

SHRI BIHARI LAL KUSHWAHA MEMORIAL
OXFORD ENGLISH SCHOOL

AFFILIATED TO C.B.S.E., NEW DELHI
KAZZAKPURA, VARANASI

SUMMER VACATION HOLIDAY HOMEWORK

CLASS -9th

SOCIAL-

- 1- Prepare all the topics from the following chapters-
 - a) India – its location and size.
 - b) The French revolution.
 - c) Democracy in contemporary world.
 - d) Factors of production.
 - e) People as resources.
- 2- Learn all the important notes and definition.
- 3- On a chart paper draw an outline map of India and mark all the States, Capital, Union territories. (Use colours)

Hindi -

- १- सुभाष चन्द्र बोस का चित्र बनाकर उनकी प्रमुख विशेषताओ को चार्ट पेपर पर लिखे ।
- २- पर्यावरण की सुरक्षा पर एक निबंध लिखे चित्र के साथ (फाईल में)
- ३- अपने क्षेत्र में कानून और व्यवस्था की बिगड़ती स्थिति पर किसी दैनिक-पत्र के संपादक को एक पत्र लिखिए |(फाईल में)
- ४- अलंकार की परिभाषा लिखते हुए अलंकारो के भेदों को उदाहरण के साथ परिभाषित कीजिये | (फाईल में)

SCIENCE-

- 1- What are green revolutions? Who is the father of green revolution?
- 2- What are weeds? Give two examples?
- 3- Differentials between mixed cropping and inter cropping?
- 4- How do good animal husbandry practice benefit farmer?
- 5- Identify two plastid which contain a pigment necessary for photosynthesis?
- 6- Define ` apiculture?
- 7- How do biotic and Abiotic factor allot crop production?
- 8- What is macro-nutrient and why are they called macro nutrient?
- 9- Which method is commonly used for improving cattle breeds and why?
- 10- What are two advantage of composite fish culture?
- 11- What is horticulture?
- 12- Differentiate between Kharif and Rabi?
- 13- Difference between manure and fertilizer?
- 14- Define hybridization?
- 15- Biotic and Abiotic factor?

Class IX (Maths)

H.W.

Q.1 Examine whether the number is rational or irrational.

(i) $\frac{(2+\sqrt{2})(3-\sqrt{5})}{(3+\sqrt{5})(2-\sqrt{2})}$ (ii) $\frac{(6-4\sqrt{2})(5+\sqrt{2})}{(6+4\sqrt{2})(1+\sqrt{2})}$

Q.2. Given that $\sqrt{3} = 1.732$, find the value of $\sqrt{75} + \frac{1}{2}\sqrt{48} - \sqrt{192}$

Q.3 Simplify $\frac{4+\sqrt{5}}{4-\sqrt{5}} + \frac{4-\sqrt{5}}{4+\sqrt{5}}$

Q.4 If $\sqrt{5} = 2.236$ and $\sqrt{6} = 2.449$, find the value of $\frac{1+\sqrt{2}}{\sqrt{5}+\sqrt{3}} + \frac{1-\sqrt{2}}{\sqrt{5}-\sqrt{3}}$

Q.5 If $x = 9 + 4\sqrt{3}$, find the value of $(\sqrt{x} - \frac{1}{\sqrt{x}})$ and $(x^2 + \frac{1}{x^2})$

Q.6 If $a = 1 + \sqrt{2}$, find the value of $(a - \frac{1}{a})^3$.

Q.7 Simplify $3\sqrt{2} + \sqrt[4]{64} + \sqrt[4]{2500} + \sqrt[6]{8}$

Q.8 Find x^2 if $x = \frac{2(\sqrt{2} + \sqrt{6})}{3\sqrt{2+\sqrt{3}}}$

Q. (10) Find the value of: a and b in

$$\frac{7+3\sqrt{5}}{3+\sqrt{5}} - \frac{7-3\sqrt{5}}{3-\sqrt{5}} = a + b\sqrt{5}$$

Q. (11) If $x = (2+\sqrt{5})^{1/2} + (2-\sqrt{5})^{1/2}$

$$y = (2+\sqrt{5})^{1/2} - (2-\sqrt{5})^{1/2}$$

then evaluate $(x^2 + y^2)$.

Q. (12) $a = \frac{\sqrt{3}-\sqrt{2}}{\sqrt{3}+\sqrt{2}}$ and $b = \frac{\sqrt{3}+\sqrt{2}}{\sqrt{3}-\sqrt{2}}$

find the value of $a^2 + b^2 - 5ab$.

Q. (13) Rationalise the denominator of $\frac{4}{2+\sqrt{3}+\sqrt{7}}$

and $\frac{1}{\sqrt{7}+\sqrt{6}-\sqrt{13}}$.

Q. (14) Express $(1.3\bar{2} + 0.\bar{3}5)$ as a fraction in simplest form.

Q. (15) Find five rational numbers between

$$\frac{1}{4} \text{ and } \frac{5}{6}.$$

Q. (16) Find six rational numbers between 5 and 8.

Q. (17) Use the factor theorem to determine whether $(x-1)$ is a factor of $2\sqrt{2}x^3 + 5\sqrt{2}x^2 - 7\sqrt{2}$

Q. (18) Find the value of a if $(x+a)$ is a factor of

(i) $x^3 + ax^2 - 2x + a + 4$ (ii) $x^4 - a^2x^2 + 3x - 6a$

Q(19)

Find the value of $(2)^3 + (-3)^3 - (6)^3$

Q(20) Factorise each of the following.

(i) $3p^2q^2 + 2p^3q + 9pq^2$

(ii) $a^2p^2 + b^2p^2 + a^2q^2 + b^2q^2$

(iii) $4a^2 + b^2 + 4ab + 8a + 4b + 4$

(iv) $x^3 + 8y^3 + 6x^2y + 12xy^2$

(v) $8p^3 - 27q^3 - 36p^2q + 54pq^2$

Q(21) Simplify $(a+b)^3 + (a-b)^3 + 6a(a^2 - b^2)$

Q(22) Factorise

(i) $\frac{4}{9}a^2 + b^2 + \frac{4}{3}ab$

(ii) $(x^2+x)^2 + 4(x^2+x) - 12$

Q(23) Write the expansion of $(2p+2q-3r)^2$

Q(24) Factorise

(i) $a^3 + 8b^3 + 27c^3 - 18abc$

(ii) $p^3 - 27q^3 + 8r^3 + 18pqr$

Q(25) Write the expansion of

(i) $(2x-y^2)^3$ (ii) $\left(\frac{2}{3}x - \frac{5}{3}y\right)^3$

Q(26) Find the value of $27x^3 + 8y^3$ if $3x + 2y = 20$ and $xy = \frac{11}{3}$