Facilities of Kissan Credit Card and Personal Accident Insurance Scheme.
  - vii) Special weather bulletins and agricultural programmes for farmers were introduced on radio and television.
- (Any 5 points and any other suitable point.)

31. When the national income is divided with the total population of the country, we get per capita income or the average income.

But there are certain limitations of this per capita income criterion of development. They are:

- i. Per capita income criterion takes into account only the economic aspect of life and ignores the social aspect of life.
- ii. This criterion ignores education, health, life expectancy, sanitation etc.
- iii. It also ignores non-material factors like peace, pollution free environment, democracy etc.
- iv. Punjab has higher per capita income as compared to Kerala but it has been ranked lower on Human Development Index because it is far behind Kerala in the literacy rate and has higher infant mortality rate than Kerala.

(2+3, Any 3 points and any other suitable point.)

32. Yes, workers are exploited in the unorganized sector. This would be clear from the following points:

- i) No rules and regulation followed.
- ii) There is no fixed number of working hours. The workers normally work 10 – 12 hours without paid overtime.
- iii) They do not get other allowances apart from the daily wages.
- iv) Government rules and regulations to protect the labourers are not followed there.
- v) There is no job security.

- vi) Jobs are low paid the workers in this sector are generally illiterate, ignorant and unorganized. So they are not in a position to bargain or secure good wages.
- vii) Being very poor they are always heavily in debt. So, they can be easily made to accept lower wages.
- viii) Social discrimination.

(1+4, Any 4 points and any other suitable point.)

33. The different forms of power-sharing in modern democracies are:

- i) Horizontal Division of Power
  - ii) Vertical Division of Power
  - iii) Division of Power among different Social Groups
  - iv) Division of Power among Political Parties, Pressure Groups and Movements
- (Give 5 marks for correct explanations)

34. The Constitution clearly provided a three fold distribution of legislative powers between the union government and the state governments.

i. The three-fold distribution of legislative powers:

- a. **Union list**
- b. **State list**
- c. **Concurrent list**

ii. Union Government can make laws on the subjects which are not covered under these lists. The name has been given to such subjects is **residuary subjects**.

(Give 5 marks for correct explanations)

### Section D

- 35. a) Amritsar
- b) Champaran
- c) Madras / Chennai

(Give marks for correct identification.)

- 36. a) Kerala
- b) in Uttarakhand
- c) in Rajasthan

(Give marks for correct location and labeling.)

-----XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX-----

**ATOMIC ENERGY EDUCATION SOCIETY  
PERIODIC TEST-II (2019-20)  
ANSWER KEY  
CLASS X  
SUBJECT: SOCIAL SCIENCE**

1. b. To restore the monarchies
2. b. Greece
3. c. Non Brahmins
4. d. Lahore
5. b. Sri Lanka
6. a. Horizontal distribution of power
7. c. Computer Software
8. a. Nagaland
9. a. Municipal Corporation
10. a. Decentralisation
11. a. Pulses
12. b. Maharashtra
13. a. Punjab
14. c. Kerala
15. b. Mahatma Gandhi
16. c. Laterite Soil
17. b. Palar Pani
18. b.. In 1973
19. c. UNDP
20. a. Primary

21.

- Foreign goods were boycotted.
- Liquor shops were picketed.
- Foreign clothes were burnt.
- Reduction of import of foreign goods.
- Traders refused to trade in foreign goods or finance foreign trade.

OR

- It emphasised the power of truth and the need to search for truth.
- Without being aggressive, a Satyagraha could win the battle.
- It is suggested that if the cause was true, if the struggle was against injustice, then physical force was not necessary to fight against the oppressor.

22.

- Economic depression
- Arrival of Simon Commission without any Indian representative.
- Vague offer of dominion status by the British
- Tax on salt and the Government monopoly over its production
- Mahatma Gandhi declared and revealed the most oppressive face of the British.

23.

- Sri Lankan government adopted policies which established the dominance of Sinhalese over all the other ethnic groups.
- Sinhala was made the only official language disregarding Tamil.
- Sinhala applicants were given preference for government job.
- Buddhism was given undue importance.

