

**INTERNATIONAL PUBLIC SCHOOL, BHOPAL**  
**SUMMER ASSIGNMENT 2017-18**  
**CLASS XII**

**ENGLISH**

The Invisible Man. (Novel by H.G.Wells)

Q.1 Answer the following questions in about 120 words.

- a) Who is Griffin and how does he become the Invisible Man?
- b) What sort of man is Doctor Kemp? What role does he play in the story?
- c) How do you see Dr. Cuss ? How did he affect the development of the story?
- d) What impression Mr. Hall and Mrs. Hall form in the minds of the readers?
- e) What changes came in the life of Griffin after he became Invisible?

Q.2 Write the book review of the novel "The Invisible Man" by H.G.Wells.

Q.3 Write all the answers of the assignment given on "The Tiger King" by Kalki.

Q.4 You bought a pair of shoes from Punjab Boot House, New Market Bhopal. When You found to your surprise that both the shoes were meant for your left foot. Now write a letter of complaint to the manager of the Boot House asking for the replacement. Sign yourself as Sunil/Saman.

Q.5 You want to visit Udaipur and two other cities of Rajasthan during summer vacation. Write a letter to the Director, Rajasthan Tourism, Jaipur. Enquiring about at least four things that you consider important before planning your visit. You are John Abraham living at 4, Anand Durai Apartments, Chennai.

**PHYSICAL EDUCATION**

**General Instruction**

- A) Complete the project file of any one game of your choice (Basketball, Handball, football, kho-Kho, Athletics, Hockey, Volleyball).
- B) Handmade file is compulsory for all students
- C) You can paste the printed photographs in file
  1. History of game.
  2. Rules and regulation.

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3. Ground/court diagram with dimension.
4. Details of equipment used in that game.
5. Skill and technique used in that game.
6. Terminologies and important tournaments
6. Award related to that game.
7. Details of any five celebrity related to that game.
8. In Athletics (Middle distance running, long distance running, throws)
9. Write benefits of Asanas.
10. Measure resting heart rate and respiratory rate of ten members from family or neighbourhood for three weeks.

**FINE ART**

- Make two traditional art (like Warli, Kalamkari, Madhubani)
- Paintings should be framed properly.

**IP**

**Write case study report on any one of the following Project title.**

- 1) Contact Management System.
- 2) Library Management System.
- 3) Automobile.
- 4) Aadhar card.
- 5) Hotel Management System.
- 6) Hostel Management System.
- 7) School Management System.
- 8) Airline Management System.
- 9) Hospital Management system

**Case study contains following Topics.**

- 1) Introduction about Java.
- 2) Introduction about Mysql.
- 3) Introduction about Project.
- 4) DataBase Table Structure.
- 5) Frame Design.

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**MATHEMATICS**

- Que1 Construct a  $2 \times 3$  matrix whose elements  $a_{ij} = \frac{1}{2}(i - j)^2$
- Que2 Find the value of  $x, y, z$  and  $a$  which satisfy the matrix equation  

$$\begin{bmatrix} x+3 & 2y+x \\ z-1 & 4a-6 \end{bmatrix} = \begin{bmatrix} 0 & -7 \\ 3 & 2a \end{bmatrix}$$
- Que3 Find the value of  $x$  such that  $\begin{bmatrix} 1 & 1 & x \\ 0 & 2 & 1 \\ 2 & 1 & 0 \end{bmatrix} \begin{bmatrix} 1 \\ 1 \\ 1 \end{bmatrix} = 0$
- Que4 If  $f(x) = x^2 - 5x + 7$  and  $A = \begin{bmatrix} 3 & 1 \\ -1 & 2 \end{bmatrix}$  find  $f(A)$
- Que5 If  $A = \begin{bmatrix} 3 & -5 \\ -4 & 2 \end{bmatrix}$  show that  $A^2 - 5A - 14I = 0$
- Que6 Express the matrix  $\begin{bmatrix} 1 & 3 & 5 \\ -6 & 8 & 3 \\ -4 & 6 & 5 \end{bmatrix}$  as the sum of symmetric and skew symmetric matrix
- Que7 Using elementary transformation find inverse of  $\begin{bmatrix} 2 & 0 & -1 \\ 5 & 1 & 0 \\ 0 & 1 & 3 \end{bmatrix}$
- Que8 Using properties of determinants prove that  

$$\begin{vmatrix} a+b+2c & a & b \\ c & b+c+2a & b \\ c & a & c+a+2b \end{vmatrix} = 2(a+b+c)^2$$
- Que9 Using properties of determinants prove that  

$$\begin{vmatrix} 1 & x & x^2 \\ x^2 & 1 & x \\ x & x^2 & 1 \end{vmatrix} = (1-x^3)^2$$
- Que10 Using properties of determinants prove that  

