Atomic Energy Central School No. 4 , Rawatbhata
Half Yearly Examination (2018-19)
Time: 3 hrs Class : XI , English Max. Marks : 80

Name of the student _____ Roll No._____Class-Sec_____Invig Sign._____

General Instructions

1) This question paper is divided into three sections-A, B & C.
2) All sections are compulsory.
3) Marks are indicated against each question.
4) Strictly adhere to the given word limit.
5) Write the question numbers carefully.
6) Write your name, Roll number, class & section on the right top corner of your question paper.

Section A Reading [20 Marks]

1. Read the following passage carefully and answer the questions that follow. (8)

'The Father of White Revolution', Verghese Kurien could've had a glorious career abroad, with multiple degrees to his name. But he chose to stay back in Gujarat and the rest is history. He believed that a country's biggest assets are its people. He improved the living standards of millions of poor farmers by placing technology and professional expertise in their hands.
Kurien was born on 26th November, 1921 at Calicut, Kerala in a Syrian Christian family. His father was a civil surgeon in Cochin. He graduated in Physics from Loyola College, Madras in 1940 and then obtained his Bachelors in Mechanical Engineering from the University of Madras. He also studied at Tata Steel Technical Institute, Jamshedpur, after which he went to USA to pursue his masters.

Kurien came back from USA and was immediately assigned to work at Anand in Gujarat's Kheda district in 1949. He had made up his mind 'to quit but was persuaded to stay by Tribhuvandas Patel, who had brought together farmers as a union to process and sell their milk. So he stayed and his sincere efforts were applauded by the then PM Lai Bahadur Shastri who came to inaugurate Amul's plant Kurien was mentioned by the Ashoka Foundation as one of the eminent present day social entrepreneurs. His 'billion-litre' idea or 'Operation Flood' is the world's biggest agricultural development programme. The operation transformed India from a milk-lacking nation to the largest milk producer in the world, surpassing the US in 1998, with 17% of global output in 2010-11.

He also made the country self-reliant in edible oils. He also founded 30 institutions which are owned by farmers. Kurien was behind the creation of Amul, where milk powder from buffalo milk was produced for the first time in the world. Kurien's life story is chronicled in his personal memoir—'I too Had a dream.' Film-maker Shyam Benegal produced a film, Manthan, based on the cooperative milk movement in India. Not able to finance it himself, he sought Kurien's help, who got half a million farmers to contribute for the making of the movie. The farmers loved 'their' own film and it won many awards. UNDP planned to use the movie to start such cooperative ventures in Latin America,
Verghese and his wife Molly had one daughter and a grandson. He died on 9th September, 2012 after a brief illness in Nadiad, near Anand. Interestingly, the man behind the milk revolution didn't drink milk himself. His cooperative movement alleviated the misery and poverty of millions, not only in India, but also outside India. His contributions will always be admired.

(a) On the basis of your reading of the above passage, make notes on it using headings and sub-headings. Use recognisable abbreviations wherever necessary (minimum 4).
Supply an appropriate title to it. (5)

(b)Write a summary of the above passage in about 80-100 words. (3)

2. Read the following passage carefully and answer the questions that follow. (12)

In 3000 years of our history people from all over the world have come and invaded us, captured our lands, conquered our minds. From Alexander onwards, the Greeks, the Turks, the Moguls, the Portuguese, the British, the French, the Dutch, all of them came and looted us, took over what was ours. Yet we have not done this to any other nation. We have not conquered anyone. We have not grabbed their land, their Page 2 of 15 culture, their history and tried to enforce our way of life on them. Why? Because we respect the freedom of others.

That is why my first vision is that of FREEDOM. I believe that India got its first vision of this in 1857, when we started the war of independence. It is this freedom that we must protect and nurture and build on. If we are not free, no one will respect us.

My second vision for India is DEVELOPMENT. For fifty years we have been a developing nation. It is time we see ourselves as a developed nation.

I have a third vision. India must stand up to the world. Because I believe that unless India stands up to the world, no one will respect us. Only strength respects strength. We must be strong not only as a military power but also as an economic power. Both must go hand in hand.

My good fortune was to have worked with three great minds, Dr. Vikram Sarabhai of the Dept. of space, Professor Satish Dhawan, who succeeded him and Dr. Brahm Prakash, father of nuclear material. I was lucky to have worked with all three of them closely and consider this the great opportunity of my life. Here I am reminded of an instance – One day an orthopaedic surgeon from Nizam Institute of Medical Sciences visited my laboratory. He lifted the material and found it so light that he took me to his hospital and showed me his patients. There were these little girls and boys with heavy metallic callipers weighing over three kg. each, dragging their feet around. He said to me:" Please remove the pain of my patients". In three weeks, we made these Floor reaction Orthosis 300 gram callipers and took them to the orthopaedic centre. The children didn't believe their eyes. From dragging around a three kg. load on their legs, they could now move around! Their parents had tears in their eyes. That was bliss to me.

I have a question: Why is the media here so negative? Why are we in India so embarrassed to recognize our own strengths, our achievements? We are such a great nation. We have so many amazing success stories but we refuse to acknowledge them. Why?

Another question:

Why are we, as a nation so obsessed with foreign things? We want foreign TVs, we want foreign shirts. We want foreign technology. Why this obsession with everything imported? Don‘t we realise that self-respect comes with self-reliance?

I was in Hyderabad giving this lecture, when a 14year old girl asked me for my autograph. I asked her what her goal in life is: She replied: ‗I want to live in a developed India.‘ For her, you, I will have to build this developed India.

You must proclaim. As an aside from yours truly: India is not an underdeveloped nation, it is a highly developed nation in an advanced state of decay! (A.P.J.Abdul Kalam)

A. Choose the best alternative from the answers given below: 1 x 6 = 6

a) India has been plundered by :

i) the Greeks and the Portuguese ii) the French and the Dutch

iii) the British iv) all of the above.

b) What does the author mean when he says —"Yet we have not done this to other nations."?

i) India has not conquered and plundered other nations

ii) India has not snatched away the history and culture of other nations

iii) Both(i) and (ii)
iv) None of the above

c) India has not conquered other nations because
i) India is afraid of other nations ii) India respects the freedom of other countries
iii) India lacks military strength iv) All of the above

d) When did Indians first have the vision of freedom?
i) In 1857 during the first war of independence ii) During the first World War
iii) During the Quit India Movement iv) None of the above

e) Dr.A.P.J.Abdul Kalam envisages India which is….
i) Free and developed ii) Militarily and economically strong iii) Self- reliant iv) All of the above

f) How long did it take to make Orthosis 300 gm callipers?
i) One week ii) two weeks iii) three weeks iv) four weeks

B. Answer the following questions in reference to the above passage: 1 x 6 = 6

a) What does Dr. Kalam want us to protect and nurture?
b) Why must India stand up to the world?
c) The great scientists who inspired A.P.J. Abdul Kalam are (i) _____ (ii) _____ and (iii) _____
d) Why do we need to give up our obsession with foreign things?
e) Explain briefly the statement-―That was bliss to me.‖
f) Find the synonym of 'Nurse' from the above passage.

