

# DELHI PUBLIC SCHOOL BALCO

Dear Parents

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We expect you to supervise your ward in completing these tasks. You may ask them to use any unused notebook for this purpose.

In days to come we will upgrade this process. You will be informed through SMS about these.

**YOU MAY ASK YOUR WARD TO USE ANY AVAILABLE NOTEBOOKS INCLUDING OLD OR UNUSED OR HALF USED NOTEBOOKS.**

Sd/-  
**Kailash Pawar**  
**Principal**

**DELHI PUBLIC SCHOOL BALCO , KORBA (C.G)**

**Matrices and Determinant**

**SUB: MATHEMATICS**

**CLASS : XII**

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1. If  $A = \begin{bmatrix} 4 & 6 \\ 7 & 5 \end{bmatrix}$ , then what is  $A(\text{adj}A)$ .

2. For what value of  $k$ , the matrix  $\begin{bmatrix} 2k+3 & 4 & 5 \\ -4 & 0 & -6 \\ -5 & 6 & -2k-3 \end{bmatrix}$  is skew symmetric.

3. If  $\begin{vmatrix} \sin x & \cos y \\ \cos x & \sin y \end{vmatrix} = \frac{1}{2}$ , where  $x, y$  are acute angles, then write the value of  $x + y$ .

4. If  $a+b+c \neq 0$  and  $\begin{vmatrix} a & b & c \\ b & c & a \\ c & a & b \end{vmatrix} = 0$ , then using properties of determinants, prove that

$$a = b = c.$$

5. Two schools A and B want to award their selected teachers on the values of honesty, hard work and regularity. The school A wants to award Rs x each, Rs y each and Rs z each for the three respective values to 3, 2 and 1 teachers with a total award money of Rs 1.28 lakhs. School B wants to spend Rs 1.54 lakhs to award its 4, 1 and 3 teachers on the respective values (By giving the same award money for the three values as before). If the total amount of award for one price on each value is Rs 57000, then using matrices, find the award money for each value.

6. If  $A = [a_{ij}] = \begin{bmatrix} 4 & -2 & 1 & 3 \\ 5 & 7 & 9 & 6 \\ 21 & 15 & 18 & -25 \end{bmatrix}$  then write the order of A and find the elements

$$a_{24} \text{ and } a_{34}$$

7. Find the value of  $\alpha$  for which  $A^2 = B$ , if  $A = \begin{bmatrix} \alpha & 0 \\ 1 & 1 \end{bmatrix}$  and  $B = \begin{bmatrix} 1 & 0 \\ 5 & 1 \end{bmatrix}$

8. For what value of k, the matrix  $\begin{bmatrix} 2-k & 4 \\ -5 & 1 \end{bmatrix}$  is not invertible

9. Using properties of determinants, show that  $\begin{vmatrix} y+z & x & y \\ z+x & z & x \\ x+y & y & z \end{vmatrix} = (x+y+z)(x-z)^2$

10. A diet is to contain 30 units of vitamin A, 40 units of vitamin B and 20 units of vitamin C. Three types of foods F1, F2 and F3 are available. 1 unit of food F1 contains 3 units of vitamin A, 2 units of vitamin B, and 1 unit of vitamin C. 1 unit of food F2 contains 1 unit of vitamin A, 2 units of vitamin B and 1 unit of vitamin C. 1 unit of food F3 contains 5 units of vitamin A, 3 units of vitamin B and 2 units of vitamin C. Represent the above situation algebraically and find the diet contents of each type of food by using matrix method. Why a proper diet is required for us.

11. A matrix A of order 3x3 has determinant 6. What is the value of  $|3A|$

12. For what value of x, the following matrix is singular  $\begin{bmatrix} 3-x & 6x+2 \\ 2 & -4 \end{bmatrix}$

13. If  $A = \begin{bmatrix} 1 & 2 & 3 \\ 0 & 3 & 2 \end{bmatrix}$  and  $B = \begin{bmatrix} 3 & -1 \\ 2 & 2 \\ 4 & 9 \end{bmatrix}$ , write the order of AB and BA.

14. Using properties of determinant prove that  $\begin{vmatrix} x & y & z \\ x^2 & y^2 & z^2 \\ x^3 & y^3 & z^3 \end{vmatrix} = xyz(x-y)(y-z)(z-x)$

$$x - y + 2z = 1$$

15. Solve the system of following equations  $2y - 3z = 1$

$$3x - 2y + 4z = 2$$

16. Find the value of  $y$ ,  $\begin{bmatrix} x-y & 2 \\ x & 5 \end{bmatrix} = \begin{bmatrix} 2 & 2 \\ 3 & 5 \end{bmatrix}$

17. If  $A = \begin{bmatrix} 2 & 3 \\ 5 & -2 \end{bmatrix}$  then write  $A^{-1}$  in terms of  $A$ .

18. Area of a triangle with vertices  $(k, 0)$ ,  $(1, 1)$  and  $(0, 3)$  is 5 sq unit. Find the value of  $k$ .

19. Using properties of determinants, prove the following

$$\begin{vmatrix} 1+a^2-b^2 & 2ab & -2b \\ 2ab & 1-a^2+b^2 & 2a \\ 2b & -2a & 1-a^2-b^2 \end{vmatrix} = (1+a^2+b^2)^3$$

OR

20. Using elementary row transformation find the inverse of the matrix  $\begin{bmatrix} 2 & 0 & -1 \\ 5 & 1 & 0 \\ 0 & 1 & 3 \end{bmatrix}$

$$3x - 2y + z = 2$$

21. Solve the following equations  $-x + 2y + z = 6$

$$2x + y - 3z = -5$$

22. Using elementary transformation, find the inverse of matrix  $A = \begin{bmatrix} 1 & 3 \\ 2 & 7 \end{bmatrix}$

23. Prove that the determinant  $\begin{vmatrix} x & \sin \theta & \cos \theta \\ -\sin \theta & -x & 1 \\ \cos \theta & 1 & x \end{vmatrix}$  is independent to  $\theta$ .