24.

- The local people are aware of their needs and can give priorities to them
- It helps initiate the process of direct decision making,
- It helps to inculcate the habit of democratic participation.
- Local government is the best way to realise one important principle of democracy.

25.

- Large scale displacement of local communities.
- They have to give up their land and livelihood.
- The displaced people do not get full rehabilitation facilities.
- Narmada Bachao and Tehri Dam Andolan.

OR

- It is a viable alternative to recharge ground water.
- Ever growing population explosion necessitates more water conservation.
- The distribution of rainfall is uneven, so rainwater harvesting is needed.



26.

- Expansion of railways during the colonial period.
- Large scale development projects were also contributed significantly to the loss of forest.
- Mining. Example: Buxa tiger reserve
- Habitat destruction, hunting, poaching, over population.

27.

- Tertiary sector helps in the development of primary and secondary sectors.
- The development of agriculture and industries leads to the development of services such as transportation, trade etc.
- When government provides basic facilities like roads bridges etc. to a developing country, it augments the process of development.
- As income levels rises, certain sectors of people start demanding many more services like eating out, private hospitals, private schools etc.

28.

- An accepted strategy for judicious use of resources
- Conventional resources are available in limited quantity. They are depleting at a faster rate. So it is inevitable to have a strategy.
- Some of the resources have been accumulated by handful of people. This restricts equitable accessibility to the resources.
- Indiscriminate use of resources necessitates resource planning.
- It is also a prerequisite for sustainable development .

29.

- He established the civil code in 1804. Due to this privileges based on birth were abolished.
- The civil code established equality before law and right to property
- The guild system was removed.
- Small scale producer of goods began to realise that uniform laws, standard weights and measures and a common national currency would facilitate the movement and exchange of goods.
- There was abolition of feudal system and peasants were freed from serfdom and manorial dues.

30.

- There are two or more levels of government.
- The jurisdictions at the respective levels of government are specified in the constitution.
- The fundamental provisions of the constitution cannot be unilaterally changed by one level of government.
- Courts have the power to interpret the constitution.
- Financial autonomy.

31.

- Promotes equality amongst citizens.
- Enhances the dignity of the individual.
- Improves the procedure of decision making.
- Provides a method to unravel conflicts amicably.
- Allows room for correcting mistakes.

32.

- The government provides HYV seeds and fertilizers
- Special weather bulletins and agricultural programmes for farmers are introduced on radio and TV.
- Government provides technical assistance and training for farmers.
- Provision for cold storage/transportation facilities
- Horticulture development/animal breeding centres have been started for the benefit of farmers.