Section B Writing and Grammar [30 Marks]

3. You are very much interested in Commerce subjects. Unfortunately these had been dropped from your school as no one was opting for it. After having a conversation with some of your friends, you decide to highlight this matter. Write a letter in 120-150 words to the principal of your school requesting him to re-introduce the Commerce stream at the Senior Secondary level. (10)

OR

You are Mithilesh/Nitiksha and at present reside at 55 D, Gulmohar Appartments, Chandni Chowk, Hyderabad. You do not stay any longer at your place of birth due to the transfer of your parents. But you are still very much attached emotionally to your childhood friends of your place of birth. Write a letter in about 120-150 words to your friend Shailendra/Shamli recalling several memories of your unforgettable past there.

4. You are a very careful observer of the changing mindset of the younger generation due to the advancement in science and technology. Write an Article on it in about 150-200 words. (10)

OR

Write a speech to be delivered in the assembly on the 'Importance of command over English Language'. (150-200 words)

5. The following passage has not been edited. There is one error in each line. Write the incorrect word and the correction as given below, against the correct blank. The correction in the first line has been done for you. (1×8= 8)

	Incorrect	**Correct**
e.g. People come to him when the	Come	Came
(a) patient is on his last legs. Dr	……..	……..
(b) Raman often burst out, 'Why cannot'	……..	……..

(c) you were come a day earlier? …….. ……..
(d) The reason being obvious; the visiting fee …….. ……..
(e) Is too high ....
(f) the time has come to call in Dr Raman; …….. ……..
(g) for them there is something ominous in the very association …….. ……..
(h) of his names with a patient …….. ……..

6. Rearrange the following words/ phrases into meaningful sentences. (1×2 = 2)

(a)be the cost / the government should / whatever / I think / health service / improve the
(b)this part of the / next year / this time / be looking amazing / building will

Section C Literature and Long Reading Text [30 Marks]

7. Read the extract carefully and answer the questions that follow by choosing the most appropriate option. (1×3 = 3)

"Now she's been dead nearly as many years
As that girl lived. And of this circumstance.
There is nothing to say at all.
Its silence silences".
(i)Who does 'she' refer to in the above stanza?
(ii)How many years has the poet's mother been dead?
(iii)The silence of the circumstance…….

8. Answer any three of the following questions. (3×3 = 9)

(i) What were the opinions of Ranga on marriage before confronting Ratna?
(ii) What changes are noticeable in the tree as soon as goldfinch arrives?
(iii) Write in short about the 'Tut dynasty'.
(iv) Why does the narrator want to forget the address finally? Explain.
(v) Describe the character of Maurad in short.

9. Answer the following questions in about 120-150 words.

Do you think that our past experiences, help us to make our life better? Related to the chapter, 'Discovering Tut: The Saga continues' discuss, "Knowledge about the past is useful to complete our knowledge of the world we live in." (6)

OR

The story, 'The Summer of the Beautiful White Horse' conveys the message of honesty and integrity. How do the characters maintain these qualities in spite of their desire to keep the horse with themselves?

10. Why did the children say, " We are not afraid to die if we can all be together.." Describe the bad weather conditions that got created on the day. (6)

OR

Write in brief with suitable examples from 'Landscape of the Soul' the difference between the Chinese and European art of painting.

11. Give a brief character sketch of the Khushwant Singh's Grandmother. (6)

OR

Give a brief character sketch of Khushrove.

ATOMIC ENERGY CENTRAL SCHOOL No.4, RAWATBHATA

HALF YEARLY EXAMINATION (2018-19)

Time allowed: 3 hours Class – XI , PHYSICS (Theory) Maximum Marks: 70

General Instructions:

a) All the questions are compulsory.
b) There are 27 questions in total.
c) Questions 1 to 5 are very short answer type questions and carry one mark each.
d) Questions 6 to 12 carry two marks each.
e) Questions 13 to 24 carry three marks each.
f) Questions 25 to 27 carry five marks each.
g) There is no overall choice. However, an internal choice has been provided in one question of two marks, one question of three marks and all three questions in five marks each. You have to attempt only one of the choices in such questions.
h) Use of calculators is not permitted. However, you may use log tables if necessary.

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1. Write down the dimensions of surface tension and plank's constant.
2. A ball is thrown straight up. What is the velocity and acceleration at the top?
3. The displacement time graphs for two particles A and B are straight lines inclined at angles of 30° and 45° with the time axis. What is the ratio of the velocities $v_A : v_B$.
4. Define polygon law of vector addition.
5. What is the angular velocity of the hour hand of clock?
6. The period of oscillation of a simple pendulum is $T=2\pi\sqrt{\frac{l}{g}}$ Measured value of L is 20.0 cm known to 1 mm accuracy and time for 100 oscillations of the pendulum is found to be 90 s using a wrist watch of 1 s resolution. What is the accuracy in the determination of g?

OR

If the errors involved in the measurements of a side and mass of a cube are 3% and 4% respectively, what is the maximum permissible error in the density of the material?

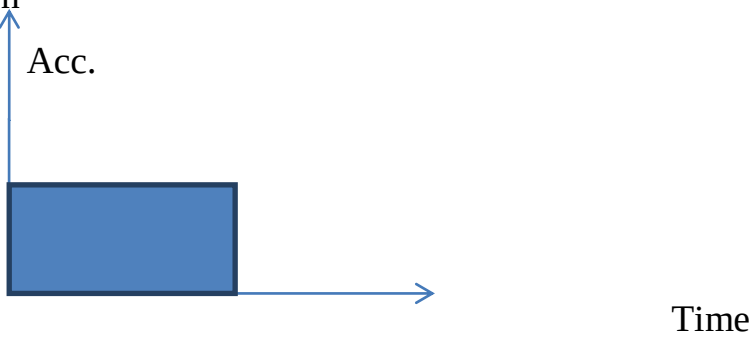
7. Draw the following graphs: (a) displacement -time graph for uniform motion
(b) displacement-time graph for uniform retardation motion.

8. Derive the Third equation of motion by calculus method.
9. Two cars are going in two concentric circular orbits of radius r_1 and r_2 with angular velocities ω_1 and ω_2. What is the ratio of their linear velocities?

10. (a) How the coefficient of friction between a body and a surface changes if the mass of the body is doubled. (b) Give one example of each: inertia of rest and inertia of direction.