24. If  $a, b, c$  are in AP, then show that the determinant  $\begin{vmatrix} x+2 & x+3 & x+2a \\ x+3 & x+4 & x+2b \\ x+4 & x+5 & x+2c \end{vmatrix} = 0$

25. Using elementary transformations, find the inverse of the following matrix  $\begin{bmatrix} 1 & 2 & 3 \\ 2 & 5 & 7 \\ -2 & -4 & -5 \end{bmatrix}$

26. If  $AB = A$  and  $BA = B$ , then show that  $A^2 = A$ .

27. For what value of  $k$ ,  $\begin{bmatrix} 2k & -1 \\ -8 & 3 \end{bmatrix}$  is a singular matrix?

28. If  $A$  is a matrix of order  $2 \times 3$  and  $B$  is a matrix of order  $3 \times 5$ , then what is the order of matrix  $(AB)'$  or  $(BA)'$ .

29. Show that : 
$$\begin{vmatrix} a & b-c & c+b \\ a+c & b & c-a \\ a-b & b+a & c \end{vmatrix} = (a+b+c)(a^2+b^2+c^2)$$

$$x+2y+z=7$$

30. Solve the following system of equation , using matrix method:  $x+3z=11$

$$2x-3y=1$$

31. If A is an invertible matrix of order 3 and  $|A|=4$  , then find the value of  $|adj(A)|$

32. If  $A = \begin{bmatrix} -2 & 3 \\ 1 & 2 \end{bmatrix}$  and  $B = \begin{bmatrix} -1 & 0 \\ 1 & 2 \end{bmatrix}$  then find  $(A+2B)'$

33. Using properties of determinant , prove that : 
$$\begin{vmatrix} b+c & c+a & a+b \\ q+r & r+p & p+q \\ y+z & z+x & x+y \end{vmatrix} = 2 \begin{vmatrix} a & b & c \\ p & q & r \\ x & y & z \end{vmatrix}$$

34. Find the equation of the line joining points A(1,3) and B(0,0). Using determinant s , find a, if C(a,0) is a point such that the area of triangle ABC is 3 sq unit.

35. Find the inverse of  $A = \begin{bmatrix} 3 & 0 & -1 \\ 2 & 3 & 0 \\ 0 & 4 & 1 \end{bmatrix}$  by row transformation.

$$x-y=3$$

36. Solve the following system of linear equation  $2x+3y+4z=17$

$$y+2z=7$$

37. Write a 2 X 2 matrix  $A = [a_{ij}]$  , whose each element  $a_{ij} = i - j$

38. Find the product  $\begin{bmatrix} 2 & 3 & 1 \end{bmatrix} \begin{bmatrix} -4 \\ 7 \\ 10 \end{bmatrix}$

39. Evaluate the determinant 
$$\begin{vmatrix} 1 & x & y+z \\ 1 & y & z+x \\ 1 & z & x+y \end{vmatrix}$$

40. Using the properties of determinant prove that 
$$\begin{vmatrix} a+l & m & n \\ l & a+m & n \\ l & m & a+n \end{vmatrix} = a^2(a+l+m+n)$$

41. There are three families . first family consist of two male member , 4 female members and three children. Second family consist of three male members, 3 female members and two children. Third family consist of two male members , two female members and five children . Male members earns Rs 500 per day and spends Rs 300 per day. Female member earns Rs 400 per day

and spends Rs 250 per day and child member spends Rs 40 per day. Find the money each family saves per day using matrices. What the necessity of saving in the family?.

42. Find a and b, if  $\begin{bmatrix} 3a+b & -b \\ 2b-a & 3 \end{bmatrix} = \begin{bmatrix} 1 & 2 \\ -5 & 3 \end{bmatrix}$ .

43. If A is a square matrix of order 3 such that  $|\text{adj}(A)| = 49$ , find  $|A|$

44. Give an example of two non-zero matrix X and Y such that  $XY = O$  but  $YX \neq O$ .

45. Solve for x,  $\begin{vmatrix} x-2 & 2x-3 & 3x-4 \\ x-4 & 2x-9 & 3x-16 \\ x-8 & 2x-27 & 3x-64 \end{vmatrix} = 0$

46. An amount of Rs 600 crore is spent by the government in three schemes. Scheme A is for saving girl child from the cruel parents who don't want girl child and get abortion before her birth. scheme B is for saving of newlywed girls from death due to dowry, scheme C is for planning and good health for senior citizens. Now, twice the amount spent of scheme C together with amount spent of scheme A is Rs 700 crore. And three times the amount spent on scheme A together with amount spent of scheme B and scheme C is Rs 1200 crore. (i) find the amount spent on each scheme using matrices. (ii) what is the importance of saving girl child from the cruel parents who don't want girl child and get the abortion before her birth?.

