KENDRIYA VIDYALYA AIZAWL
SUMMER VACATION HOLIDAY HOMEWORK
CLASS XII

Subject-Biology

Q1 .A cross was carried out between two pea plants showing the contrasting traits of height of the plant. The result of the cross showed 50% parental characters.
(a)Mark out the cross with the help of PUNETT SQUARE ?
(b)Name the type of cross carried out.

Q2.What type of disorder is Thalassaemias ?How is it differ from sickle cell anaemia ?

Q3.(a)The inheritance of flower colour in the snapdragon is a good example to understand incomplete dominance. Perform a cross upto F_2 generation to show this inheritance.
(b)Find out the F_2 phenotypic and genotypic ratio of this cross.
(c)Name and state the laws that can be derived from this cross.

Q4.A cross between a normal couple resulted in a son who was haemophilic and a normal daughter. In course of time, when the daughter was married to a normal man, the grandson was also haemophilic .
(a)Represent this cross in the form of a pedigree chart . Give the genotype of the daughter and her husband.
(b)Write the conclusion you draw of the inheritance pattern of this disease.

Q5.Write any two autosomal genetics disorder with their symptoms.

Q6.Write two points on the importance of gene mapping.

Q7.(a)Describe the various steps of Griffith's experiment that led to the conclusions of Transforming Principle .
(b)How did the chemical nature of the Transforming Principle get established?

Q8.How did Hershey and Chase prove that DNA is the genetic material? Describe the experiment.

Q9.In which phase of the cell cycle does replication occur in Eukaryotes? What would happen if cell division is not followed after DNA replication?

Q10.If a double stranded DNA has 20% of cytosine , calculate the percent of adenine in DNA ?

Q11.How is sex determined in grasshopper?

Q12.Linkage and crossing over are alternatives of each other. Justify with the help of an example.

PLS CONTACT YOUR CLASS TEACHER FOR SUBJECT TEACHER MOBILE NO

KENDRIYA VIDYALYA AIZAWL

Summer Vacation Holiday Home Work

Class XII   Science   Subject: Computer Science

1. What is the difference between type casting and type conversion? Explain with suitable example ?
2. What is a reference variable? What is its usage ?
3. Write a program to find the sum of the series 1,2,3,4 … n ?
4. What is the difference between the object and class ?
5. What is the difference between object oriented program and procedural programming ?
6. What is polymorphism ?
7. Define the following:
   i)   Inheritance
   ii)   Encapsulation
8. What is abstraction ?
9. What do you understand by function overloading? Give an example.

Haliday HOME - WORK
(RANJEET SINGH YADAV)
PGT ECo

CLASS - IX (A + B)

To write Question - Answer of
IST chapter of Text book.

CLASS - X - (A+B)

write question answer of
the chapter Economic Development
of Text book

CLASS - XII H

To write Question Answer of
IInd unit Consumer - behaviour

Kendriya Vidyalya Aizawl
Holiday Homework

ENGLISH (In Grammar Notebook)

CLASS XA

MCB

1   Page 26   C5,C7

2   Page 33   D5,D6

3   Page34   D7,D8

4   Page36   E2,E3

5   Page37   E4,E5

6   Page38   E6

Q2   Read the novel "**Story of my life"** and write down the summary of the chapters 1,2,3,4 and 5.

Q3   Revise the syllabus covered so far(April and May)

ENGLISH HOLIDAYS HOMEWORK

(In Grammar Notebook)

CLASS XII A,B

1   From any magazine select five passages, paste them in notebooks and make notes followed by the key for abbreviations, and summary(80 words)