11. Why are the passengers thrown outwards when a car in which they are travelling suddenly takes a circular turn?

12. The acceleration –time graph for a body is shown below. Plot the corresponding velocity-time graph

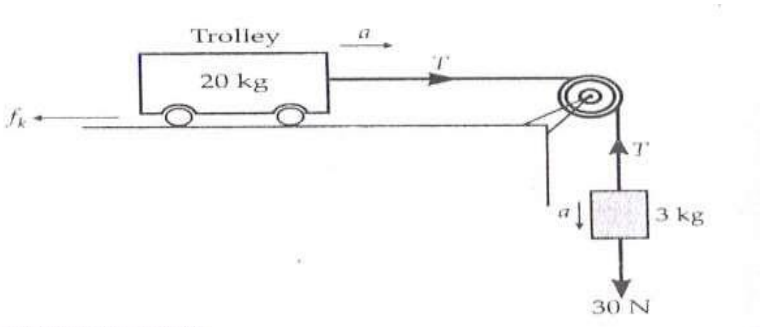


13. Convert 200 Newton force in that unit system in which 100 gram, 50 cm and 1 minute are considered as fundamental quantities using dimensional analysis method.

14. Name and state the conservation principle on which the recoiling of a gun is based. Obtain the expression for the recoil velocity of the gun.

15. (a) Write one difference between systematic and random errors.
(b) If the sides of rectangle are (20 ± 0.2) cm & (30 ± .01) cm. calculate the percentage error in its area & perimeter.

16. What is the acceleration of the block and the trolley system, if the coefficient of kinetic friction between the trolley and the surface is 0.04? What is the tension in the string? Neglect the mass of string. (take g= 10 m/s^2)



17. Two towns A and B are connected by regular bus service with a bus leaving in either direction in every T minutes. A man cycling with a speed of 20 km/h in the direction A to

B notices that a bus goes past him every 18 min in the direction of the motion, and every 6 min in the opposite direction. What is the period T of the bus service and with what speed do the busses ply on the road? **OR**

On a two lane road, car A is travelling with a speed of 35 km/h. Two cars B and C approach car A in opposite directions with a speed of 54km/h each. At a certain instant, when distance AB is equal to AC, both being 1Km, B decides to overtake A before C does. What minimum acceleration of car B is required to avoid an accident?

18. State with reasons, whether the following algebraic operations with scalar and vector physical quantities are meaningful: (a) adding a scalar to a vector of the same dimensions, (b) multiplying any vector by any scalar, (c) adding a component of a vector to the same vector.

19. (a) Define resolution of vector. (b) Explain by vector resolution why it is easier to pull lawn roller than to push it. Draw necessary diagram.

20. Explain resolution of vectors in three dimensional spaces. Draw necessary diagram.

21. State parallelogram law of vector addition. Show that resultant of two vectors A and B inclined at an angle θ is R=$\sqrt{A^2 + B^2 + 2ABcos\theta}$. Write the formula of direction of resultant vector.

22. Define Newton's second law of motion and hence prove first law and Third law of motion by second law.

23. (a) Define Impulse and explain impulse-momentum theorem. (b) Explain why fielder pulls his hands backwards while catching the ball.

24. Explain following:

(a) Passengers in bus suddenly experience sudden forward jerk when it suddenly stops

(b) A cyclist bend inwards from vertical position while taking a turn?

(c) Why does a person sitting in one train think that the other train is at rest, when both the trains are moving on parallel tracks with the same speed and in the same direction?

25. A projectile is fired at an angle θ with horizontal with 'u' velocity

(a) Show that its trajectory is a parabola.

(b) Obtain expression for: The maximum height attained and horizontal range.

(c) Show that there are two angles of projection for which the horizontal range is same.

OR

(a) Define centripetal acceleration. Give its direction.

(b)Derive the expression for the centripetal acceleration.

(c) If the time period of rotation of a body in a circular path is increased by three times then what is the effect on the centripetal acceleration.

26.(a) A body starts accelerating uniformly with acceleration 'a' with a initial velocity 'u' and travels in a straight line. Derive an equation for the distance covered by it in n^{th} second of its motion.

(b) A ball is dropped from the roof of a tower of height h. The total distance covered by it, in the last second of its motion is equal to the distance covered by it in first three seconds, what is the value of h? ($g = 10\ m/s^2$)

(c) Define relative velocity

OR

(a)Derive the formula of converting any physical quantity from one unit system to another system by dimensional analysis.

(b) Assuming that mass M of the largest stone that can be moved by a flowing river depends upon the velocity 'v', the density of water 'ρ', and acceleration due to gravity 'g'. Using dimensional analysis Show that M varies with the sixth power of the velocity of flow.

27.(a) What is meant by banking of road? What is need the of banking?

(b) Obtain an expression for the maximum speed with which a vehicle can safely negotiate a curved road banked at an angle θ. The coefficient of friction between the wheels and the road is μ.

OR

(a) Define angle of repose and show that in equilibrium angle of repose is equal to angle of friction

(b) Show that kinetic friction is less than the static friction.

(c) Establish that static friction is a self-adjustable force.

(d)Write the basic laws of limiting friction.

ATOMIC ENERGY CENTRAL SCHOOL NO.4, RAWATBHATA

HALF-YEARLY EXAMINATION (2018-19)

Time: 3hour Class: XI, Chemistry Maximum Marks:70

Name of Student_____Roll No. _____Class& Sec_____Invg. Sign.___

General Instructions:

1. This paper contains 27 questions. All the questions are compulsory.
2. Question No. 1 to 5 are very short type questions and carry one mark each.
3. Question No. 6 to 12 carry two marks each.
4. Question No. 13 to 24 carry three marks each.
5. Question No. 25 to 27 carry five marks each.
6. There is no overall choice. However, an internal choice has been provided in one question of two marks, one question of three marks and all three questions in five marks each. You have to attempt only one of the choices in such question.
7. Use of calculator is not permitted.

Q.1. What is meant by Critical temperature? 1

Q.2. What would be the IUPAC name & symbol for the element with atomic no. 109? 1

Q.3. Give the values of principal quantum number and magnetic quantum number for 19th electron of K (Potassium). 1

Q.4. How many numbers of particles in bcc unit cell. 1

Q.5. How is the pressure of a given sample of gas related to the temperature at constant volume? Give name of this law. 1

Q.6. Define limiting reagent. 50 kg of N_2 gas 10.0 kg of H_2 gas are mixed to produce NH_3 gas, identify the limiting reagent. Also, calculate the amount of NH_3formed. 2

Q.7. What do you mean by threshold frequency and work function for a metal? 2

Q.8. Arrange the following in increasing order of size. Give reason for your answer: 2

Mg^{2+} O^{2-} Na^{+} F^{-} Al^{3+}

Q.9. Explain the hybridisation in ethyne (C_2H_2). 2

Q.10. A sample of gas occupies 3.00 L at 760 torr. Calculate the volume of the gas will occupy if the pressure is changed to 1.45 atm and the temperature remains constant. 2

OR

Explain why -273^0C is the lowest possible temperature using Charle's law?