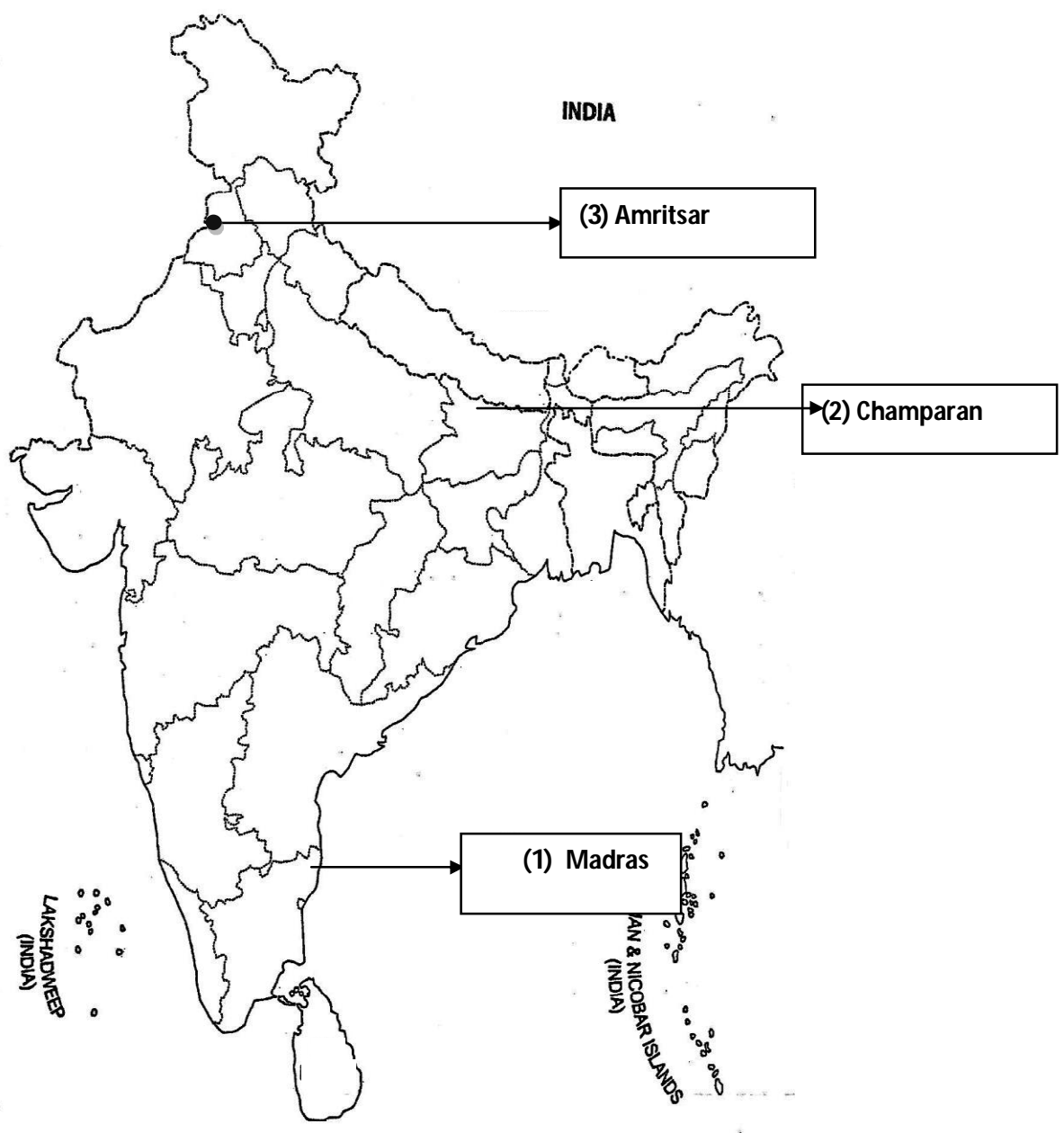
33.

- Developed countries
- The standard of living in these countries is generally high.
- Literacy rate is quite high due to better education system.
- Life expectancy rate is more due to better standard of living.
- High Human Development Index.
- Developing countries.
- The standard of living is normally not very high.
- Literacy rate is quite low.
- Life expectancy rate is less.
- Low Human Development Index.