2   Read the novel "**The Invisible Man"** and write down the summary of the chapters 1,2,3,4 and 5.

3   Write about the person whom you would like to have as your role model.

SUBJECT :Geography

Sl no.	Name of the Student	Topic
1	Bimal Rana	India Density of Population-Statewise (2011 census)
2	Ch. Biplop Singha	Locate Major Airports of the World
3	Chandani Rai	Locate sea Port of India
4	Christina Lalmuanpuii	Wheat Producing states of India
5	Deborah Lalchawimawii	Cotton and Jute producing states of India
6	Devender Sharma	Jowar and Bajra producing states
7	Diya Chhetri	Major Seaports of the World
8	H.C.Lalsangliani	Trans Siberian Railway
9	Jacob A Thanchungnunga	Trans Canadian Railway
10	Lalfakzuali Pachuau	Australian Trans Continental Railway
11	Lalremruata	Suez Canal
12	Lalremruata	Major Tribes of India
13	Lalrinfela	Mountain Ranges of South India
14	Lalsangpuia	Mountain Ranges of North India
15	Lalthanzuali	Major oil fields of India
16	Malsawmtluangi Vanchhawng	List 20 important National Highways of India
17	Neha Barman	Peninsular Rivers of India
18	R.Lalfakawma	Ganga river system
19	Rishi Raj	Brahmaputra River System
20	Sangeeta Prathan	Indus River System
21	Vanlalfakzuali	List 5 major Dams of North India
22	V.L.Thlamuanpuia	List 5 major dams of peninsular India
23	Zosangzuali	Major Schedule Tribes of India
24	Zothantluangi Zote	Major Schedule Caste of India

| 25 | T.Lalramchhani | Wonders of India |
| 26 | Martina Sailo | Latitude and Longitude of the India States |

SUBJECT : HINDI

केंद्रीय विद्यालय क्रमांक-1, जेल, त्रिपुरा

द्वितीयावधि परीक्षा हेतु तैयार गए उत्तर कार्य

कक्षा - ग्यारहवी

विषय - हिन्दी

निर्देश - (1) सभी प्रश्नों का उत्तर लिखना अनिवार्य है।

(2) स्वच्छ व सुन्दर लेख पर विशेष ध्यान दें।

प्रश्न - नीचे दिए गए काव्यांश को पढ़कर दिए गए प्रश्नों का उत्तर लिखिए -

मैं निज उर के उद्गार लिए फिरता हूँ,
मैं निज उर के उपहार लिए फिरता हूँ।
है यह अपूर्ण संसार न मुझको भाता,
मैं स्वप्नों का संसार लिए फिरता हूँ।
मैं जला हृदय में अग्नि, दहा करता हूँ,
सुख-दुःख दोनों में मग्न रहा करता हूँ।
जग भव-सागर तरने को नाव बनाए,
मैं भव मौजों पर मस्त बहा करता हूँ॥

(क) प्रस्तुत काव्यांश के कवि एवं कविता का नाम बताइए?

(ख) कवि को संसार क्यों अच्छा नहीं लगता?

(ग) कवि के हृदय में कैसी आग दहक रही है?

(घ) कवि संसार रूपी सागर से पार उतरने के लिए क्या करता है?

प्रश्न2. यशोधर पंत का आदर्श कौन था? उसके व्यक्तित्व व तीन विशेषताएँ लिखिए।

प्रश्न3. किसी एक विषय पर निबंध लिखिए -

(क) स्वच्छ भारत: स्वस्थ भारत ।

(ख) हिन्दी भारत की पहचान ।

प्रश्न4. सरकारी विद्यालयों में गिरते शिक्षा के स्तर पर चिंता व्यक्त करते हुए शिक्षा विभाग के सचिव को पत्र लिखिए।

प्रश्न5. 'भ्रष्टाचार' पर एक आलेख लिखिए।

	HOLIDAY ASSIGNMENT	Cl XII Geography
Sl no.	Name of the Student	Topic
1	Bimal Rana	India Density of Population- Statewise (2011 census)
2	Ch. Biplop Singha	Locate Major Airports of the World
3	Chandani Rai	Locate sea Port of India
4	Christina Lalmuanpuii	Wheat Producing states of India
5	Deborah Lalchawimawii	Cotton and Jute producing states of India
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25	T.Lalramchhani	Wonders of India
26	Martina Sailo	Latitude and Longitude of the India States
27	Namrata Joshi	Gathering areas of the World
28	Lalnunmawii	Origin of Agriculture

कक्षा- ग्यारहवीं

विषय हिन्दी

निर्देश: (i) सभी प्रश्नों का उत्तर लिखना अनिवार्य है।
(ii) स्वच्छ व सुन्दर लेखन पर विशेष ध्यान दें।