Q.11. Give reason: 2

a. Falling liquid drops are spherical.

b. The thicknesses of Glass Window pans of old building are thicker at the bottom than at the top.

Q.12. What is the compressibility factor? How does it help to account to nature of a gas. 2

Q.13. A pure sample of compound is found to contain 2.04 g of sodium, 2.65 x 1022 atoms of carbon and 0.132 moles of oxygen atoms. Determine the empirical formula of the compound. (Na = 23, C = 12, O = 16)? 3

OR

Commercially available conc. HCI contains 38% HCl by mass. What is the molarity of this solution? The density is 1.19g m L^{-1}.What volume of concentrated HCl is required to make 1.0 L of an 0.10M HCl ?

Q.14. a. State Pauli's exclusion principle. 3

b. Write the de Broglie relation

c. List two main differences between orbit and orbital.

Q.15. Calculate the total pressure in a mixture of 8g of dioxygen and 4g of dihydrogen confined in a vessel of 1 dm^3 at 27^0C. Calculate partial pressureof O_2&H_2 (R=0.083 bar dm^3 k^{-1} mol^{-1}) 3

Q.16. A. Sigma bond is more stronger than pi bond, why? 3

B. All bonds in PCl_5 are not equal. Explain.

C. Which one is more ionic out of NaCl & NaI and why?

Q.17. a. What is meant by hydrogen bond? Write its types. 3

b. Explain why o - nitrophenol has a lower boiling point than p –nitrophenol?

Q.18. Calculate number of moles in following: 3

a. 2.24 L CO_2 gas at STP

b. 18 gm glucose

c. 3.01×10^{22} He atoms

Q.19. A. Draw the resonating structures of carbonate ion. 3

B. Why is NF_3 trigonal pyramidal while BF_3 is trigonal planar, though both are tetra atomic molecules?

C. H_2O is polar but CO_2 is non-polar molecule.

Q.20. The first ($_iH_1$) and the second ($_iH_2$) ionization enthalpies (in kJ per mole) and the ($_{eg}H$) electron gain enthalpy (in kJ per mole) of a few elements are given below : 3

Elements	ΔH_1	ΔH_2	$\Delta_{eg}H$
I	520	7300	-60
II	419	3051	-48
III	1681	3374	-328
IV	2372	5251	+48

Which of the above element is likely to be :

(i) the least reactive element

(ii) the most reactive non metal

(iii) the most reactive metal.

Q.21. A. Write the general outer electronic configuration of d- and f- block elements. 3

B. Assign the position of the element having outer electronic configuration as

a) $(n-1)d^2ns^2$ for n=4

b) ns^2np^4 for n=3 in the periodic table.

Q.22. Account for following:

a. Li resembles with Mg

b. electron gain enthalpy of F is less than that of Cl

c. Be and N have high value of ionisation enthalpy against the trend.

Q.23. (a) The 4f sub shell of an atom contains 12 electrons. What is the maximum number of electrons having the same spin in it? 3

(b) Explain the meaning of $4p^6$.

(c) Write the electronic configuration of the atom with atomic number 24.

Q.24. Define the following terms: 3

A. Mole Fraction B. Empirical Formulae C. Molality

Q.25. a. What is the electromagnetic spectrum? Describe hydrogen spectrum & describe series of spectrum & the region to which do they belong? 5

b. What is maximum no. of emission lines when the excited electron of a H atom in n=6 drops to ground state.

OR

A. What are the shapes of 3s and 3p orbitals? How many total nodes are present in these orbitals? 2+2+1

B. What is the Hund's maximum multiplicity rule? Explain with example.

C. What are degenerate orbitals?

Q.26. a. What shapes are associated with sp^3d and sp^3d^2 hybrid orbitals ? 2+2+

b. Out of $CO_2$and BF_3, which one of them will have a larger bond angle and why? 1

c. Write two limitations of octet theory.

OR

A. Draw the energy level diagram of O_2 molecule. Mention its magnetic behavior. 3+2

B. Explain why the bond order of N_2 is greater than N_2^+ but the bond order of O_2 is less than O_2^+.

Q.27. A. Describe the causes for deviation from ideal behavior and the modification made in the ideal gas equation. 3+2

B. Calculate the value of the gas constant for 1 mole of a gas in SI system at STP.

OR

a. How will you distinguish between the following pairs of terms: 3+2

i. n type and p type semiconductor

ii. Crystal lattice and unit cell?

iii. Tetrahedral void and octahedral void?

b. An element X(At. Mass = 40 g mol^{-1}) having fcc structure, has unit cell edge length of 400 pm. Calculate the density of X.

Atomic Energy Central School No 4, Rawatbhata
Half Yearly Examination (2018-19)
Time – 3hour Class XI, Mathematics M.M.- 100

General Instructions:

(i) All questions are compulsory.

(ii) This question paper contains 29 questions.

(iii)Question 1- 4 in Section A are very short-answer type questions carrying 1 mark each.

(iv) Question 5-12 in Section B are short-answer type questions carrying 2 marks each.

(v) Question 13-23 in Section C are long-answer-I type questions carrying 4 marks each.

(vi) Question 24-29 in Section D are long-answer-II type questions carrying 6 marks each.

Section- A (1 ×4 = 4)

1. Solve the inequality $\frac{1}{x-4} < 0$ *and show the solution on number line*.
2. Find the maximum number of hand-shakes possible in a room of 10 persons.
3. Use the listing method to write the set : $\{a_n: n \in \mathbb{N}, a_{n+1} = 3\, a_n \text{ and } a_1 = 1\}$
4. Evaluate cosec (-765^0).

Section B (2 ×8 = 16)

5. Find the Principal solution of the following: cosec x = -2.
6. Find all pairs of consecutive odd natural numbers, both of which are larger than 10, such that their sum is less than 40.
7. Solve the quadratic equation $x^2 + x + \frac{1}{\sqrt{2}} = 0$.
8. Find is it true that P(A U B) = P(A) U P(B), for any two sets A & B. check with the help of a counter example.
9. Draw the graph of tan x and write it's domain and range.
10. If $f(x) = x^3 - \frac{1}{x^3}$. Show that $f(x) + f\left(\frac{1}{x}\right) = 0$.
11. Simplify $i^{107} + i^{112} + i^{117} + i^{120}$.
12. Draw the Venn diagrams to illustrate the following relationship among sets E, M and U, where E is the set of students studying English in a school, M is the set of students studying Mathematics in the same school, U is the set of all students in that school.

