

- Q.11** The polynomials  $p(x) = ax^3 - 3x^2 + 4$  and  $2x^3 - 5x + a$  when divided by  $(x-2)$  leaves the remainders  $p$  and  $q$  respectively. If  $p-2q = 4$  find the value of  $a$ .
- Q.12** The sum and difference of two sides of a triangle is 52cm and 8cm. If the third side of the triangle is 36 cm find the area of the triangle.
- Q.13** The perimeter of a triangle is 50 cm. One side of a triangle is 4cm longer than the smaller side and the third side is 6cm less than twice the smaller side. Find the area of the triangle.
- Q.14** Plot the following points and write the name of the figure and obtain area of it.  
P (-3, 2), Q (-7, -3), R (6, -3), S (2, 2)
- Q.15** (i) Plot the points A (-5, 3), B (3, 3), C (3, 0) and D (-5, 0) in the Cartesian plane.  
(ii) Name the figure ABCD.  
(iii) Find the ratio of areas of two parts of ABCD in the I quadrant and II quadrant.

**VII.**

- Q.1** Select any 20 Idioms and look for their related images. Find out their meanings and paste the images in a scrap book.  
(Idiom + meaning + image + usage)
- Q.2** Festoon your vocabulary :  
'Other ways to say' the following words :-  
Roll No. 1-5 similar words
- |          |       |       |          |          |
|----------|-------|-------|----------|----------|
| Trust    | Faith | Enjoy | Shot     | Interest |
| Nurturer | Same  | Happy | Request  | Punctual |
| Friend   | Enemy | Early | Formal   | Casual   |
| Bolled   | Tired | Order | Careless | Careful  |
- Q.3** Make a Scrap Book file on the following Literary Devices-
- |                        |              |                        |
|------------------------|--------------|------------------------|
| a. Metaphor            | b. Simile    | c. Alliteration        |
| d. Onomatopoeia        | e. Hyperbole | f. Transferred Epithet |
| g. Repetition          | h. Euphemism | i. Personification     |
| j. Imagery (all types) |              |                        |
- Write their meanings and 2 examples of each.
- Q.4** Work From Bravia 2 worksheets each (No. 1 and 2) of Reading, Writing and Grammar
- Q.5** Write a debate for or against the motion.  
This house believes that 'Intelligence is defined by the results of an exam'.

**END****SEEDLING PUBLIC SCHOOL**

Holidays ! Holidays ! on the way, enjoy and be gay.

This should be the way to learn and play !

HOLIDAY FUN -2019-20

Class - IX

**Instructions :**

- Use loose sheets and make a file.
- Work should be neat and appealing.
- Grades will be given for Holiday Fun as per CBSE norms**

**I. Do the following Questions-**

Create a presentation on "Start-up Idea". In this presentation you have to do the following-

- Decide the title for your start-up.
- The presentation includes 15 slides.
- Add images and videos.
- Add shapes, animations and transitions.

- II.** (i) Plan to go to a place by a vehicle. Take reading of odometer and speedometer after every 5 minutes till you reach your destination. Record these observations in tabular form. Plot distance time and speed time graph. State whether the motion is uniform or non-uniform. (Roll No. 1-10)
- (ii) Suspend a solid ball (bob) by a light but strong thread of length  $\ell$  with a rigid support. Displace the bob slightly from its rest position O and release it. It will begin to move to and fro about its mean position. Observe the time  $t$  for 20 complete, oscillations using a stop watch and then divide  $t$  by 20 to find its time period  $T$ . Repeat the procedure for 6 different lengths of the string. Plot  $T^2 - \ell$  graph. Determine the value of acceleration due to gravity of mathematically using relation. (Roll no. 11 - 20)

$$T = 2\pi \sqrt{\frac{\ell}{g}}$$

And graphically by finding the slope of  $T^2 - \ell$  graph.

- (iii) Suggest the design of an arrangement for experimental demonstration of Newton's third law of motion. (Roll No. 21-34)

This work has to be done individually in a scrap book.