47. For what value of x, the matrix  $A = \begin{bmatrix} 3-2x & x+1 \\ 2 & 4 \end{bmatrix}$  is singular?.

48. If A is an invertible matrix of order  $3 \times 3$  such that  $|A| = 5$ , then find  $|A^{-1}|$

49. Find the matrix X such that it satisfies the equation  $A - 2B + X = O$ , given that

$$A = \begin{bmatrix} 5 & 3 \\ -3 & 1 \end{bmatrix}; B = \begin{bmatrix} 0 & -2 \\ 3 & 1 \end{bmatrix}$$

50. Solve the equation :  $(\tan^{-1} x)^2 + (\cot^{-1} x)^2 = \frac{5\pi^2}{8}$

51. If the points  $(a_1, b_1), (a_2, b_2)$  and  $(a_1 + a_2, b_1 + b_2)$  are collinear, then show that  $a_1 b_2 = a_2 b_1$ .

52. The sum of three numbers is 6. If we multiply the second number by 2 and add the first number to the result, we get 7. By adding second and third numbers to three times the first number, we get 12. find the numbers using matrices.

53. Let  $A = \begin{bmatrix} \cos \theta & \sin \theta \\ -\sin \theta & \cos \theta \end{bmatrix}$  show by mathematical induction, that for every positive integer n,

$$A^n = \begin{bmatrix} \cos n \theta & \sin n \theta \\ -\sin n \theta & \cos n \theta \end{bmatrix}$$

**Class: XII**

**Subject: Biology**

**Note: Write the answers for following questions in your class work notebook.**

**CHAPTER : 1 REPRODUCTION IN ORGANISMS**

1. No organism is immortal, then why do we say there is no natural death in single – celled organisms?
2. What is the significance of reproduction?
3. Name the type of reproduction wherein the off springs produced are identical to each other and to the parent.
4. Name the stage of growth and maturity in the life of animals before they can reproduce sexually.
5. Give the scientific name of the plant which flower once in 12 years.
6. Name the type of fertilization wherein the survival of the organism up to adulthood is threatened.
7. Name the structure from where every sexually reproducing organism begins their life. 8. What is a meiocyte?
9. What do you mean by clones?
10. What is a vegetative phase in plants?
11. Name the type of plants that show clear cut vegetative, reproductive and senescent phases.
12. Name the plant which flower only once in their life time.
13. In seed plants how the non-motile gametes are carried to female gamete?
14. Differentiate between asexual and sexual method of reproduction.
15. Gametes are always haploid .How are the gametes produced from a haploid plant body and a diploid plant body?
16. How do the following organisms reproduce?  
a)Yeast b)Amoeba.
17. Life spans of organisms are not necessarily correlated with their sizes. Explain
18. Name the asexual reproductive structures of the following:  
Chlamydomonas, Penicillium, Hydra, Sponge.

19. Explain the following terms- Isogametes, Anisogametes, staminate flower, pistillate flower.
20. Why are Chara and Marchantia are referred to as monoecious and dioecious plants ? 21. What are hermaphrodite? Give an example.
22. Why do you refer Water Hyacinth as an invasive weed? Why is it difficult to get rid off them?
23. Why the number of male gametes produced is more than the number of female gamete?
24. Name the gametes produced by staminate and pistillate flowers.
25. Why are offsprings of oviparous animals at a greater risk as compared to offsprings of viviparous animals?
26. Cell division is itself a mode of reproduction .Name two single celled organisms and explains this.
27. What are zoospores ? Why are they referred so?
28. What do the following parts of a flower develop into after fertilization?  
Ovary, zygote, ovary wall, ovules.
29. Mention the three phases in the life cycle of plants and animals.
30. What are vegetative propagules? Name the vegetative propagules of the following plants .Ginger, Agave, Bryophyllum ,Water hyacinth.
31. What are continuous breeders and seasonal breeders?
32. Where does syngamy occur?Explain with examples .
33. Explain the features exhibited by the organisms showing external fertilization to enhance the chances of syngamy .What is the disadvantage of external fertilization ?
34. Differentiate between oestrus and menstrual cycle with examples.
35. Write the sexuality in the following organisms.(a) earthworm (b) Cockroach (c) Chara (d) Marchantia (e) Sweet Potato (f)Leech.
36. What is parthenogenesis? Give an example.
37. What are oviparous and viviparous animals? Give examples.

## CHAPTER : 2 SEXUAL REPRODUCTION IN FLOWERING PLANTS

1. Why are pollen grains produced in enormous quantity in maize?
2. What is the ploidy of the cells in the microspore tetrad?
3. What is the ploidy of PEN?
4. Even though each pollen grain has two male gametes, why are atleast 10 pollen grains  
and not 5 pollen grains required to fertilize 10 ovules present in a particular carpel?
5. What are parthenocarpic fruits?
6. Of the eight nuclei of the embryo sac in flowering plants three are at the micropylar  
end. How many are there at the chalazal end and how many nuclei located in the central  
cell?
7. How could pollen grains be well preserved as fossils?
8. How many haploid nuclei and haploid cells are present in the female gametophyte of  
angiosperm?
9. Why is the process of fertilization in flowering plant referred to as double fertilization?
- 10.. Draw a diagram of the following and label their parts.
  - (i) T.S. of a mature anther.
  - (ii) Mature pollen grain.
  - (iii) A diagrammatic view of a typical anatropous ovule.
  - (iv) A diagrammatic representation of the mature embryo sac .
  - (v) Fertilized embryo sac
  - (vi) Stages in embryo development in a dicot.
  - (vii) Dicot embryo.
  - (viii) L.S. of an embryo of grass
  - (ix) A longitudinal section of a flower showing growth of pollen tube.
11. Explain the structure of microsporangium.
12. Explain the structure of pollen grain. 21
13. What are the characteristics of wind ,water and insect pollinated flowers ?
14. Describe the development of male gametophyte in angiosperms.