(i) All the students who study Mathematics study English, but some students who study English do not study Mathematics.

(ii) There is no student who studies both Mathematics and English.

(iii) Some of the students study Mathematics but do not study English, some study English but do not study Mathematics, and some study both.

(iv) Not all students study Mathematics, but every student studying English studies Mathematics.

Section C (11 × 4 = 44)

13.Prove that: $2.7^n + 3.5^n - 5$ is divisible by 24, $\forall\, n \in \mathbb{N}$.

14.Draw the graph of the function given by $f(x) = \begin{cases} 1-x & , x < 0 \\ 1 & , x = 0 \\ 1+x & , x > 0 \end{cases}$

and find the domain and range.

Or

Redefine the function $f(x)$ by splitting the interval at -2 and 2 where

$f(x) = |x - 2| + |2 + x|$, $-3 \le x \le 3$. Also draw the graph and find domain and range.

15. For any 3 sets A, B and C prove that A×(B` ∪ C`) = (A× B) ∩ (A×C)

16. Prove that cos 6x = 32 $\cos^6$ x – 48 $\cos^4$ x + 18 $\cos^2$ x – 1.

17. Find the general solution of the equation 2 $\cos^2$ x + 3 sin x = 0.

18. Find the square root of the complex number -15 – 8i .

19. A solution of 8 % boric acid is to be diluted by adding a 2 % boric acid solution to it. The resulting mixture is to be more than 4 % but less than 6% boric acid. If we have 640 litres of the 8% solution , how many litres of the 2% solution will have to be added?

20. If (x+I y)^3 = u+ i v, them show that $\frac{u}{x} + \frac{v}{y} = 4(x^2\text{-}y^2)$.

21. If $^{2n}C_3 : {}^nC_3$ = 11:1, find the value of n.

22. How many words can be formed by arranging the letters of the word 'PARALLEL' so that all L's do not come together?

Or

Find how many words with or without meaning are possible from the letters of the word AGAIN. If all of these words are arranged in the dictionary order, find the 50 th word.

23. Prove the distribution law $A \cap (B \cup C) = (A \cap B) \cup (A \cap C)$, without using Venn diagram.

Section D(6 ×6 = 36)

24. Prove that $\cos^4 \frac{\pi}{8} + \cos^4 \frac{3\pi}{8} + \cos^4 \frac{5\pi}{8} + \cos^4 \frac{7\pi}{8} = \frac{3}{2}$.

Or

If α & β are solutions of equation a tan $\theta + b \sec\theta = c$ then prove that $\tan(\alpha + \beta) = \frac{2ac}{a^2 - c^2}$.

25. Show the graphical solution of the linear inequalities:

3x+2y ≤150 , x + 4y ≤ 80, x ≤ 15, x ≥ 0 , y ≥ 0.

26. A bag contains 6 white and 5 red marbles. Find the number of ways in which 4 marbles can be drawn from the bag if a) they are of any colour. b) 2 must be white and 2 red. c) they must be of the same colour. (2+2+2)

Or

Prove the Pascal's theorem: $^nC_r + {}^nC_{r-1} = {}^{n+1}C_r$.

27. Convert the complex number z = $\frac{i-1}{\cos\frac{\pi}{3} + i \sin\frac{\pi}{3}}$ in polar form.

28. Prove that $1 + \frac{1}{1+2} + \frac{1}{1+2+3} + \cdots \ldots\ldots\ldots\ldots \frac{1}{1+2+3+\cdots\ldots\ldots\ldots+n} = \frac{2n}{n+1}$ $for\ all\ n \in \mathbb{N}$

29. In a group of 50 students, the number of students studying French, English Sanskrit were found to be as follows: French = 17, English = 13, Sanskrit = 15
French and English = 09, English and Sanskrit = 4, French and Sanskrit = 5, English, French and Sanskrit = 3. Find the number of students who study
(i) French only (ii) French and English but not Sanskrit
(iii) at least one of the three languages (iv) English and Sanskrit but not French
(v) French and Sanskrit but not English (vi) none of the three languages

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ATOMIC ENERGY CENTRAL SCHOOL No 4 RAWATBHATA

Half Yearly Examination (2018-19)

Time: 3Hrs Class – XI , Biology M.M. 70

Name of the student_____Roll No._____Class Sec_____Invig. Sign._____

General Instruction:-

1) There are a total of 27 questions and five sections in the questions paper. All questions are compulsory.
2) This question paper consists of four sections A, B, C and D. Section 'A' consists of 5 question of one mark each. Section 'B' is of 7 questions of 2 marks each, section 'C' is of 12 questions of 3 marks each and Section 'D' consists of 3 questions of five marks each.
3) There is no overall choice. However an internal choice has been provided in one questions of 2 marks one question of 3 marks and all questions of 5 marks. Attempt only one choice in all such questions.
4) Wherever necessary, the diagrams drawn should be neat and properly labeled.

SECTION 'A'

1. Write the name of smallest organism, also write their short name.
2. What do you mean by coenocytic condition?
3. Name the male and female sex organs of bryophytes.
4. Who coin the term cell and in which it was published.
5. Name two organisms that do not reproduce at all.

SECTION 'B'

6. Write the term for the body cavity, true body cavity develop from which germinal layer?
7. Segmentation in the body is first observed in which group (Phylum) of the organisms?
8. What does 'S' refers in a 70S and 80S ribosome? In which organisms they are occurs. Write example.
9. Give one example of each of
   (i)An acidic amino acid (ii) A basic amino acid.
10. Describe briefly the four major groups of protozoan.
11. Why does doctor recommend to use vegetable oils in your home?
12. What are polyunsaturated fatty acids?

SECTION 'C'

13. What are the characteristics of class-Ascomycetes?
14. (i) Write the category of the following in which they belongs:*Panthera*, Solanaceae, Cancidae, Monera.
    (ii) What are mesosomes and its use in bacterial cell?
15. (a) A plant may have different names in different region of the country or world. How does botanist solve this problem?

(b) (i) Which cell division is called euqational division?
    (ii) Expand NAD and FAD.

16. (a) Write the type of photosynthetic pigments in red algae, green algae and brown algae.

(b) Write the salient features of Gymnosperms.

(c) List the differences between metaphase of mitosis and metaphase-I of meiosis.

17. (a) Describe peptide bonds and explain how it is form with suitable example.

(b) Discuss about competitive inhibition of enzymes? How is it different from non-competitive inhibition?