प्रश्न - नीचे दिए गए पठित काव्यांश को पढ़कर पूछे गए प्रश्नों का उत्तर लिखिए -

मैं सिंधु तट के अंगार लिए फिरता हूँ,
मैं मिल तट के अंगार लिए फिरता हूँ।
यह अपूर्ण संसार न मुझको भाता,
मैं स्वप्नों का संसार लिए फिरता हूँ।
मैं जला हृदय में अगिन, दगा करता हूँ,
सुख-दुःख दोनों में मगन रहा करता हूँ।
जग भव-सागर तरने को नाव बनाए,
मैं भव मौजों पर मस्त बना करता हूँ॥

(क) प्रस्तुत काव्यांश के कवि एवं कविता का नाम बताइए?
(ख) कवि को संसार क्यों अच्छा नहीं लगता?
(ग) कवि के हृदय में कैसी आग दहक रही है?
(घ) कवि संसार रूपी सागर से पार उतरने के लिए क्या करता है?

प्रश्न. सुमित्रानन्दन पंत का आदर्श कौन था? उसके व्यक्तित्व की तीन विशेषताएँ लिखिए।

प्रश्न. किसी एक विषय पर निबंध लिखिए -
(क) स्वच्छ भारत: स्वस्थ भारत।
(ख) हिन्दी भारत की पहचान।

प्रश्न 4. सरकारी विद्यालयों में गिरते शिक्षा के स्तर पर चिंता व्यक्त करते हुए शिक्षा विभाग के सचिव को पत्र लिखिए।

प्रश्न 5. 'भ्रष्टाचार' पर एक आलेख लिखिए।

R.No	NAME OF STUDENT	PROJECT NAME
		CLASS XII 'HUMANITIES' HISTORY
1		HARRAPPAN CULTURE
2		MAHABHARATA
3		RIG VEDA
4		INSCRIPTION-MEANING
5		PATRILINY
6		MATRILINY
7		KINSHIP
8		INDUS VALLEY CIVILISATION
9		ARCHAEOLOGY
10		THE FIRST PALNNED CITY
11		CHANDRAGUPTA MAURIA
12		SAMUDRAGUPTA
13		ASHOKA
14		BODHISATTA
15		THE MAHABHARATA
16		THE GANGA RIVER
17		THE YAMUNA RIVER
18		MAHAVIRA
19		THE GUPTA DYNASTY
20		THE BUDDHA
21		JAINISM
22		THE TEACHINGS OF THE BUDDHA
23		INSCRIPTION OF ASHOKA
24		GODS IN ANCIENT PERIOD
25		DEVELOPMENT OF BUDDHISM
26		CHRISTIANITY
27		LOWER PALAEOLITHIC PERIOD
28		UPPER PALAEOLITHIC PERIOD

KENDRIYA VIDYALYA AIZAWL

Summer Vacation Holiday Home Work

Class XII   Subject: INFORMATICS PRACTICES

1. What is modem? What is its function?
2. Define the following :
   (i)   Hub
   (ii)   Switch
3. What is snooping ?
4. What is eavesdropping ?
5. What do you understand by domain name resolution ?
6. Briefly discuss the role of the following device in the context of networking.
   (i)   Repeater
   (ii)   Gateway
7. What difference type of standards?
8. Explain the following:
   i)   Event
   ii)   Event Driven Program
   iii)   Event Source
   iv)   Listener

1. A 400pF capacitor is charged by a 100V battery. How much electrostatic energy is stored by the capacitor? What is the amount of charge stored in the capacitor?

2. How much work is must be done to charge a $24\mu F$ capacitors when the potential difference between the plates is 500V.

3. A capacitor is charged through a potential difference of 200V, when 0.1C charge is stored on it. How much energy will it release, when it is discharged?

4. What is the electric flux through a cube of side 1 cm which encloses an electric dipole?

5. What is the work done in moving a test charge q through a distance of 1cm along the equatorial axis of an electric dipole?

6. An electric dipole of length 4cm, when placed with its axis making an angle of $60°$ with a uniform electric field, experiences a torque of $4\sqrt{3}$ Nm. Calculate the potential energy of the dipole, if it has charge$\pm 8nC$.

