

**SHREE SANATAN DHARM EDUCATION CENTRE**  
**CLASS – IX**  
**SUMMER VACATION HOMEWORK**  
**SESSION 2018-19**

**Physics –**

- Q.1. A motorboat starting from rest on a lake accelerates in a straight line at a constant rate of  $3. \text{ ms}^{-2}$  for 8.0 s. How far does the boat travel during this time?
- Q.2. An artificial satellite is moving in a circular orbit of radius 42250 km. Calculate its speed if it takes 24 hours to revolve around the earth.
- Q.3. State & derive second law of motion.
- Q.4. If action is always equal to the reaction, explain how a horse can pull a cart?
- Q.5. A truck starts from rest and rolls down a hill with a constant acceleration. It travels a distance of 400m in 20 sec. Find its acceleration. Find the force acting on it if its mass is 7 tonnes (Hint /1 tonne = 1000kg.)
- Q.6. A stone of 1kg. is thrown with a velocity of  $20 \text{ ms}^{-1}$  across the frozen surface of a lake and comes to rest after travelling a distance of 50m. What is the force of friction between the stone and the ice?
- Q.7. An automobile vehicle has a mass of 1500kg. what must be the force between the vehicle and road if the vehicle is to be stopped with a negative acceleration of  $1.7 \text{ ms}^{-2}$ ?
- Q.8. Using a horizontal force of 200N, intend to move a wooden cabinet across a floor at a constant velocity. What is the friction force that will be exerted on the cabinet?
- Q.9. An object of mass 100 kg is accelerated uniformly from a velocity of  $5 \text{ ms}^{-1}$  to  $8 \text{ ms}^{-1}$  in 6 s. calculate the initial & final momentum of the object. Also find the magnitude of the force.
- Q.10. How much momentum will a dumb-bell of mass 10 kg transfer to the floor if it falls from a height of 80 cm? Take its downward acceleration to be  $10 \text{ ms}^{-2}$ .
- Q.11. A bus starting from rest moves with a uniform acceleration of  $0.1 \text{ ms}^{-2}$  for 2 min. Find:  
(a) the speed acquired (b) the distance travelled
- Q.12. A stone is thrown in a vertically upward direction with a velocity of  $5 \text{ ms}^{-1}$ . If the acceleration of the stone during its motion is  $10 \text{ ms}^{-2}$  in the downward direction, what will be height attained by the stone and how much time will it take to reach there?
- \* Make a Project on “Laws of Motion”.

**Chemistry –** Make a working model of chromatography. Write all possible steps in a separate file.

- Biology- Q.** “Project on resources are depleting at an alarming rate presently due to which they are very near to their end”.
- (a) What according to you, are the causes for such a scenario?  
(b) Mention the possible consequences if the same situation continues.  
(c) State some measures that can be taken by individual as well as at the national level to curb the situation.  
(d) Give an examples of a resources which is depleting at an increasing rate now-a-days. Write all details.

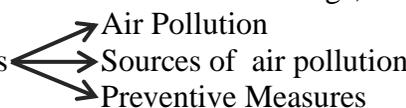
R. No. 1-15 (Physics Project); R.NO. 16-30 (Chemistry Project); 31-Last no. (Biology Project)

**Computer Application –** Create a Power Point on ‘Cyber Safety’. (10-12 slides)

**Maths –** Exercise from R.S. Agarwal, Pg. No.m42 (1F), 90(2D), 92, 114(3C), 136(3G), 138 (To be done in Maths Reg.)

**Social Science -** Air Pollution Sources, preventive Measures and Controlling Programmes (Schemes) : A case study of Kanpur.

This project report must contain these headings;

- (i) Introduction – (Geo)
- What is 
- (ii) Scenario of Air Pollution (sources/preventive Measures) Measures in Kanpur in; (1) 19<sup>th</sup> Century. (2) 20<sup>th</sup> Century (3) Present time
- (iii) Implementing programme in different level (Pol.Sci) (1) City level Municipal (2) State level (3) Nation level (4) International level (U.N.O. Prog.)
- (iv) Its impact on – (1) Primary Sector (2) secondary sector (Eco.) (3) Tertiary sector.
- (v) Conclusion (with reference to sustainable development)
- (vi) Biography.