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**Kailash Pawar**  
**Principal**

**DELHI PUBLIC SCHOOL BALCO**  
**1<sup>ST</sup> ASSIGNMENT FOR CLASS XII : 2020-2021**  
**SUBJECT: PHYSICS**

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**INSTRUCTION:- DO ALL THE QUESTIONS IN CLASS-WORK COPY**

1. Two charges  $q_1$  and  $q_2$  are separated by a small distance satisfying the equation (i)  $q_1 + q_2 = 0$  and (ii)  $q_1 \cdot q_2 > 0$ . What does it tell us in each case about (a) the charge and (b) the force?
2. Two charges  $q_1$  and  $q_2$  are separated by a distance of 1m. What is the minimum value of force acting between them?
3. Write the dimensional formula for the permittivity of free space  $\epsilon_0$ .
4. Estimate the total number of electrons present in 100g of water. How much is the total negative charge carried by these electrons? Avogadro's number =  $6.02 \times 10^{23}$  and molecular mass of water = 18.
5. A pith ball A of mass  $9 \times 10^{-5}$  kg carries a charge of  $5\mu\text{C}$ . What must be the magnitude and sign of the charge on a pith ball B held 2 cm directly above the pith ball A, such that the pith ball A remains stationary?
6. The sum of two point charges is  $7\mu\text{C}$ . They repel each other with a force of 1N when kept 30 cm apart in free space. Calculate the value of each charge?

7. A charge  $q$  is placed at the centre of the line joining two equal charges  $Q$ . Show that the system of three charges will be in equilibrium if  $q = \frac{-Q}{4}$
8. An infinite number of charges each equal to  $10\text{nC}$  are placed Z- axis at  $z = 1\text{m}$ ,  $z = 2\text{m}$ ,  $z = 4\text{m}$ ,  $z = 8\text{m}$  and so on. Find the total force on a charge of  $5\text{C}$  placed at the origin. It is assumed that there are no charge are placed at the X-axis and Y-axis.
9. Answer the following questions:
- (a) The dielectric constant of water is 80. What is its permittivity?
  - (b) Can a body have a charge of  $2.4 \times 10^{-19}\text{C}$ ? Justify your answer by comment.
  - (c) The electrostatic force between two charges is a central force. Why?
10. Plot a graph showing the variation of coulomb force (F) versus  $\left(\frac{1}{r^2}\right)$ , where ' $r$ ' is the distance between the two charges :  $(1\mu\text{C}, 2\mu\text{C})$  and  $(2\mu\text{C}, -3\mu\text{C})$ . Interpret the graphs obtained.

## **Assignment**

### **Chemistry XII**

1. Write the following name reactions: (**Refer NCERT Part –II**)

#### **Unit-10 Haloalkanes and haloarenes**

- (i) Fienkelstein reaction
- (ii) Swarts rection
- (iii) Friedel crafts alkylation reaction
- (iv) Wurtz reaction
- (v) Fittig reaction
- (vi) Wurtz fittig reaction

#### **Unit-11 Alcohols, Phenols and ethers**

- (i) Kolbe reaction
- (ii) Reimar –Tiemann
- (iii) Williamson synthesis

#### **Unit -12 Aldyhydes ,Ketones and carboxylic acids**

- (i) Stephen reaction
- (ii) Etard reaction
- (iii) Gatter-mann Koch reaction
- (iv) Rosenmund reaction
- (v) Clemmensen reaction
- (vi) Wolf – kishner reaction
- (vii) Cannizzaro reaction
- (viii) Hell-Volhard –Zelinsky reaction

#### **Unit-13 Amines**

- (i) Hoffmann bromamide reaction
- (ii) Gabriel phthalimide synthesis

**INDIAN ECONOMIC DEVELOPMENT**  
**CLASS-XII**  
**UNIT-1 DEVELOPMNT EXPERIENCE (1947-1990)**  
**AND ECONOMIC REFORMS SINCE 1991**

**CH-1: INDIAN ECONOMY ON THE EVE OF INDEPENDENCE**

Q1. Explain colonial exploitation of the Indian economy under the British rule.

Ans. 1. **Colonial exploitation of agricultural sector:-**

- a. Zamindars were declared as owners of the soil.
- b. The tillers (actual cultivators) got bare minimum for survival with no surplus for investment.

2. **Colonial exploitation of industrial sector:-**

- a. Foreign demand for the Indian handicrafts was destroyed by way of heavy duty on their exports.
- b. Domestic demand for the Indian handicrafts was destroyed by way of duty-free import of the British goods.

3. **Colonial exploitation of international trade:-**

- a. Duty-free export of Indian raw material to fulfil the industrial needs in Britain.
- b. Duty-free import of British goods to expand demand for the British in the Indian markets.

