Dr. Virendra Swarup Education Center (Sr. Wing), Shyam Nagar, Kanpur
HOLIDAY HOMEWORK (2022-23)
Class – X

ENGLISH
Section A - (Reading)
Task 1 -Discursive Passage
Task 2 - Factual Passage
(Workbook Assignment 2 pg. 5-8)
Section B - (Writing)
Task 1-Letter to the editor about rising cases of obesity among children.(Workbook Assignment 9, pg33)
Task 2 - Study the data of covid cases during the first week of June2022 and write an analytical paragraph based on it in the language notebook.
(Grammar)- Workbook Assignment 15 &16 (pg 53-56)comprising of Gap filling, Omission Exercise, Reported Speech, Error Exercise, Sentence Reordering.
Section C (Literature) Revise all the chapters done in class.
Note- All workbook assignments are to be done in the workbook- Skill Enhancer.

HINDI
१) निम्नलिखित विषयों में से किसी एक विषय पर अनुच्छेद लिखिए....
क) "साक्षरता -उन्नति का मार्ग "
शिक्षा का महत्त्व, विकास का साधन, सर्व-शिक्षा अभियान
ख) "मेट्रो रेल-महानगरीय जीवन का सुखद सपना"
यातायात का तीव्रतम साधन, लाभ , सुखद भविष्य
(२) निम्नलिखित में से किसी एक राज्य को चुनकर उस पर तीन पृष्ठों की एक परियोजना तैयार कीजिए।
क) अरुणाचल प्रदेश
ख) मेघालय
नोट: समस्त कार्य आर्ट शीट पर करके विद्यालय खुलने पर एक फाइल के रूप में प्रस्तुत कीजिए।

SANSKRIT
1-दो नीति के श्लोक लिखिए तथा उनका अर्थ भी लिखिए (चार्ट पेपर में)
2-'शेमुषी 'भाग 2 पुस्तक में दिए गए, पाठ संख्या 1,2,3,4 पाठों को पढ़ें। 3-'अभ्यासवान् भव'-भाग 2 पुस्तक से अपठित संख्या 6 तथा 7 को पुस्तक में हल कीजिए।

MATHEMATICS
1 Solve the given practice sheet on comment sheets .
2 Do the activity of linear equations in two variables from the lab manual in lab activity notebook .

SCIENCE - (Physics)
Do all numericals of chapter "Reflection of light" from NCERT book on comment sheets.
Chemistry-
Prepare a file on anyone of the following topics:-
1.Collect any 3 corroded metals & write about them.
2.Contribution of Mendeleev ,Newland &Dobereiner in Chemistry.
3.Preparation of Baking soda & Bleaching powder.
4.Collection of 3 acid-base indicators & their action
5.Collection of pictures showing uses of plaster of paris & washing soda.

Biology

Prepare a Project file on any one of the following given topics

*. (The project must essentially contain minimum 5 pages, excluding introductory and concluding page)

1. Management of natural resources
2) Forest and wildlife
3) Activist movements
4) Conservation of wildlife
5) Water as a natural resource
6) Dams : resources to regulate water
7) Water pollution
8) Rain water harvesting
9) Coal and petroleum: valuable natural resources
10) 3 R's
11) Air pollution due to burning of coal and petroleum.

SOCIAL SCIENCE

1. **History :** Prepare the chapter The Rise of Nationalism in Europe for the August Test.
2. **Geography** :Prepare chapter- Resources and development for August Test.
3. Economics:
*** Project Topic:** Consumer Awareness
1.Brief history
2.Consumer's Rights
3.Consumer's Duties
4.Consumer's redressal
Commission.(Three tier system)
(Use 5- 6 inter leaved sheets)

COMPUTER APPLICATIONS

I. Expand and explain the following:

1. TCP/IP 2. SMTP 3. MMS 4. POP 5. SMS 6. URL 7. TELNET 8. SCP 9. FTP 10. SFTP 11. SSH 12. HTTP 13. HTTPS 14. IRC 15. ICQ 16. IM 17. MOOC 18. DRDO 19. NeGP 20. BCC

II. Mention some Searching Tips which can be used to effectively search for the desired information on Internet.

• **Do both the above questions in your Computer register.**

Dr. Virendra Swarup Education Centre (Sr. Wing) Shyam Nagar , Kanpur
Holiday Home Work (2022-23)
CLASS 10th
Worksheet –I (Polynomials)

Answer the following and justify :