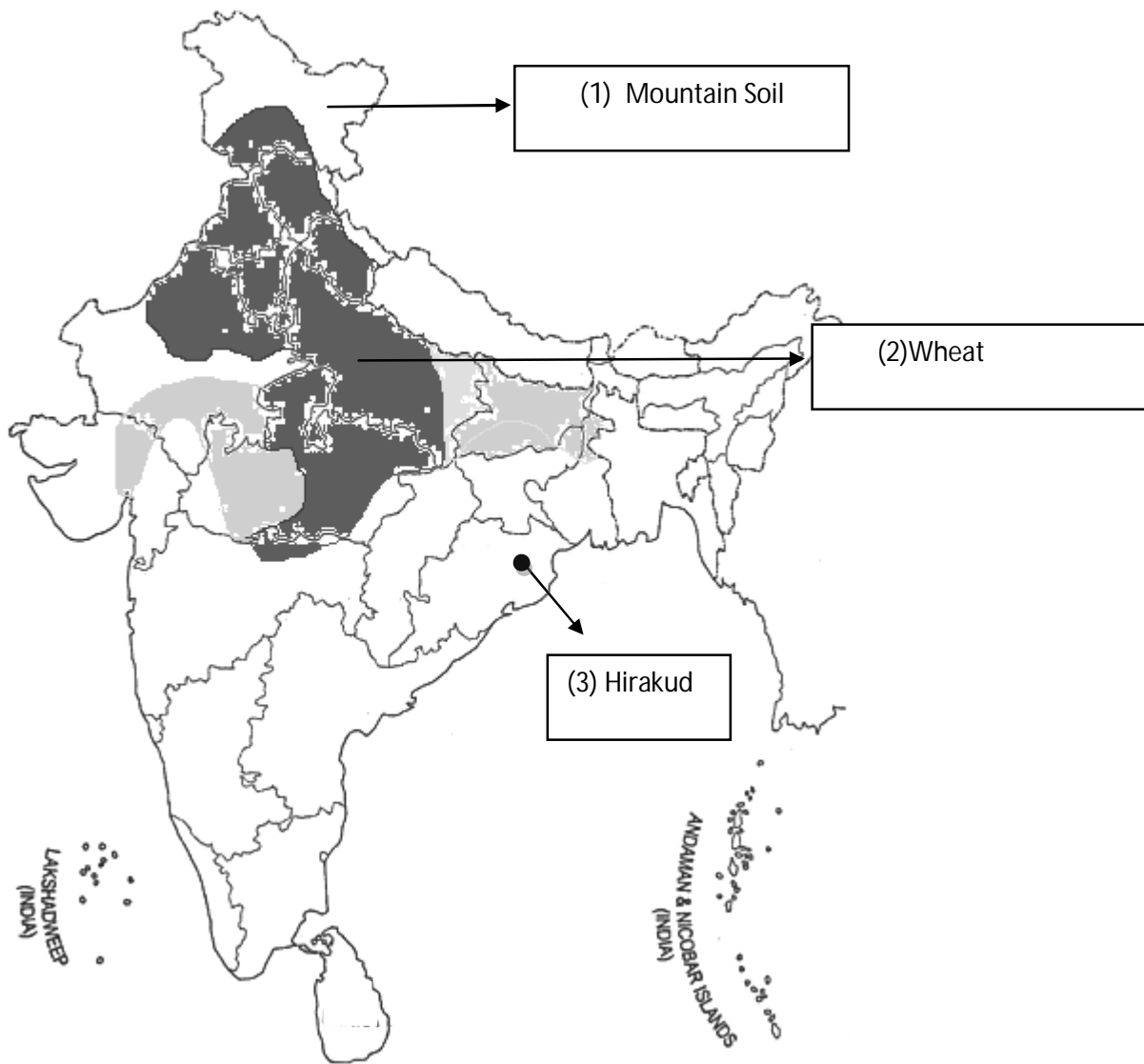
34.

- Villagers fought against mining in Sariska tiger reserve in Rajasthan
- In Alwar , Villagers made their own rules and regulations to protect wildlife against outside encroachment.
- Chipko Movement
- Beej bachao Andolan and Navadanya
- Joint Forest Management Programme .

35.



(36)



परमाणु ऊर्जा शिक्षण संस्था

अणुशक्तिनगर, मुंबई

आवधिक परीक्षा - 2, उत्तर संकेत/बिंदु एवं अंक विभाजन (2019-20)