7. A $500\mu C$ charge is at the centre of a square of side 10cm. find the work done in moving a charge of $10\mu C$ between two diagonally opposite points on the square.

8. Two positive points charges of $0.2\mu C$ and $0.01\mu C$ are placed 10cm apart. Calculate the work done in reducing the distance to 5cm.

9. An electric dipole of length 2cm is placed with its axis making an angle of $60°$ to a uniform electric field of $10^5 NC^{-1}$. If it experiences a torque of $8\sqrt{3}$ Nm, calculate the
   i) Magnitude of charge of the dipole, and
   ii) Potential energy of the dipole.

10. A cube of side 'b' has a charge 'q' at each of its vertices. Determine the potential and electric field due to this charge array at the centre of the cube.

11. Three point charges$+q$, $+2q$ and Q are placed at the three vertices of an equilateral triangle. Find the value of charge (in terms of q), so that electric potential energy of the system is zero.

12. Twenty seven spherical drops of radius 3mm and carrying $10^{-12} C$ of charge are combined to form a single drop. Find the capacitance and the potential of the bigger drop.

13. When 10^{12} electrons are transferred from one conductor to another, a potential difference of 10V appears between the conductors. Find the capacitance of the two capacitors.

14. Two capacitors of capacitance $3\mu F$ and $6\mu F$ are charged to a potential of 2V and 5V respectively. These two charged capacitor are connected in series. Find the potential across each of the two capacitors.

15. Two capacitor of capacitance $8\mu F$ and $14\mu F$ is connected in series with a battery. The voltage across the $8\mu F$ capacitor is 4V. Compute the total battery voltage.

16. A capacitor of unknown capacitance is connected across a battery of V volts. The charge stored is $360\mu C$. When potential across the capacitor is reduced by 120V, the charge stored on it becomes $120\mu C$. Calculate i) potential V and the unknown capacitance. Ii) What will be the charge stored in the capacitor, if the voltage applied had increased by $120V$.

17. Two capacitors of capacitance $3\mu F$ and $6\mu F$ arranged in series are connected in parallel with a third capacitor $4\mu F$. The arrangement is connected to a 6.0V battery. Calculate the total energy stored in the capacitors.

18. The capacities of three capacitors are in the ratio $1:2:3$. their equivalent capacity in parallel is greater than the equivalent capacities in series by 60/11 pF. Calculate the individual capacitances.

19. A parallel plate capacitor has plate area $25cm^2$ and a separation of 2mm between the plates. The capacitor is connected to a battery of 12V. a) Find the charge on the capacitor. b) the plate separation is decreased by 1mm. find the extra charge given by the battery

20. A parallel plate capacitor is charged by a potential difference V by a d.c source. The capacitor is then disconnected from the source. If the distance between the plate is doubled state with reason how the following will change-
    i)   Electric field between the plates
    ii)   Capacitance
    iii)   Energy stored in the capacitor.

21. Eight identical spherical drops, each carrying a charge 1 nC are at a potential of 900 V each. All these drops combine together to form a single large drop. Calculate the potential of this large drop.

22. Two capacitors of unknown capacitances C_1 and C_2 are connected first in series and then in parallel across a battery of 100 V. If the energy stored in the two combinations is 0.045 J and 0.25 J respectively, determine the value of C_1 and C_2. Also calculate the charge on each capacitor in parallel combination.

23. A thin metallic spherical shell of radius R carries a charge Q on its surface. A point charge Q/2 is placed at its centre C and another charge +2Q is placed outside the shell at a distance x from the centre as shown in the figure. Find (i) the force on the charge at the center of shell and at the point A, (ii) the electric flux through the shell.

24. An infinite line charge produces a field of $9 \times 10^4 NC^{-1}$ at a distance of 2cm. calculate the linear charge density.

25. Three capacitors of $10\ \mu F$, $15\ \mu F$ and $30\mu F$ are connected in series and on this connection a potential difference of 60V is applied. Calculate the charge, potential and energy stored on each capacitor.

26. A parallel combination of three resistors takes a current of 5A from a 20V supply. If two resistors are 10Ω and 8Ω. Find the value of third one.