Question 1

A quadratic polynomial, whose zeroes are -3 and 4, is
(A) $x^2 – x + 12$
(B) $x^2 + x + 12$
(C) $\frac{x^2}{2} - \frac{x}{2} - 6$
(D) $2x^2 + 2x – 24$

Question 2

If the zeroes of the quadratic polynomial $x^2 + (a + 1)x + b$ are 2 and -3, then
(A) a = -7, b = -1
(B) a = 5, b = -1
(C) a = 2, b = -6
(D) a = 0, b = -6

Question 3

The number of polynomials having zeroes as -2 and 5 is
(A) 1
(B) 2
(C) 3
(D) more than 3

Question 4

The zeroes of the quadratic polynomial $x^2 + 99x + 127$ are
(A) both positive
(B) both negative
(C) one positive and one negative
(D) both equal

Question 5

The zeroes of the quadratic polynomial $x^2 + kx + k$, $k \neq 0$,
(A) cannot both be positive
(B) cannot both be negative
(C) are always unequal
(D) are always equal

Question 6

If the zeroes of the quadratic polynomial $ax^2 + bx + c$, $c \neq 0$ are equal, then
(A) c and a have opposite signs
(B) c and b have opposite signs
(C) c and a have the same sign
(D) c and b have the same sign

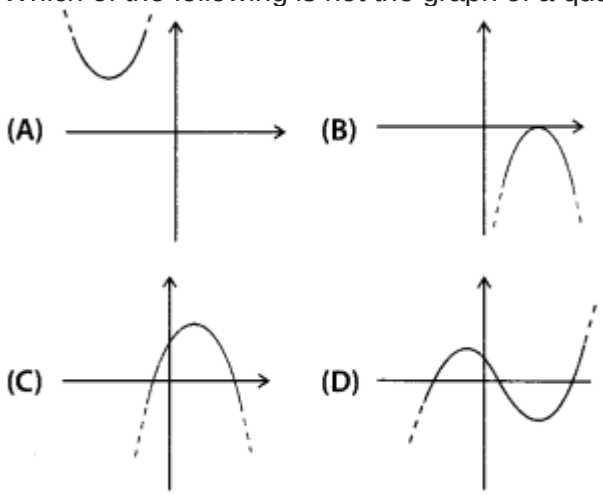
Question 7

If one of the zeroes of a quadratic polynomial of the form $x^2 + ax + b$ is the negative of the other, then it

(A) has no linear term and the constant term is negative.
(B) has no linear term and the constant term is positive.
(C) can have a linear term but the constant term is negative.
(D) can have a linear term but the constant term is positive.

Question 8

Which of the following is not the graph of a quadratic polynomial?



Question 9

Are the following statements 'True' or 'False'? Justify your answers.

(i) If the zeroes of a quadratic polynomial $ax^2 + bx + c$ are both positive, then a, b and c all have the same sign.

(ii) If the graph of a polynomial intersects the x-axis at only one point, it cannot be a quadratic polynomial.

(iii) If the graph of a polynomial intersects the x-axis at exactly two points, it need not be a quadratic polynomial.

(vii) The only value of k for which the quadratic polynomial $kx^2 + x + k$ has equal zeroes is 1/2.

Question 10

If one of the zeroes of the quadratic polynomial $(k - 1)x^2 + kx + 1$ is -3, then find the value of k .

Question 11

Find the zeroes of the following polynomials by factorization method and verify the relations between the zeroes and the coefficients of the polynomials:

a) $4x^2 - 3x - 1$

b) $3x^2 + 4x - 4$

c) $5t^2 + 12t + 7$

d) $t^3 - 2t - 15t$

e) $4x^2 + 5\sqrt{2}x - 3$

f) $2s^2 - (1 + 2\sqrt{2})s + \sqrt{2}$

g) $v^2 + 4\sqrt{3}v - 15$

Question 12

For each of the following, find a quadratic polynomial whose sum and product respectively of the zeroes are as given. Also find the zeroes of these polynomials by factorization.

(i) $\frac{-8}{3}, \frac{4}{3}$ (ii) $\frac{21}{8}, \frac{5}{16}$

(iii) $-2\sqrt{3}, -9$ (iv) $\frac{-3}{2\sqrt{5}}, -\frac{1}{2}$

Worksheet II

(Linear equations in two variables)

Choose the correct answer from the given four options and justify your answer

Question 1

Graphically, the pair of equations

$6x – 3y + 10 = 0$

$2x – y + 9 = 0$

represents two lines which are

(A) intersecting at exactly one point.