18. Write the envelope of the prokaryotic cells and describe them in briefly.

19. What do you mean by 'Fungi Imperfecti' describe features of this class.

20. What are mitochondria? Describe its ultra structure.

OR

Draw neat and labeled diagram of chloroplast and describe

21. (i) Water vascular system is characteristic of which of the group (Phylum) of animals.

(ii) Write the name of egg-laying mammal.

(iii) What do you mean by eutherians?

22. Differentiate between:

(i) Homosporous and Heterosporous Pteridophyte.

(ii) Syngamy and triple fusion.

23. Draw labeled diagram of Ultra structure of Plant cell Or Animal cell.

24. (i) Describe the various levels of organization of body of animals, with examples of each.

(ii) What are phycocolloids? Name two of them and write their respective sources.

SECTION 'D'

25. (a) Who proposed the cell theory? Describe the cell theory.

(b) (i) Why meiosis is called reduction division? (ii)Describe the events taking place during interphase.

(iii) What is G_0 phase?

OR

(a) Describe the structure of nucleotide and differentiate from nucleoside, with example.

(b) Mention the ploidy of the following:

Protonemal cell of moss; Primary endosperm nucleus in dicot; leaf cell of a moss; prothallus cell of a fern; ovum of a liverwort; zygote of a fern.

26. (a) Distinguish between Chordates and Non-Chordates.

(b) Write short note on double fertilization. (c) Write the salient features of dicotyledons.

OR

Write the five kingdoms of organisms and describe with suitable example.

27. Describe cell division mitosis with labeled diagrams.

OR

(i) What is a Centromere? How does the position of centromere form the basis of classification of chromosomes? Support your answer with a diagram showing the position of centromere on different types of chromosomes.

(ii) What is mesosome in a prokaryotic cell? Mention the function that it performs.

Atomic Energy Central School No-4, Rawatbhata

Half Yearly Examination, (2018-19)

Class: XI ,COMPUTER SCIENCE with C++Subject Code No. 083

Time allowed: 3 hours Maximum Marks: 70

Name of the student_____Roll No._____Class Sec_____Invig. Sign._____

Instructions:

i) All questions are compulsory.
ii) Please check that this question paper contains 2 printed pages.
iii) Please check that this question paper contains 4 questions.
iv) Please write down the proper serial number of the question before attempting it.

Q.N-1 a) Draw the block diagram of digital computer system? Explain the working of each unit with examples? [6]

b) Define the features of 3rd generation of computers and compare with advantages over to 2nd generation computers? [3]

c) Match the following: [3]

i)	Mark -1	Napier	
ii)	Loom	Babbage	
iii)	Adding Machine	H. Aiken	
iv)	Stored Program Architecture	Jacquard	
v)	Difference Engine	Pascal	
vi)	Logs and Bones	Von Neumann	

d) Classify the Computer Systems? [2]

e) Differentiate between data and information? [1]

Q.N.-2 a) Classify the Tokens of C++ briefly, give examples of each? [3]

b) Why we include header files in C++ Programs? Name the header files for the following functions: getch(), exp(), pow() [2]

c) Write the syntax for initialization of Variable, with a suitable example. [3]

OR

Explain the Conditional Operator with example?

d) Find out the possible errors in the following program:

i) [2]

```
Void main ();
{ Int a,b;
  A=10;
  a+20=b;
  cout<< " B=  <<b;
  getch():
}
```

ii) Mark underlines for each error in the following program and also give explanation about the error occurs in the program. [2]

```
include<iostream.h>
void main();
{ clrsrc();
  INT a,b, c;
  cout<<"enter the values\n";
  cin>>a>>b;
  c=sqrt(a+b);
```

```
    cout<<"the result is: "<<c;
  }
```

e) Explain the fundamental data types used in C++? [3]

Q.N.-3 a) Give output to the following statements: [3]

i) (11)? cout<<" Apple" : (0)? " Banana" : "Orange" ;
ii) 0 && -1 || !0 && -14 && 1
iii) A = (12 != 12) ? 12*2 : 12+2 ;

b) Write the following mathematical expression in to valid C++ expression: [4]

$a.\ A = \pi r^2$ b. $z = \sqrt{\frac{2x+y}{3}}$ c. $\frac{2e^{4y}}{xy}$ d. Z= e^X+Xsin^{-1}X

c) Find output in the following code: [2]

```
{ int x =6, y, z, w;
y = x-- /3 + 4;
z = x-- * 3 + ++y * 2;
w = ++z + y++  -  x--;
++w;
cout<<x<<' '<<y<<' '<<z<<' '<<w;
}
```

d) Write Program in C++for the followings:

i) Enter 3 numbers a, b, &c and find the result of $\frac{2a+3b+c}{abc}$ [3]

ii) Find the greatest number among 3 numbers.

iii) WAP to calculate area of a Triangle, by using Heron's Formula. [3]

OR

WAP to calculate the Compound Interest for the given Principal Amount, rate of interest and time. [4]

iv) Enter the percentage marks of a student and find its grade on the basis of following criteria: if marks >=90 then grade is 'A', 90>marks>=60 then grade is 'B', 60>marks<=50 then grade is 'C' marks<50 then grade is 'D'. [4]

v) Enter the purchase amount (PA) of a customer and calculate the discount and tax. If the PA is >=10000 then discount is 9.5% of PA and Tax is 3.5%, if PA is >=5000 then discount is 7.5% of PA and Tax is 2.5%, otherwise discount is 5% of PA and Tax is 0%. Calculate the net pay as PA+Tax-Discount. Display all details at output. [6]

Q.N.-4 a) Name the Technologies used in the following generations of computers: [3]

IInd Gen., IIIrd Gen., IVth Gen.

(b) Convert the following numbers into another base: [8]

(i) $(10001.010)_2$ = (?)$_{10}$
(ii) $(1100.55)_{10}$ = (?)$_8$
(iii) $(CA7.9)_{16}$ = (?)$_2$
(iv) $(542.3)_8$ = (?)$_{10}$

ATOMIC ENERGY CENTRAL SCHOOL NO.4,RAWATBHATA

Half Yearly Examination (2018-19)

Time :3hrs Class XI, Physical Education M.M:70

Name of the student_____Roll No._____Class Sec_____Invig. Sign._____

General instructions:

1) Question paper consist of 26 questions.All questions are compulsory.
2) 1 marks question 10-30 words.
3) 3 marks question 30-50 words.
4) 5 marks question 75-100 words.