27. If potential difference V applied across a conductor is increased by 2V, how will the drift velocity of the electron charge?

28. A copper wire of radius 0.1mm and resistance 1kΩ is connected across a power supply of 20V. (i) How many electrons are transferred per second between the supply and the wire at one end? (ii) Find the current density in the wire?

29. A wire is stretched to increase its length by 5%. Calculate percentage change its resistance.

30. A silver wire has a resistance of 2.1Ω at 27.5˚C and a resistance of 2.7Ω at 100˚C. Determine the temperature coefficient of resistivity of silver.

31. A wire of 20Ω resistance is gradually stretched to double its original length. It is then cut into two equal parts. These parts are then connected in parallel across a 4V battery. Find the current drawn from the battery.

32. A potential difference of 4.5V is applied across a conductor of length 0.1m. If the drift velocity of the electron is $1.5 \times 10^{-4} ms^{-1}$, find the electron mobility.

33. The number density of electrons in copper is $8.5 \times 10^{28} m^{-3}$. A current of 1A flows through a copper wire of length of 0.24m and area of cross-section $1.2mm^2$, when connected to a batter of 3V. find the electron mobility.

34. Estimate the average drift speed of conduction electrons in a copper wire of cross-sectional area $1 \times 10^{-7} m^2$ carrying a current of 1.5A. Assume the density of conduction electrons to be $9 \times 10^{28} m^{-3}$.

35. How will you represent a resistance of 3700Ω ± 10% by colour index?

36. A current of 2mA is passed through a colour coded carbon resistor with first, second and third rings of yellow, green and orange colour. What is the voltage drop of the carbon resistor?

37. The sequence of coloured bands in two carbon resistors R_1 and R_2 is
    i) Brawn, green, blue and ii) orange, black, green.
    Find the ratio of their resistances.
38. A wire carries a current of 0.5A, when a potential difference of 1.5V is applied across it. What is its conductance? If the wire is of length 3m and area of cross section $5.4mm^2$, calculate its conductivity.
39. A negligible small current is passed through a wire of length 15m and uniform cross section $6 \times 10^{-7}m^2$ and its resistance is measured to be 5Ω. What is the resistivity of the material at the temperature of the material?
40. Find the resistivity of a conductor in which a current density of $2.5Am^{-2}$ is found to exist, when an electric field of $15Vm^{-1}$ is applied on it.
41. Calculate the electrical conductivity of the material of a conductor of length 3m, area of cross-section $0.02mm^2$ having a resistance of 2Ω.
42. A wire of resistance 4Ω is used to wind a coil of radius 7cm. the wire has a diameter of 1.4mm and the specific resistance of the material is $2 \times 10^{-7}Ωm$. Find the number of turns in the coil.
43. A wire of 10Ω resistance is stretched to thrice its original length. What will be its new resistance and new resistivity?
44. A wire has a resistance of 16Ω. It is melted and drawn into a wire of half its length. Calculate the resistance of the new wire. What is the percentage change in its resistance?
45. A cylindrical wire is stretched to increase its length by 10%. Calculate the percentage increase in resistance.
46. Two wires A and B of equal mass and of the same metal are taken. The diameter of the wire A is half the diameters of wire B. If the resistance of the wire A is 24Ω, calculate the resistance of the wire B.
47. A metallic wire of length 1m is stretched to double its length. Calculate the ration of its initial and final resistances assuming that there is no change in its density on stretching.
48. On applying the same potential difference between the ends of wires of iron and copper of same length, the same current flows in them. Compare their radii. Specific resistance of iron and copper are $1.0 \times 10^{-7}Ωm$ and $1.6 \times 10^{-8}Ωm$. Can their current densities be made equal by taking appropriate radius?
49. A potential difference of 6V is applied across a conductor of length 0.12m. calculate the drift velocity of the electrons, if the electron mobility is $5.6 \times 10^{-6}m^2V^{-1}s^{-1}$.
50. A letter A consists of a uniform wire of resistance $1Ωcm^{-1}$. The sides of the letter are each 20cm long and the cross piece in the middle is 10cm long while the apex angle is 60°. Find the resistance of the letter between the two ends of the legs.