Project report must contain 15 to 20 neatly hand written pages with proper diagrams and relevant pictures.

**हिन्दी – रचनात्मक कार्य–कलाप**

परियोजना – (पत्रिका निर्माण – अमुख निर्माण समिति, आभार, भूमिका, विषय–सूचि)

- किन्ही दो उत्पादों पर सकारात्मक विज्ञापनों का नव निर्माण करें।
- हमारा रसोईघर अनेक रोगों से सम्बन्धित समस्याओं का निराकरण करता है ऐसे ही किन्ही पाँच वस्तुओं का प्रदर्शन करते हुए किन–किन रोगों से उनका घरेलू उपचार सम्भव है बताएं।
- अपने अनुभव के आधार पर किसी प्राकृतिक आपदा का वर्णन करें तथा उससे बचाव के लिए आपने क्या किया, क्या करना चाहिए सुझाव प्रस्तुत करें।
- आपदा पर रेखाचित्र तैयार करना।

# SHREE SANATAN DHARM EDUCATION CENTRE

Holiday Homework

English Class 9

Hobbies not only beat the stress but also keep your mind sharp.

If you feel busy or stressed, holidays are the best time to lose yourself in a project which will give your brain a break and at the end you will commit to find time for a hobby. You have to analyze people's attitude towards keeping a hobby and then you will realize that keeping a hobby is very important aspect of one's life.

Detailed guidelines for the project:

Prepare a questionnaire containing 10 questions. The following hints can be used to prepare the questionnaire.

- age, gender and occupation of the individual
  - how does the individual spend his leisure hours
  - regular work habits, a daily schedule that the individual keeps
  - what is individual's favourite pastime hobby
  - why does he take interest in this particular hobby
  - since when has he been following this hobby
  - what is the number of hours he contributes for the hobby in a week
  - would he like to interact with others who have a similar hobby
  - what does the individual learn from the hobby
  - does the hobby require any specific tools
  - where does the individual collect material to pursue the hobby
  - what else can he do to enhance the learning from the hobby
  - would he like to make his hobby his profession
  - does he face any obstacle/hurdle while pursuing his hobby; how does he over come it
1. Explore and think 'out of the box' to make your project colourful. The cover page must have the TITLE written on the top. Remember to mention your name, class and section. You can use sketches, cartoons etc. to make the cover page.

Page no. 1, should be titled 'INDEX' which would contain the breakup of the project as shown in the table.

Serial no.	subject	Page no.
1.	index	1
2.	acknowledgements	2

Page no.2, This page should be titled 'Acknowledgement', to express your gratitude for the help you got from various individuals. You should record your thanks to all those you have helped you, it does not matter how small the help may be. For ex. You thank your mother, father, sibling, teacher, neighbour etc.

Page no. 3 -13

2. Make photocopies of questionnaire and circulate them to ten people of **your** choice. These can be your parents, friends, neighbor or anybody else.
3. Collect the questionnaire and paste the sheets.

Page no.14

4. Write report. The report should consist of three paragraphs (with a title, an introduction, a body and conclusion) in 120 words.
5. The report should talk about the general outcome/result, of the survey and must have a catchy title.

Page no. 15

6. Paste pictures of interesting hobbies that **you** come across during the survey.

Page no. 16

7. Paste a picture of your hobby and write about it in 200 words.

**Clue** points -

- Hobbies help us to learn, grow and explore
- Your hobby, when you adopted it
- Time spent on it progress made any plan to make in your profession

Page no. 17

8. The last page will contain a 'Bibliography' or 'Sources' from which you have gathered information for your project.

Submission of the project has to be done timely and must be given to the teacher when the school reopens. (by 4th July, 2018)