VISHWA BHARATI PUBLIC SCHOOL, DWARKA
SESSION 2019-20
HOLIDAY HOMEWORK
CLASS XI (Commerce Stream)

ENGLISH:

1. Prepare a poster on any one of the following:
   (a) Water conservation / Rain harvesting
   (b) Blood donation
   (c) Care for animals
2. Write an Article, Letter, and Speech on any social/environmental issue which you feel strongly about.

ECONOMICS:

1. Revise Chapter – 1
2. Do questions and answers of Ch-1 from textbook. (MCQs, HOTS and other diagram related questions)
3. Do the following questions:
   a) What are the objectives of Business?
   b) What are the difference between economics and non-economic activities?
   c) Define trade. What are different types of trades?
   d) What are the difference between micro and macro-economics?
   e) Define Economy and economics.
   f) What are the causes of Central problems?
   g) What is opportunity cost?
   h) Write note on: What, How and by whom to produce?
   i) Explain properties of PPC.
   j) Define consumer's equilibrium.

ACCOUNTS:

1. Revise Ch-2 and 6.
2. Prepare MCQs from ch-1 and 6 and write them in a notebook.

BUSINESS STUDIES:

1. Learn Ch-1
2. Prepare 30 MCQs from ch-1 and write them in a notebook.

PHYSICAL EDUCATION:

Do questions and answers of chapter-1 and 2.

MATHS:

Solve the given worksheet.

1. In a survey of 25 students, it was found that 15 has taken Maths, 12 had taken Physics and 11 had taken Chemistry, 5 has taken Maths and Chemistry, 9 had taken Maths and Physics, 4 had taken Physics and Chemistry and 3 had taken all the three. Find the number of students that had taken,

(i) Only Chemistry (ii) Only Maths (iii) Only Physics
(iv) Physics and Chemistry but not Maths (v) Maths and Physics but not Chemistry
(vi) Only one of the subjects (vii) At least one of the three subjects
(viii) None of the subjects

2. If $A = \{2x : x \in N\}$, $B = \{3x : x \in N\}$, $C = \{5x : x \in N\}$, then find

(i) $A \cap B$ (ii) $B \cap C$ (iii) $(A \cap B) \cap C$

3. Let A and B be two sets such that $n(A) = 20$, $n(A \cup B) = 42$, and $n(A \cap B) = 4$. Find (i) n(B) n(A - B) (iii) n(B - A)
4. Let $U = \{ x \in N : x \leq 9\}$; $A = \{ x : x$ is an even number, $0 < x < 10\}$; $B=\{2,3,5,7\}$. Verify that $(A \cup B)' = A' \cap B'$
5. Write the Cardinal number of the following finite sets. (cardinal number is the number of distinct elements of a finite set)

(i) A = {x : x is a prime factor of 12}
(ii)B = The set of prime numbers less than 17
(iii) C = { x : x is a digit in the binary number system}
(iv) D = The set of all vowels in the word MATHEMATICS
(v) $E = \{ x : x \in N$ and $(x-1)(x+2) = 0\}$
(vi) F = { 50,51,52,53…….,200}
(vii) $G = \{ x : x \in Q$ and $x^2 - 5 = 0\}$
(viii) $H = \{ x : x \in C$ and $x^2 + 1 = 0 \}$; C = set of complex numbers.

6. Let $U = \{1,2,3,4,5,6\}$, $A = \{2,3\}$, $B = \{3,4,5\}$. Find (i) $B' - A'$ (ii) $(B - A)'$
7. In a group of 50 people, 14 drink fruit juice but not cold drink, 30 drink fruit juice and each person likes at least one of the 2 drinks. Find

(i) how many drink fruit juice and cold drink both? (ii) how many drink cold drink but not fruit juice?

8. There are 2000 students in s school , out of which 1000 play cricket, 600 play basketball, 550 play football, 120 play cricket and basketball, 80 play basketball and football and 150 play cricket and football and 45 play all the three games. Find how many students play none of the three games.
9. Determine the domain and range of the relation R defined by $R = \{(x + 1, x + 5) : x \in (0 , 1 , 2 , 3 , 4 , 5)\}$
10. Let $f : R \rightarrow R$ be given by $f(x) = x^2 + 3$. Find (i) $\{x : f(x) = 28\}$

(ii) The pre - images of 39 and 2 under 'f'.

11. Find the domain and range of $f(x) = \frac{x - 2}{x - 1}$
12. Is $g(x) = \{(1,1) , (2,3), (3,5), (4,7)\}$ a function? If this is described by the formula, $g(x) = \alpha x + \beta$, then what values should be assigned to α and β ? A = (2,-1)
13. If $f(x) = \frac{x - 1}{x + 1}$, then show that (i) $f(\frac{1}{x}) = - f(x)$ (ii) $f(\frac{-1}{x}) = \frac{-1}{f(x)}$
14. Given $R = \{(x, y) : y = x - 3, x , y \in Z\}$. State which of the following ordered pairs belong to the relation:

(i) (5,2) (ii) (1,2) (iii) (0, -3) (iv) (7, -4) (v) (- 4, 1)

15. Let $f(x) = x^2 - x$ and $g(x) = x$ be two functions defined in the domain $R^+ \cup \{0\}$, find :

(i) $(f + g)(0)$ (ii) $(f - g)(-1)$ (iii) $(fg) (1/2)$ (iv) $(f/g)(4)$

16. Let $A = \{1,2,3,4,6\}$. Let R be the relation on A defined by $R = \{(a,b) : a,b \in A , b$ is exactly divisible by $a\}$. Write R in roster form and its domain and range.
17. Let $f(x) = x+1$, find $f(f(x))$.