Q2. Explain the features of Indian economy on the eve of independence.

Ans. The features of Indian economy on the eve of independence:

1. **Stagnant Economy:** A stagnant economy is the one which shows little or no growth in income. Between 1860-1925, growth rate of PCI was as low as 0.5% per annum (PA) & between 1925-1950

it was 0.1% PA. Bulk of Indian population lived in poverty.

2. **Backward Economy:** Indian Economy was backward with very low per capita income. In 1947-48, PCI in India was just Rs 230. Bulk of population was without sufficient food, clothing & shelter.

3. **Agricultural Backwardness:**

- Nearly 72% of working population was engaged in agriculture , contributing only 50% Of GDP.
- Productivity of rice & wheat was extremely low with 660 Kg & 665 Kg per hectare respectively.
- Food grain production was barely enough for subsistence.

4. **Industrial Backwardness:**

- There was lack of basic & heavy industries.
- Production of machines was almost negligible.
- Small-scale & cottage industries were almost ruined.

- Bulk of capital goods was imported from Britain.
5. **Rampant Poverty:** Bulk of population was poor. They were not getting two square meals a day. There was widespread unemployment owing to destruction of handicrafts industries.
  6. **Heavy dependence on Imports:** India had to import:
    - Various capital goods such as machines & equipments.
    - Various consumer goods such as medicines, bicycles, kerosene etc
    - Various defence equipments such as guns & rifles.

Q3. What was the state of agricultural sector of the Indian economy on the eve of independence?

Ans. The state of agricultural sector of the Indian economy on the eve of independence was:

1. **Low Production & Productivity:** Both production as well as productivity were found to be extremely low.

Table-1: **Production & Productivity of Wheat & Rice – A comparison between 1947 & 2018-19**

Crop	Productivity (Kg per Hectare)		Production (in lakh tonnes)	
	1947	2018-19	1947	2018-19
Wheat	660	3408	64	991
Rice	665	2665	220	1156

Productivity of wheat was nearly 5.2 times lower in 1947 compared it with 2018-19.

Productivity of Rice was nearly 4 times lower in 1947 compared it with 2018-19.

Level of output of wheat was nearly 15.5 times lower, and that of rice was nearly 5.3 times lower in 1947 compared with their levels in 2018-19.

2. **High Degree of Uncertainty:** Agriculture was excessively dependent upon rainfall. Good rainfall implied good output, while poor rainfall implied poor output. No effort was made under the British rule to develop permanent means of irrigation.
3. **Dominance of Subsistence Farming:** Subsistence farming is form of farming in which the crops are produced to provide for the basic needs of the family. There is little surplus left for sale in the market.
4. **Gulf between Owners of the Soil & Tillers of the Soil:** While the owners shared the output, they seldom shared the cost of production. They were only interested in maximising their rental income. The tillers of the soil were merely given enough for subsistence.
5. **Small & Fragmented Holdings:** Land holdings were both small as well as fragmented. Therefore, landholdings were uneconomic, so yielding low output at high cost.
6. **Land Revenue System under the British Raj:**
  - The zamindars were recognised as permanent owners of the soil.
  - Zamindars were to pay a fixed sum to the government as land revenue.

- They were free to extract as much from the tillers of the soil as they could.

Therefore, Land Revenue System under the British Raj was called Zamindari System.

Q4. What was the state of industrial sector of the Indian economy of the eve of independence?

Ans. Systematic de-industrialisation took place during the British rule due to:

A. Decay of world famous handicraft industries owing to the following reasons.

1. **Discriminatory Tariff Policy of the State:** Tariff-free export of raw materials from India & tariff-free import of British finished products.
2. **Disappearance of Princely Courts:** Indian handicraft industry had worldwide reputation as they were used by the Rajas, nawabs, princes and emperors. The beginning of British rule implied the end of princely courts. Consequently, the handicrafts started decaying.
3. **Competition from Machine-made Products:** Low cost machine-made products gave a stiff competition to the handicrafts products in India.
4. **Introduction of Railways in India:** Introduction of Railways increase the size of market for low cost British products and decrease the demand for Indian products.

B. Bleak Growth of Modern Industry:

- Few industries were established by the private entrepreneurs like TISCO in 1907.
- State participation in the process of modern industrialisation was limited.
- There was no such capital goods industry in the country.

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BUSINESS STUDIES

**CBSE Test Paper - 01**

**Chapter - 1 Nature and Significance of Management**

1. Coordination is: **(1)**
  - a. Function of management
  - b. An objective of management
  - c. The essence of management
  - d. None of the these
  
2. Chief Marketing Officer and Managing Director is the part of \_\_\_\_\_ **(1)**
  - a. Middle Management
  - b. Operational Management
  - c. Top Management
  - d. None of these
  
3. Coordination can be considered as: **(1)**
  - a. An objective of management
  - b. A function of management
  - c. An essence of management
  - d. None of the above
  
4. A good manager synchronises all the activities of different departments through: **(1)**
  - a. Supervision
  - b. Planning
  - c. Coordination
  - d. Staffing
  
5. Hero Ltd.'s target is to produce 20,000 shirts per month at a cost of ₹150 per shirt. The Production Manager could achieve this target at a cost of ₹170 per shirt. Do you think the Production Manager is 'efficient? Give reason in support of your answer. **(1)**
  