कक्षा - दसवीं	विषय- हिंदी(कोर्स-अ)	अधिकतम अंक- 80
निर्देश - (1) व्याकरण आदि त्रुटियों को ध्यान में रखते हुए उचित अंक काटकर उत्तर- पुस्तिका की जाँच कीजिए । (2) प्रश्नों के उत्तर संकेत मात्र हैं ।		
(खंड-क)		
प्र.1 (क)	खेती करने के लिए , घर बनाने के लिए , कल-कारखाने लगाने के लिए , सड़कें और रेल पटरियाँ बिछाने के लिए धरती चाहिए ।	2
(ख)	खाद्य- सामग्री की जैसे अन्न,फल,सब्जी आदि ,रहने के लिए मकान, पहनने के लिए कपड़े आदि की समस्याएँ सामने आ रही हैं ।	2
(ग)	बढ़ती हुई आबादी को खिलाने के लिए खेतों को रासायनिक उर्वरक चाहिएऔर फसल को कीटाणु हानि न पहुँचाएँ,इसलिए कीटनाशक दवाइयाँ चाहिए,जिससे पैदावार ज्यादा हो सके ।	2
(घ)	उर्वरक और कीटनाशी दवाइयों के कारण मिट्टी प्रदूषित होती जा रही है ।	1
(ङ)	इत	1
प्र.2 (क)	मेरे जाने पर कोई अफसोस न करे, कोई मेरी मृत्यु का शोक न मनाए,कोई अपनी आँखों में आँसू न लाना । सभी अपने देश से अत्यधिक प्यार करें ।	2
(ख)	मैंने दुश्मन से पीठ पर घाव नहीं खाएँ हैं । वह दुश्मन का सामना करते हुए मृत्यु प्राप्त कर रहा है । वह अपनी सिंहनी जैसी माँ का बेटा है । वह बार-बार इस धरा पर अपनी माँ की कोख से ही जन्म ले ।	2
(ग)	अमरता की याचना नहीं करता ।	1
(घ)	मनुष्य को सदैव अपने देश के हित के लिए जीना चाहिए तथा देश से प्यार करना चाहिए ।	1
(ङ)	'सैनिक की अभिलाषा' या अन्य कोई उपयुक्त शीर्षक ।	1

(खंड-ख)

प्र.3 (क)

1+1+1=3

(च ) मिश्रवाक्य (छ) संयुक्त वाक्य (ज) सरल वाक्य

(ख)

1+1= 2

(अ) जब अध्यापिका ने छात्रा की प्रशंसा की तो उसका उत्साह बढ़ गया ।

(आ) गीता जब मेहनत करेगी तभी पास होगी ।

प्र.4

1+1+1+1+1=5

(क) मुझसे पत्र लिखा गया ।

(ख) पक्षी आकाश में उड़ेगें ।

(ग) क्या उनसे लिखा जाएगा ?

(घ) अब पढ़ा जाए ।

(ङ) राधा से गीत सुनाया जाएगा ।

प्र.5

1+1+1+1+1=5

(क) हम - पुरुषवाचक सर्वनाम , बहुवचन, पुल्लिंग

(ख) मोहन - व्यक्तिवाचक संज्ञा, एकवचन , पुल्लिंग

(ग) दसवीं - संख्यावाचक विशेषण, क्रमसूचक, स्त्रीलिंग, एकवचन, 'कक्षा' विशेष्य

(घ) लिखेगा - सकर्मक क्रिया , एकवचन , पुल्लिंग , भविष्यतकाल

(ङ) यह - सार्वनामिकविशेषण , एकवचन , स्त्रीलिंग , 'कार' विशेष्य

(खंड-ग)

प्र.6 (क) एक उदास शांत संगीत को सुनने जैसा । बड़े भाई और पुरोहित जैसे रिश्ते को याद करते हैं ।

2

(ख) बड़े भाई और पुरोहित के समान सबको आशीषों से भरना । ऊँचाई पर देवदारु की छाया से ।

2

(ग) हिंदी युवा साहित्यकारों की एक साहित्यिक संस्था ।

1

प्र.7

2x5 =10

(क) पानवाला एक काला,मोटा एवं खुशमिजाज व्यक्ति ,बड़ी तोंद, लाल-काली बत्तीसी, मजाकिया एवं बातूनी , संवेदनशील इंसान आदि ।

(ख) कैप्टन एक चश्मा बेचने वाला था । नेताजी की मूर्ति पर चश्मा न होना ।

(ग) मृत बेटे के शरीर को आँगन में एक चटाई पर लिटाकर सफेद कपड़े से ढकना ,

फूल आदि उस पर डालना , सिराहने दीप जलाना , नाच-गाकर उत्सव के रूप में मनाना तथा पुत्रवधू को भी रोने की अपेक्षा उत्सव मनाने के लिए कहना ।