Q-1 Define physical education.	1
Q-2 When and Where were the first modern Olympic games organized?	1
Q-3 What are Olympic ideals?	1
Q-4 Define physical fitness.	1
Q-5 What are the motto of Paralympics?	1
Q-6 Define pranayama.	1
Q-7 Define leadership.	1
Q-8 Describe soft skills required for a different career.	1
Q-9 What do you mean by surfing sports?	1
Q-10 Rajiv Gandhi khel ratna award started in which year.	1
Q-11 Write the recent badminton player names qualified for asian games 2018 final singles.	1
Q-12 Why is proper diet important for a positive lifestyle?	3
Q-13 Describe aims and objectives of adaptive physical education.	3
Q-14 What is meditation?Explain its importance.	3
Q-15 Write a short note on Special Olympic Bharat.	3
Q-16 How can yoga help improve concentration.	3
Q-17 What are effects of physical inactivity on health?	3
Q-18 Which types of leadership qualities in children?	3
Q-19 Mention the safety measures one should take mountaineering.	3
Q-20 Write the importance of physical education programmes in modern times.	5
Q-21 What are the main functions of the Indian Olympic Association?	5
Q-22 Explain the concept of a positive lifestyle.	5
Q-23 What is adaptive physical education?Stae the principles of adapting physical education programme for children with special need.	5
Q-24 How many elements of yoga?Explain about any two.	5
Q-25 How many types of kriyas?Explain about any two.	5
Q-26 Elaborate the various objectives of adventure sports.	5

परमाणु ऊर्जा केन्द्रीय विद्यालय क्रमांक - 4 रावतभाटा

अर्द्धवार्षिक परीक्षा (2018-19)

पूर्णांक 80 कक्षा ग्यारहवीं, हिंदी (केन्द्रिक) समय 3 घंटे

खंड "क "

प्र० 1 निम्नलिखित अपठित काव्यांश को ध्यानपूर्वक पढकर पूछे गए प्रश्नों के उत्तर लिखिए | ,

समय वह संपति है जो प्रत्येक मनुष्य को ईश्वर की ओर से मिली है | जो लोग इस धन को संचित रीति से बरतते है | वे शारीरिक सुख तथा आत्मिक आनंद प्राप्त करते हैं | इसी समय संपत्ति के सदुपयोग से एक जंगली मनुष्य सभ्य और देवता स्वरूप बन जाता है | इसी के द्वारा मूर्ख विद्वान , निर्धन धनवान ,अज्ञ अनुभवी बन जाता है | मनुष्य को संतोष ,हर्ष और सुख तब तक प्राप्त नहीं होता जब तक वह उचित रीति से समय का सदुपयोग नहीं करता है |नि:संदेह एक रत्न राशि है जो कोई उसे अपरिमित और अगणित रूप से अंधाधुंध व्यय करता है | वह दिन प्रतिदिन अकिंचन , रिक्त हस्त और दरिद्र होता है | वह आजीवन खिन्न और भाग्य को कोसता रहता है |मृत्यु भी उसे इस जंजाल और और दुःख से छुड़ा नहीं सकती है | प्रत्युत उसके लिए मृत्यु का आगमन मनो अपराधी के लिए गिरफ्तारी का वारंट हो |सच तो यह है कि समय नष्ट करना एक प्रकार की आत्महत्या है | अंतर केवल इतना ही है कि आत्मघात सर्वदा के लिए जीवन का जंजाल छुड़ा देती है | संसार में सबको दीर्घायु प्राप्त नहीं होती है, परन्तु सबसे बड़ी हानि जो समय की दुरुपयोगिता एवं अकर्मण्यता से होती है ,वह यह है कि पुरुषार्थहीन और निरीह पुरुष के विचार अपवित्र और दूषित हो जाते हैं |

यदि मनुष्य सचमुच ही मनुष्य बनना चाहता है तो सब कर्मों से बढकर श्रेष्ठ कार्य उसके लिए यह है कि वह एक पल भी व्यर्थ ना गवाएँ |प्रत्येक कार्य के लिए पृथक समय और प्रत्येक समय के लिए पृथक कार्य निश्चित करे |

क) समय के सदुपयोग का क्या महत्त्व है ? 2

ख) समय के दुरूपयोग का क्या परिणाम सामने आता है ? 2

ग) मनुष्य श्रेष्ठ कब बन जाता है ? 2

घ) लेखक इस गद्यांश के द्वारा क्या संदेश देता है ? 2

ड) प्रतिदिन और आजीवन शब्दों से उपसर्ग अलग कीजिए | 1

च) दीर्घायु और आगमन शब्दों के विलोम शब्द लिखिए | 1

प्र० 2 निम्नलिखित अपठित काव्यांश को ध्यानपूर्वक पढकर पूछे गए प्रश्नों के उत्तर लिखिए | 1x6=6

निज भाषा उन्नति अहै , सब उन्नति को मूल |
बिन निज भाषा ज्ञान के , मिटै न हिय की शूल |
पढ़े संस्कृत जतन करि, पंडित भये विख्यात |

पै निज भाषा ज्ञान बिन ,कहि न सकत इक बात |

अंग्रेजी पढ़ के जदपि , सब गुन होत प्रवीन |

पै निज भाषा ज्ञान बिन , रहत हीन के हीन |

एक भाषा इक जीव मति सब घर के लोग |

तबै बनत है सबन सों ,मिटत मूढ़ता सोग |

और एक अति लाभ यह या में प्रगट लखात |

निज भाषा में कीजिए ,जो विद्या बात |

क) कवि ने सब उन्नति का मूल किसे माना है ? ख) संस्कृत पढने वालों को कवि क्या मानता है?

ग) अपनी भाषा को अपनाने की बात कवि क्यों कर रहा है ? घ) काव्यांश की भाषा पर टिप्पणी कीजिए|

ड.) कवि निज भाषा में विद्या की बात क्यों कर रहा है ? च) मिटै न हिय की शूल'से क्या अभिप्राय है?

खंड (ख)

प्र० 3 निम्नलिखित में से किसी एक विषय पर निबंध लिखिए | 8

क) पहला सुख निरोगी काया ख) युवा पीढ़ी और राष्ट्र निर्माण

ग) परिश्रम सफलता की कुंजी है | घ) समाचार- पत्र का महत्त्व

प्र० 4 अस्पताल की कुव्यवस्था पर असंतोष प्रकट करते हुए चिकित्सा अधिकारी को पत्र लिखिए | 5

अथवा

दिनों दिन बढ़ती महंगाई पर चिंता व्यक्त करते हुए किसी दैनिक समाचार पत्र के सम्पादक को पत्र लिखिए |

प्र० 5 निम्नलिखित प्रश्नों के संक्षिप्त उत्तर लिखिए - 1x4=4

क) जनसंचार के प्रमुख माध्यम कौन से हैं ? ख) " उदंत मार्तंड किसने प्रकाशित किया ?

