
WINTER HOLIDAYS HOMEWORK
CLASS-XI Commerce (2018-19)

English:

1. Design a poster for promoting cleanliness in the surrounding of your colony.
* Points to be included:
 - (a) Slogans
 - (b) Visuals
 - (c) Issuing Authority

- Accountancy:-**
- 1) Prepare Journal, Ledger, Trial Balance, Financial Statements, Bar graph and pie charts on the basis of question given in the class.
 - 2) Prepare voucher of the given question in the class.
 - 3) Do Q8. (pg no P-36) for all
- Note :-** Submit your project in spiral binding.

- Business Studies:-** Prepare a project according to the instructions given in the class on the following topics.
- a) Departmental Stores
 - b) Insurance
 - c) Multinational Companies
 - d) Small Scale Industries
- Note :-** Submit your project in spiral binding.

- Economics :-** Students have to prepare 1 project of economics from Part-B. Topics for the projects can be related to any economic issues like:
- 1) Dissemination of price information for growers and its impact on consumers.
 - 2) Global Warming
 - 3) Designing eco-friendly projects applicable in school such as paper and water cycle.
 - 4) Impact of demonetization on Indian economy.

- 5) Any economic issue like poverty, unemployment or population. Its causes and effects of inequalities of income and wealth in your country and steps taken by government to mitigate these.
- 6) Impact of GST bill on trade.
- 7) A project on make in India and its impact on Indian Economy.
- 8) What is national debt? Give your suggestions to overcome from this problem. Also suggest yours views on following measure?
 - a) Should the government make cuts to public spending in order to reduce the national debt?
 - b) Should the government raise taxes on the rich?
- 9) What are labour unions? Explain acts made for trade union. Do you believe labour unions help or hurt the economy?
- 10) New policies introduced by government and its impact on Indian Economy.
 - (ii) Highlights of changes in government budget and its impact on Indian economy.

Note: - Maximum length of a project should be 10 pages and need to be submitted in a neat folder.

MATHS:

1. Reduce $(\frac{1}{1-2i} + \frac{3}{1+i})(\frac{3+4i}{2-4i})$ to the standard form.
2. If $(x+iy)^3 = u + iv$, then show that $\frac{u}{x} + \frac{v}{y} = 4(x^2 - y^2)$.
3. Solve graphically: $x+2y \leq 2000$, $x+y \leq 1500$, $y \leq 600$, $x \geq 0$, $y \geq 0$.
4. How many numbers are there between 100 and 1000, which have exactly one of their digits as 7?
5. How many diagonals are there in a polygon of n sides?
6. Find the coefficient of x^{32} and x^{-17} in the expression of $(x^4 - 1/x^3)^{15}$.
7. The 2nd, 3rd and 4th terms in the expansion of $(x + y)^n$ are 240, 720 and 1080 respectively. Find the values of x,y and n.
8. If the mth term of a given AP is n and its nth term is m then show that its pth term is $(n+m-p)$.
9. If pth, qth and rth term of an AP are a,b,c respectively. Show that $(q-r)a + (r-p)b + (p-q)c = 0$.
10. Find the sum $1^2 + (1^2+2^2) + (1^2+2^2+3^2) + \dots +$ to n terms.
11. Prove that: $\sin 5x - 2\sin 3x + \sin x / \cos 5x - \cos x = \operatorname{cosec} 2x - \cot 2x$
12. Prove that: $\cos 20^\circ \cos 40^\circ \cos 60^\circ \cos 80^\circ = 1/16$

13. Prove that: $\cos 5x = 16\cos^5 x - 20\cos^3 x + 5\cos x$
14. Solve: $\sec x - \tan x = \sqrt{3}$
15. Using slopes, show that the vertices $(-2, -1)$, $(4, 0)$, $(3, 3)$ and $(-3, 2)$ are the vertices of a parallelogram.
16. Find the equation of line passing through $(-2, -4)$ and perpendicular to the line $3x - y + 5 = 0$.
17. The mid-points of the sides of a triangle are $(1, 5, -1)$, $(0, 4, -2)$ and $(2, 3, 4)$. Find its vertices.
18. Solve miscellaneous exercise of Ch- Trigonometry (NCERT).
19. Solve miscellaneous exercise of Ch- limits and derivatives (NCERT).
20. Differentiate :
- (i) $e^x(x^3 + \sqrt{x})$
 - (ii) $x^2 \tan x$
 - (iii) $(\sin x + \cos x / \sin x - \cos x)$
 - (iv) $(\sec x - 1 / \sec x + 1)$

Physical Education: -

1. Prepare physical education practical file. Revision of chapters 7 & 8.
2. Measures BMI of 10 members of your family or neighbourhood and how graphical representation of the collected data .