- III.** 1. Make diagrams of meristematic and permanent tissue in plants. (well labeled)  
 2. Make well labelled diagrams of Animal tissue in your copy.
- IV.** 1. Make diagram for the given technique of separation in your copy. Write the principle behind this technique of separation.
- sublimation
  - Distillation

- It is mandatory for every student to do a project on Disaster Management.
- While making the project students take support from Disaster Management authorities like—
  - Fire service
  - Police
  - Rehabilitation Centres

**Topics for the Projects**

- |                         |                          |                        |
|-------------------------|--------------------------|------------------------|
| (i) Cyclone             | (ii) Floods              | (iii) Earthquake       |
| (iv) Volcano eruption   | (v) Landslide            | (vi) Avalanche         |
| (vii) Tsunami           | (viii) Nuclear explosion | (ix) Chemical disaster |
| (x) Biological disaster |                          |                        |

- Students may include the following information—
  - Proper illustration (maps or anything else)
  - Data collection
  - Causes of the disaster
  - How to cope with the disaster
  - Effects
- Students will do the project in file.
  - Handmade paper not to be used.
  - Project has to be handwritten.

**(v) Distribution of marks :**

- |                      |                   |                  |
|----------------------|-------------------|------------------|
| (i) Content accuracy | (ii) Presentation | (iii) Creativity |
| (iv) Originality     | (v) Viva          |                  |

**Viva :—** Students will be called individually and explain how they prepared the project and some information about the Topic.

- No of pages not to exceed 15.

- V.**  $\frac{1}{4}\frac{1}{2}$  HkDr dky] jhfr dky o vk/kfud dky ds, d&, d dfo ds0; fDrRo o dfrRo dk o.ku djrsqg i kdY; r\$ kj djA
- $\frac{1}{2}\frac{1}{2}$  fo | ky; if=dk grqLojfr dgkuh] dfork] ; k=koRrKUr] l lej.k] y[k vkfn fd l h , d fo"k; ij fy[kA
- $\frac{1}{8}\frac{1}{2}$  vi us?kj ; k fo | ky; dsutnhd vki usvDI j fd l h i {kh dks n\$kk gkskA Lo; a dks i {kh&foKkuh ekursqg ml i {kh dk uke] Hkstu] [kkus dk] jgus dk rjhdk o vU; if{k; ka ds l kfk 0; ogkj ij , d i kdYi r\$ kj djA
- $\frac{1}{4}\frac{1}{2}$  fn, x, okn&fookn fo"k; ij i {k&foi {k ij vi usfokj fyf[k, & 'n\$ k dh l hek ij yMus okyk gh l Ppk n\$ kHkDr^

**VI. Q.1.** Express  $0.3\bar{4} - 0.2 + 0.\bar{6}$  in p/q form where  $q \neq 0$ .

**Q.2** Prove that  $a^p = b^q = c^r$  and  $b^2 = ac$ , then show that  $q = \frac{2pr}{r+p}$ .

**Q.3** If  $abc = 1$ , then show that  $\left(1 + a + \frac{1}{b}\right)^{-1} + \left(1 + b + \frac{1}{c}\right)^{-1} + \left(1 + c + \frac{1}{a}\right)^{-1} = 1$

**Q.4** If  $x = \frac{1}{2 - \sqrt{3}}$ , find the value of  $x^3 - 2x^2 - 7x + 5$ .

**Q.5** Express with rational denominator :

$$\frac{15}{\sqrt{10} + \sqrt{20} + \sqrt{40} - \sqrt{5} - \sqrt{80}}$$

**Q.6** If  $x + \frac{1}{x} = \sqrt{5}$ , find the value of  $x^4 + \frac{1}{x^4}$ .

**Q.7** Find the value of  $8a^3 + 27b^3 + 125 - 90ab$  when  $2a = -(5+3b)$

**Q.8** Find the product  $\left(a - \frac{1}{a}\right)\left(a + \frac{1}{a}\right)\left(a^2 + \frac{1}{a^2}\right)\left(a^4 + \frac{1}{a^4}\right)$ , using a suitable identity.

**Q.9** Find the value of  $\frac{1}{27}r^3 - s^3 + 125t^3 + 5rst$  when  $s = \frac{r}{3} + 5t$ .

**Q.10** If both  $(x-2)$  and  $(x-\frac{1}{2})$  are factors of polynomial  $px^2 + 5x + r$ , show that  $p = r$ .