ग) संवाददाता किसे कहते हैं ? घ) संचार किसे कहते हैं ?

प्र० 6 "महानगरीय जीवन" अथवा "गाँवों में बढता फैशन " विषय पर लगभग एक फीचर लिखिए | 3

खंड (ग)

प्र० 7 निम्नलिखित पद्यांश को पढ़ कर पूछे गए प्रश्नों के उत्तर लिखिए | 2x3=6

पाँचवा मैं हूँ अभागा ,जिसे सोने पर सुहागा ,

पिताजी कहते रहें हैं ,प्यार में बहते रहे हैं '

आज उनके स्वर्ण बेटे ,लगे होंगे उन्हें हेटे,

क्योंकि मैं उन पर सुहागा ,बंधा बैठा हूँ अभागा |

क) कवि स्वयं को अभागा क्यों कहता है ? ख) कवि के पिता कवि के प्रति कैसा स्नेह रखते हैं ?

ग) आज पिता को अपने स्वर्ण बेटे हेटे क्यों लगे होंगे ?

अथवा

पग घुंघरू बांधि मीरा नाची

मैं तो मेरे नारायण सू , आपहि हो गई साची

लोग कहै , मीरां भइ बावरी ; न्यात कहै कुल नासी

विष का प्याला राणा भेज्या ,पीवत मीरां हाँसी

मीरां के प्रभु गिरधर नागर ,सहज मिले अविनासी |

क) लोग मीरा को बावरी क्यों कहते हैं ?

ख) मीरा के कुल - बंधुओं ने उसके साथ कैसा व्यवहार किया ?

ग) मीरा ने " सहज मिले अविनासी " क्यों कहा है ?

प्र० 8 निम्नलिखित काव्यांश का भाव -सौंदर्य और शिल्प -सौंदर्य स्पष्ट कीजिए | 3+3=6

हम तौ एक एक करि जाना |

दोइ कहै तिनहीं कौ दोजग जिन नाहिंन पहिचाना ||

एकै पवन एक ही पानी एकै जोति समांना ||

एकै ख़ाक गढे सब भांडे एकै कोंहरा साना ||

जैसे बाढ़ी काष्ट ही काटें अगिनि न काटें कोई ||

सब घटि अंतरि तूही व्यापक धरै सरूपे सोई ||

अथवा

घर में विधवा रही पतोहू ,लक्ष्मी थी ,यद्यपि पति घातिन |

पकड़ मँगाया कोतवाल ने ,डूब कुएँ मरी एक दिन |

खैर ,पैर की जूती ,जोरू न सही एक ,दूसरी आती ,

पर जवान लड़के की सुध कर ,साँप लोटते फटती छाती |

प्र० 9 निम्नलिखित प्रश्नों में से किन्हीं दो प्रश्नों के उत्तर लिखिए | 2x2=4

क) "वे आँखे " कविता में कवि ने किसान की पीड़ा के लिए किन्हें जिम्मेदार बताया है ?

ख) कबीरदास के धार्मिक विचारों पर प्रकाश डालिए |

ग) मायके आई बहन के लिए कवि ने घर को परिताप का घर क्यों कहा है ?

प्र० 10 निम्नलिखित गद्यांश को पढ़ कर पूछे गए प्रश्नों के उत्तर लिखिए |

फिर तेवर चढ़ा हमें घूर कर कहा - " तुनकी पापड़ से ज्यादा महीन होती है ,महीन | हाँ ,किसी दिन खिलाएँगे ,आपको |" एकाएक मियाँ की आँखों के आगे कुछ कौंध गया | एक लंबी साँस भरी और किसी गुमशुदा याद को ताजा करने को कहा -"उतर गए वे जमाने | और गए वे कद्रदान जो पकाने खाने की कद्र करना जानते थे ! मियाँ अब क्या रखा है ...निकाली तंदूर से -निगली और हजम !"

क) मियाँ के तेवर चढ़ाने और घूरने का क्या कारण था ? 2

ख) मियाँ को एकाएक क्या याद आ गया ? 2

ग) मियाँ को किस चीज का अफसोस था ? 2

घ) पाठ और लेखक का नाम लिखिए | 1

अथवा

बिछुडन - समय बड़ा करुणादायक होता है | आपको बिछुडते देख कर आज हृदय में बड़ा दुःख है | माई लार्ड ! आपके दूसरी बार इस देश में आने से भारतवासी किसी प्रकार प्रसन्न न थे | वे यही चाहते थे कि वे फिर न आवें | पर आप आए और उससे यहाँ के लोग बहुत दुखित हुए | वे दिन रात यही मनाते थे कि जल्द श्रीमान यहाँ से पधारें | पर अहो ! आज आपके जाने पर हर्ष की जगह विषाद होता है | इसी से जाना कि बिछुडन -समय बड़ा करुणादायक होता है , बड़ा पवित्र ,बड़ा निर्मल और बड़ा कोमल होता है | वैर - भाव छूट कर शांत रस का आविर्भाव उस समय होता है |

क)लेखक किसे संबोधित कर रहा है ? उसे किस की विदाई पर दुःख है और क्यों ? 2

ख) भारतवासी दूसरी बार किसे नहीं आना देना चाहते थे ? 2

ग)बिछुडन -समय को पवित्र , निर्मल और शांत क्यों कहा गया है ? 2

घ) पाठ और लेखक का नाम लिखिए| 1

प्र० 11 निम्नलिखित प्रश्नों में से किन्हीं तीन प्रश्नों के उत्तर दीजिए | 3x3=9

क) पंडित वंशीधर का चरित्र- चित्रण कीजिए |

ख) शिवशंभु की दो गायों की कहानी के माध्यम से लेखक क्या कहना चाहता है ?

ग) कर्जन को इस्तीफा क्यों देना पड़ा ?

घ) मियां नसीरूद्दीन की कौन सी बातें आपको अच्छी लगती हैं ?

अपनी पाठ्य पुस्तक" वितान भाग -एक में संकलित पाठों के आधार पर पूछे गए प्रश्नों के उत्तर दीजिए|4

प्र०12 पातरपानी , पातालपानी , तथा रेजाणीपानी के बारे में आप क्या जानते हैं ?

अथवा

कुमार गंधर्व को शास्त्रीय गायकों की कौन सी बात खलती है

प्र० 13 निम्नलिखित प्रश्नों में से किन्हीं दो प्रश्नों के उत्तर दीजिए | 2x4=8

क) वर्षा न होने की स्थिति में कुंई में पानी कहाँ से आता है ?

ख) लताजी ने चित्रपट -संगीत में क्या योगदान दिया ?

ग) लता मंगेशकर और नूरजहाँ के गायन में क्या महत्त्वपूर्ण अंतर है ?