6. Why is it said that management is a goal-oriented process? **(1)**

7. Hero Ltd.'s target is to produce 10,000 shirts per month at a cost of ₹150 per shirt. The Production Manager could achieve this target at a cost of ₹160 per shirt. Do you think the Production Manager is 'effective'? Give reason in support of your answer. (1)
8. At which level of management the managers are responsible for the welfare and survival of the organisation? (1)
9. What are the personal objectives of the management? (3)
10. Name any two activities undertaken at the "Top Level Management". (3)
11. Rahul determines the overall objectives and strategies for the organisation. He also interacts with business environment to analyse its implications. Name the managerial level at which Ajay Kumar is working. State any four of his basic functions. (4)
12. Explain any four features of management. (4)
13. Explain any five features of management. (5)
14. What is Profession? What are the features of profession? (5)
15. Why management is important to an organisation? Explain any four points. (6)



## Chapter I

### Accounting for Not –for- profit organization

- 1) Is it possible for one hospital to have an income and expenditure account whereas another has a profit and loss account? (1)
- 2) Why depreciation on fixed assets is not recorded in receipts and Payment Account? (1)
- 3) “Not – for –profit organisation” do not maintain any capital account”. What do they maintain instead of capital account? (1)
- 4) Give two examples of capital receipts which are directly added to the capital fund (1)
- 5) One horse of a horse race club died. Insurance company has offered to settle the claim at 60% will it be recorded in the Accounts of the club and how? (1)
- 6) Define Legacy. Explain its treatment while preparing financial statements of a “Not – for –profit Organisation”. (3)
- 7) How the following items are shown in the balance sheet of Not –for – profit Organisation on 31<sup>st</sup> March 2007: (3)

	Rs.
Expenditure on construction of pavilion (The construction work was in progress)	3,60,000
Pavilion fund on 31 <sup>st</sup> March 2006	3,10,000
Donation received during yr 2006-07	4,20,000
Capital fund on 1 <sup>st</sup> April ,2006	5,50,000

- 8) Extracts of receipt and payment Account for the year ended 31<sup>st</sup> March ,2007 are given below:

	Rs.
Subscriptions	
2005.6	2,500
2006.7	26,750
2007.8	1,000
	30,250

Additional information:

Total number of members : 230  
Annual membership fee : Rs 125

Subscription outstanding on April 1, 2006: Rs. 2,750

Prepare a statement showing all relevant items of subscriptions viz. income, advance, outstanding etc. (3)

9) Show the following information in the Balance Sheet of the cosmos club as on 31<sup>st</sup> March 2007:

Particulars	Debits(Rs.)	Credit(Rs.)
Tournament Fund	-	1,50,000
Tournament fund Investment	1,50,000	-
Income from Tournament		
Fund Investment	-	18,000
Tournament Expenses	12,000	-

Additional Information:

Interest accrued on Tournament fund Investment Rs.6,000

(3)

10) Show the treatment of the following items by a not for profit organization:

- Annual Subscription
- Specific Donation
- Sale of old periodical
- Sale of fixed assets

(3)

11) Following is the receipts and payments accounts of Purveni recreation club for the year ended 31<sup>st</sup> March 2007

RECEIPT AND PAYMENTS ACCOUNT  
For the year ended 31<sup>st</sup> March 2007

Receipts	Amt(Rs)	Payments	Amt(Rs)
To case in hand	8320	By rent of hall	3640
To subscription	26000	By salaries	5200
To entrance fee	3900	By sports Equipments	16,640
To sell of refreshment	9880	By Dance Expenses	4,940
To sale of dance ticket	5850	By supply of	
To interest on		Refreshment	6,760
Investment @ 7%	4550	By Honorarium	1,040
		By sundry Expenses	3,250
		By Electricity Charges	1,820
		By Cash in hand	15,210
	58,500		58,500

Following additional information are also provided to your:

(i) The value of assets and liabilities on 31<sup>st</sup> March 2006 were as follows

Sport equipment Rs 6760 ; subscription in arrears Rs 1950 ,furniture Rs 12,480, outstanding rent Rs 780 subscription received in advanced Rs 520

(ii) Entrance fee is to be Capitalized

(iii) The value of assets and liabilities on 31<sup>st</sup> March 2007 were:

Sport equipment Rs 19,760 , subscription in arrears Rs 1,690, furniture Rs 11,180 , outstanding rent Rs 390 , subscription in advance Rs. 2340

(6)

12) Prepare Income and Expenditure account for the year ended 31<sup>st</sup> March 2008 and the Balance sheet as it 31<sup>st</sup> march 2008 for the following information of Gandhi welfare society  
RECEIPT AND PAYMENTS ACCOUNTS for the year ended 31<sup>st</sup> March 2008

Receipt	Amt(Rs)	Payments	Amt(Rs)
To Balance c/d	19,800	By salaries & Wages	1,42,802
To subscriptions 2006.2007 8910 2007-2008 23100 2008-2009 2750	242660	By 10% Investment (face value 13750) Purchased on 1/4/07	11,000 6809
To legacies	7920	By Rates &Takes	8602
To Donations for building	46,200	By office Expenses By Entertainment material	64,020 2860
To sale of old furniture	6600	By Telephonic chares	16500 1320
To Miscellaneous Expenses	79408	By Internet Charges By Balance c/d	148675 4,02,588
	4,02,588		4,02,588

Additional Information:

(i) On 31<sup>st</sup> March 2007 the society had following assets and liabilities:

Assets: 10 % investment Rs 1,21,000 ( face value Rs 165,000 furniture Rs 88,000 Musical Instruments Rs 13,420 , Machinery Rs 61,600 , Fax Machines Rs 18,700, subscription in arrears Rs 17,600

Liabilities: Creditors for entertainment material Rs 5,500 subscription received in advance Rs 2310 and building fund Rs 55,000

(ii) Charge depreciation @ 20% on furniture , machinery and fax machinery

(iii) On 31<sup>st</sup> march 2008 entertainment material was valued at Rs 28732

Internet charges outstanding Rs 1650

(iv) Each year subscription is paid by 110 members each paying Rs 2310

(v) Payment for entertainment material includes Rs 2200 for previous year

(6)

13) From the following receipts and payments accounts for the year ended 31<sup>st</sup> March 2007 and Balance Sheet as at 31<sup>st</sup> March 2006 of Somnath Childrens welfare society prepare Income and Expenditure for the year ended 31<sup>st</sup> 2007 and Balance Sheet as at 31<sup>st</sup> 2007

**RECEIPT AND PAYMENT ACCOUNT**  
For the year ended 31<sup>st</sup> March 2007

Receipts	Amt(Rs)	Payments	Amt(Rs)
To Balance b/d	26,400	By repair	55,200
To Subscription	66,000	By calculation	3,000
To Donation	9960	By printing	19,560
To life Membership fee	24,000	By stationary	11,400
To internet	9000	By Insurance premier	2520
		By rent and rates	1440
		By office expenses	10,320
		By balance c/d	31,920
	1,35,360		1,35,360

Balance Sheet As At 31<sup>st</sup> March 2006

Liabilities	Amt(Rs)	Assets	Amt(Rs)
Creditors for stationary	4800	Cash	26,400
Subscription on advance	46,800	Accrued Internet Subscriptions in	3600
Outstanding Salary	12000	Arrears	12,000
Capital Fund	9,18,000	3 % investment	3,60,000
		Computer	54,000
		Equipment	36,000
		Car	4,80,000
		Furniture	9,600
	9,81,600		9,81,600

Additional Information:

- (1) Rs 6000 were impaid for repairs as on 31<sup>st</sup> March 2007
- (2) Subscription received during 2006-2007 included Rs 2400 for the year 2007-2008
- (3) Subscriptions due but not paid on 31<sup>st</sup> March 2007 were Rs 10,080
- (4) Rent and rates includes Rs 240 for the year 2007- 08
- (5) Depreciations on the following  
Car @ 5%p.a. ; Furniture @ 10 % pa

Equipment @ 20% pa  
Computers @ 25% and Printer @ 30%pa

(6)

14) Following is the receipts and Payments Account for the year ended 31<sup>st</sup> March 2007 of theatre club

RECEIPTS AND PAYMENTS ACCOUNT

For the year ended 31<sup>st</sup> March 2007

Receipt	Amt(Rs)	Payments	Amt(Rs)
To Cash Balance	48540	By cost of Refreshment	3960
To sale Proceeds From Bar	79200	By Dance Expenses	11000
To Subscription	45100	By purchase of Bar	38500
By Dance Ticket Sales	14300	By Auditorium	13200
By refreshment sales	7040	By sundry Expenses	16940
		By cash balance c/d	1,10,880
	194480		194480

Additional Information

	Arrears	Received in Advanced
(i) Subscription		
1 <sup>st</sup> April 2006	2200	1100
31 <sup>st</sup> March 2007	4400	1650
(ii) Fixed Assets (Building)		
Less Depreciation	1 <sup>st</sup> April 2006	31 <sup>st</sup> March 2007
	22,00,000	22,00,000
	- 7,70,000	- 8,25,000
	14,30,000	13,75,000

- (iv) Depreciation is to be charged on auditorium @ 15% on cost  
(v) On 1<sup>st</sup> April 2006 bar stock was valued at Rs 3300 and it was valued on 31<sup>st</sup> march 2007 at Rs 4400

15) Excellent Library Society showed the following position on 31<sup>st</sup> december 2001  
Balance Sheet as at 31<sup>st</sup> dec. 2001

Liabilities	Rs	Assets	Rs
Capital Fund	79,300	Electrical fittings	15,000
Expenses Due	700	Furniture	5000
		Books	40000
		Investments in Securities	15000
		Cash at Bank	2500
		Cash on hand	2500
	80,000		80,000

Receipts and Payments A/C  
For the year ending on 31<sup>st</sup> Dec 2002

Receipts	Rs	Payments	Rs
To Balance b/d		By electric charges	720
Cash at Bank 2500		By postage stationary	500
Cash on hand 2500	5000	By Telephonic charges	500
To Entrance fees	3000	By Books Purchased on(1.1.2002)	
To membership subs	20,000	By outstanding	6000
To sales proceeds of Old papers	150	Expenses paid	700
To hire of Lecture hall	2000	By rent A/C	8800
To Interest on Securities	800	By investment in securities	4000
		By salaries A/C	6,600
		By balance C/d	
		Cash at Bank	2000
		Cash on hand	1130
	30,950		30,950

You are required to prepare an Income and Expenditure Account for the year ending 31-12-200 and Balance Sheet as on that date after making the following adjustments:

- Memberships subscription included Rs 1000 received in advance
- Provide for outstanding Rent Rs 400 and Salaries Rs 300
- Books to be depreciated @ 10% including additions. Electrical fittings and furniture are also to be depreciated at the same rate.
- 75% of the entrance fees is to be capitalized.
- Interest on securities to be calculated @ 5% p.a. including purchases of investment made as on 1.7.2002 for Rs 4000.