(B) intersecting at exactly two points.

(C) coincident.

(D) parallel.

Question 2

The pair of equations $x + 2y + 5 = 0$ and $-3x – 6y + 1 = 0$ have

(A) a unique solution

(B) exactly two solutions

(C) infinitely many solutions

(D) no solution

Question 3

If a pair of linear equations is consistent, then the lines will be

(A) parallel

(B) always coincident

(C) intersecting or coincident

(D) always intersecting

Question 4

The pair of equations $y = 0$ and $y = -7$ has

(A) one solution

(B) two solutions

(C) infinitely many solutions

(D) no solution

Question 5

The pair of equations $x= a$ and $y=b$ graphically represents lines which are

(A) parallel

(B) intersecting at (b, a)

(C) coincident

(D) intersecting at (a, b)

Question 6

For what value of k, do the equations $3x-y+8 = 0$ and $6x – ky = -16$ represent coincident lines?

(A) 1/2

(B) -1/2

(C) 2

(D) -2

Question 7

If the lines given by $3x + 2ky = 2$ and $2x + 5y + 1 = 0$ are parallel, then find the value of k

Question 8
The value of c for which the pair of equations cx – y = 2 and 6x – 2y = 3 will have infinitely many solutions is
(A) 3
(B) -3
(B) -12
(D) no value

Question 9
One equation of a pair of dependent linear equations is -5x + 7y = 2. The second equation can be
(A) 10x +14y + 4 = 0
(B) -10x – 14y + 4 = 0
(C) -10x + 14y + 4 = 0
(D) 10x – 14y = -4

Question 10
A pair of linear equations which has a unique solution x = 2 andy = -3 is
(A) x + y = -1 and 2x – 3y = -5
(B) 2x + 5y = -11 and 4x + 10y = -22
(C) 2x – y= 1 and 3x + 2y = 0
(D) x – 4y – 14 = 0 and 5x – y – 13 = 0

Question 11
If x = a and y = b is the solution of the equations x – y = 2 and x + y = 4, then the values of a and b are, respectively
(A) 3 and 5
(B) 5 and 3
(C) 3 and 1
(D) -1 and -3

Question 12
Aruna has only ₹1 and ₹2 coins with her. If the total number of coins that she has is 50 and the amount of money with her is ₹75, then the number of ₹ 1 and ₹2 coins are, respectively
(A) 35 and 15
(B) 35 and 20
(C) 15 and 35
(D) 25 and 25

Question 13
For the pair of equations λx + 3y = -7 and 2x + 6y = 14 to have infinitely many solutions, the value of λ should be 1. Is the statement true? Give reasons.

Question 14
For all real values of c, the pair of equations x – 2y = 8 and 5x – 10y = c have a unique solution. Justify whether it is true or false.

Question 15
For which values(s) of λ , do the pair of linear equations λx + y = λ^2 and x + λy = 1 have

(i) no solution ?
(ii) infinitely many solutions ?
(iii) a unique solution ?

Question 16
For which value (s) of k will the pair of equations kx + 3y = k – 3, 12x + ky = k have no solution?

Question 17
For which values of a and b will the following pair of linear equations have infinitely many solutions?
x + 2y= 1
(a – b)x + (a + b)y = a + b – 2

Question 18
Two straight paths are represented by the equations x – 3y = 2 and -2x + 6y = 5. Check whether the paths cross each other or not.

Question 19
The angles of a triangle are x, y and 40°. The difference between the two angles x and y is 30°. Find x and y.

Question 20
In a competitive examination, one mark is awarded for each correct answer while 1/2 mark is deducted for every wrong answer. Jayanti answered 120 questions and got 90 marks. How many questions did she answer correctly?

Question 21
A person, rowing at the rate of 5 km/h in still water, takes thrice as much time in going 40 km upstream as in going 40 km downstream. Find the speed of the stream.

Question 22
A two-digit number is obtained by either multiplying the sum of the digits by 8 and then subtracting 5 or by multiplying the difference of the digits by 16 and then adding 3. Find the number.

Question 23
Vijay had some bananas, and he divided them into two lots A and B. He sold the first lot at the rate of ₹ 2 for 3 bananas and the second lot at the rate of ₹ 1 per banana, and got a total of ₹ 400. If he had sold the first lot at the rate of ₹1 per banana and the second lot at the rate of ₹ 4 for 5 bananas, his total collection would have been ₹ 460. Find the total number of bananas he had.