- (घ) खीरे खाने की पूरी तैयारी करने के बाद खीरे का रसास्वादन करने की अपेक्षा खीरों की फाकों को सूँघ- सूँघकर खिड़की के बाहर फेंककर एक लंबी डंकार लेना ।
- (ङ) लेखक को यह विश्वास था कि फादर बुल्के विदेशी संन्यासी हैं । इनकी मृत्यु पर भारत में कौन रोएगा लेकिन उनकी मृत्यु पर रोने वाले भारतीय हिंदी लेखकों का एक समूह और मसीही समुदाय के लोगों का तांता-सा लग गया, जिन्हें गिनना स्याही फैलाना है ।
- (च) भारतीय संस्कृति और सभ्यता से प्रभावित होकर ।
- (छ) पिता , माँ और हिंदी प्राध्यापिका शीला अग्रवाल का ।

प्र.8

1+2+2=5

- (क) बिजली की शोभा छिपी हुई है जो समय-समय पर जगमगा कर प्रकट हो जाती है।
- (ख) कवि नई चेतना के काव्य की रचना करने वाले कवियों का आह्वान करता है कि वे अपने हृदय में विद्युत की छवि बसा ले । इसका आशय यह कि जिस प्रकार बिजली चमकती और कड़कती हुई धरती की छाती को चीर कर रख देती है, उसी प्रकार नई कविता का सृजन करने वाले कवि भी अपनी कविताओं में विध्वंस और विप्लव का स्वर भरते हुए सामाजिक क्रांति का मार्ग प्रशस्त करें ।
- (ग) यहाँ बादलों को तेजस्वी कवि के रूप में प्रस्तुत किया गया है । वह कवि जिसके हृदय में वज्र जैसी शक्ति, विद्युत जैसी चमक और नवीन भावनाओं का संचार होता है ।

प्र.9

2x5= 10

- (क) कमल के पत्ते और तेल की मटकी से ।
- (ख) अपने दिए वचन को निभाना, कष्ट न पहुँचाना, कभी न सताना और उनकी रक्षा करना ।
- (ग) ऐसे धनुष तो हमने बचपन कईबार तोड़े हैं, आपने पहले कभी इतना क्रोध नहीं किया, इस धनुष पर इतनी ममता क्यों है? हमारी नजर में तो सभी धनुष एक समान हैं । यह धनुष पुराना था, रामचंद्र जी ने तो इसे केवल छुआ ही था और वह तो छूते ही टूट गया । इस पुराने धनुष के टूटने से क्या लाभ या हानि ?
- (घ) वीर योद्धा युद्धभूमि में अपने शक्ति का प्रदर्शन करता है । वह बेकार में अपनी वीरता की डींगे नहीं हाँकता है ।
- (ङ) कवि बादलों को क्रांति, विप्लव और विनाश का प्रतीक मानता है । विनाश के बाद ही निर्माण होता है । कवि बादलों की गर्जना को शक्ति का प्रतीक मानकर मनुष्य में उत्साह

और साहस भरना चाहता है। मनुष्य में उत्साह, साहस और आत्मबल होगा तभी नव निर्माण संभव है।

(च) कविता में बादल ललित कल्पना और क्रांति-चेतना की ओर संकेत करता है। यह एक ओर पीड़ित-प्यासे लोगों की आशाओं और आकांक्षाओं की पूरा करने वाला है तो दूसरी ओर वह नई कल्पना और नए अंकुर के लिए विध्वंस, विप्लव और क्रांति चेतना की ओर संकेत करता है।

(छ) इस समय मौसम अत्यंत सुहावना होता है। यह वसंत ऋतु के आगमन का समय होता है। मंद-सुगंधित हवा बहने लगती है। पेड़ - पौधों की डाले पत्तों और फूलों लद जाती हैं। प्राकृतिक सुंदरता सबके मन को हर लेती है। अन्य ऋतुओं ऐसा सुहावना मौसम नहीं होता है।

प्र.10 स्वविवेक से जाँच कीजिए। 2

प्र.11 स्वविवेकानुसार 3

(खंड-घ)

प्र.12 \* प्रस्तावना एवं उपसंहार - 2

- विषयवस्तु - 6
- भाषा की शुद्धता एवं वाक्य रचना 2

प्र.13 \* प्रारंभ एवं समापन 1

- विषयवस्तु 3
- भाषा की शुद्धता एवं वाक्य रचना 1