# DELHI PUBLIC SCHOOL BALCO

## ASSIGNMENT

CLASS: XII

SUBJECT: ENGLISH CORE (301)

**Q1.** R.K International School, Kolkata is looking for a receptionist for the school. Write an advertisement on behalf of the administrative officer in the classified columns of the local newspaper giving necessary details. Draft the advertisement in not more than 50 words.

**Q2.** Surya / Swati has cleared the **JEE Advanced**.. The family is elated at the achievement and they decide to have a get-together for all friends. Draft an informal invitation for the get-together.

**Q3** You are Atul / Asha a student of APJ Abdul Kalam Public School. Principals of two schools from Nepal visited your school as part of a cultural exchange programme. Students of the school put up a cultural show in their honour. Write a report about it for your school magazine. (150-200 words)

**Q4.** You are Naveen/Neha a student of Class XII at K.P. School, Ghaziabad. The student is required to cope with a lot of peer environment. Write a letter to the editor of a national daily highlighting the kind of pressures an adolescent faces and suggest ways to cope with the same.

**Q6.** Some colleges conduct entrance test for admission to under-graduate courses like English (Hons.) and Journalism (Hons.). Do you think that the entrance test is the right method of selecting students? Write an article in about 150-200 words. You are Shan/Shweta, a student of class XII at A.P. International School Agra.

**Q7.** "Academic excellence is the only requirement for a successful career." Write a debate either for or against the motion. (120 - 150 words)

**Q 8.** "ONLINE SMART CLASSES ARE THE FUTURE OF EDUCATION STYLE". Write a debate either for or against the motion. (150 - 200 words).

**Q9. Read the passage given below and answer the questions that follow :**

The most alarming of man's assaults upon the environment is the contamination of air, earth, rivers, and sea with lethal materials. This pollution is for the most part irrevocable; the chain of evil it initiates is for the most part irreversible. In this contamination of the environment, chemicals are the sinister partners of radiation in changing the very nature of the world; radiation released through nuclear explosions into the air, comes to the earth in rain, lodges into the soil, enters the grass or corn, or wheat grown there and reaches the bones of a human being, there to remain until his death. Similarly, chemicals sprayed on crops lie long in soil, entering living organisms, passing from one to another in a chain of poisoning and death. Or they pass by underground streams until they emerge and combine into new forms that kill vegetation, sicken cattle, and harm those who drink from once pure wells.

It took hundreds of millions of years to produce the life that now inhabits the earth and reached a stage of adjustment and balance with its surroundings. The environment contained elements that were hostile as well as supporting. Even within the light of the sun, there were short wave radiations with power to injure. Given time, life has adjusted and a balance reached. For time is the essential ingredient, but in the modern world there is no time.

The rapidity of change and the speed with which new situations are created follow the heedless pace of man rather than the deliberate pace of nature. Radiation is no longer the bombardment of cosmic rays; it is now the unnatural creation of man's tampering with the atom. The chemicals to which life is asked to make adjustments are no longer merely calcium and silica and copper and all the rest of the minerals washed out of the rocks and carried in

the rivers to the sea; they are the synthetic creations of man's inventive mind, brewed in his laboratories, and having no counterparts in nature.

(a) On the basis of your understanding of the above passage make notes on it using headings and sub-headings. Use recognizable abbreviations (wherever necessary-minimum four) and a format you consider suitable. Also supply a title to it.

(b) Write a summary of the passage in about 80 words.

**Note:** Following are some questions given to you expecting that you will first read those lessons (from your text books) which are relatively easy to understand and then answer.

**Q10. Read the following extract from the poems and answer the questions that follow:**

1. "and felt that old  
Familiar ache' my childhood's fear,  
But all I said was ,see you soon, Amma,  
All I did was a smile and smile and smile," (My Mother at Sixty Six)

- a. What 'familiar' ache did the poet feel?
- b. What could have been the poet's childhood fears?
- c. Why did the poet only smile?

2. 'It would be an exotic moment  
without rush, without engines,  
we would all be together  
in a sudden strangeness.' (Keeping Quiet)

- a. What would be an exotic moment ?
- b. Why would it be exotic ?
- c. What would be the result of all being together ?
- d. Explain : 'sudden strangeness'

**Q9. Answer the following questions in about 30-40 words.**

1. According to Pablo Neruda, what is it that human beings can learn from Nature?

(Keeping Quiet)

2. What kind of ordeals is Aunt Jennifer surrounded by?

3. What is the significance of the parting words of the poet and her smile, in *My Mother at Sixty-six*?

5. The crofter can be called as a *good host*. Why? (The Rattrap)

6. Both the units of 'Memories of Childhood' present autobiographical episodes from the lives of two women from marginalised communities. Describe the main issues raised as well as the common features highlighted in them.

7. How did Mr. Lamb's meeting with Derry become a turning point in Derry's life? (On the Face of It)

**Q.10 Read and prepare the summary of the story "Evans Tries an O-Level" and prepare an audio/visual recording of the same. In addition to that you may also try a dramatic presentation of the same and upload it on YouTube as well.**