$$\begin{vmatrix} (b+c)^2 & a^2 & a^2 \\ b^2 & (c+a)^2 & b^2 \\ c^2 & c^2 & (a+b)^2 \end{vmatrix} = 2abc(a+b+c)^3$$
- Que11 Solve for  $x$ :  $\begin{vmatrix} 3x-8 & 3 & 3 \\ 3 & 3x-8 & 3 \\ 3 & 3 & 3x-8 \end{vmatrix} = 0$
- Que12 Find the value of the determinant  $\begin{vmatrix} \sqrt{13} + \sqrt{3} & 2\sqrt{5} & \sqrt{5} \\ \sqrt{15} + \sqrt{26} & 5 & \sqrt{10} \\ 3 + \sqrt{65} & \sqrt{15} & 5 \end{vmatrix}$
- Que13 If  $a, b, c$  are in A.P then find the value of determinant  

$$\begin{vmatrix} x+2 & x+3 & x+2a \\ x+3 & x+4 & x+2b \\ x+4 & x+5 & x+2c \end{vmatrix}$$

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Que14 Find the adjoint of the matrix  $A = \begin{bmatrix} 1 & 2 & 3 \\ 3 & 2 & 2 \\ 3 & 3 & 4 \end{bmatrix}$

Que15 If  $A = \begin{bmatrix} \cos \alpha & -\sin \alpha & 0 \\ \sin \alpha & \cos \alpha & 0 \\ 0 & 0 & 1 \end{bmatrix}$  verify that  $A \cdot (\text{Adj. } A) = |A|I$

Que16 Find the inverse of  $A = \begin{bmatrix} 1 & 3 & 3 \\ 1 & 4 & 3 \\ 1 & 3 & 4 \end{bmatrix}$  and verify that  $A^{-1}A = I$

Que17 Show that  $x = \begin{bmatrix} -8 & 5 \\ 2 & 4 \end{bmatrix}$  satisfies the equation  $x^2 + 4x - 42 = 0$ . Thus find  $x^{-1}$

Que18 Using matrix method solve the following system of linear equations  
 $x + 2y - 3z = 6$ ,  $2x - y + z = 2$  and  $3x + 2y - 2z = 3$

Que19 Using matrix method solve  $\frac{2}{x} - \frac{3}{y} + \frac{3}{z} = 10$ ,  $\frac{1}{x} + \frac{1}{y} + \frac{1}{z} = 10$ ,  $\frac{3}{x} - \frac{1}{y} + \frac{2}{z} = 13$

Que20 If  $A = \begin{bmatrix} -4 & 4 & 4 \\ -7 & 1 & 3 \\ 5 & -3 & -1 \end{bmatrix}$  and  $B = \begin{bmatrix} 1 & -1 & 1 \\ 1 & -2 & -2 \\ 2 & 1 & 3 \end{bmatrix}$  find  $AB$ . Use the result to solve  $x - y + z = 4$ ,  $x - 2y - 2z = 9$  and  $2x + y + 3z = 1$

Que21 If  $A = \begin{bmatrix} 1 & -1 & 1 \\ 2 & 1 & -3 \\ 1 & 1 & 1 \end{bmatrix}$  find  $A^{-1}$  and hence solve  $x + 2y + z = 4$ ,  $-x + y + z = 0$ ,  $x - 3y + z = 2$

Que22 The sum of three numbers is 2. If twice the second number is added to the sum of first and third, the sum is 1. By adding second and third number to five times the first number we get 6. Find the three numbers by using matrices.

**ECONOMICS**

Project Work on any one of the following topics:

1. Government Budget and its components-Analysis of the current Budget.
2. Goods and Service Tax Act(GST).
3. Demand and its determinants-Case study of a particular commodity.

**ACCOUNTANCY**

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1. Calculate different ratios from your comprehensive problem of class XI to assess Liquidity, Solvency, Efficiency and Profitability of your concern.
2. With the help of Annual Report of one listed company of 2015-16 Calculate the following ratios to Judge liquidity, solvency, efficiency and profitability of co. Also write comments by comparing results Of co. with standard ratios.
3. Interpretate results by preparing graphs. Write one complete note on operational efficiency and Financial position of a co.

**INSTRUCTIONS:**

1. Project should be handwritten.
2. Use only classmate project papers. (one side ruled)
3. Draw proper formats wherever necessary

**POLITICAL SCIENCE**

1. Strong opposition is a strong pillar of successful democracy. But under Narendra Modi, India is moving towards an opposition-less democracy. Analyse on the basis of following points:
  - a) Reason of the rise of the Modi era
  - b) Reason of the downfall of the opposition (Congress)
2. Collect 10 cartoons from various newspapers and magazines and analyse them on the basis of the following points:
  - a) The issues they are concerned with.
  - b) The values they are portraying
  - c) The message for the society and the system
3. After the result of six state elections held recently, whole nation appears to be Namoned. Critically analyse the three years of Modi government on the basis of following points:
  - a) Policies taken
  - b) Policies implemented
  - c) Secularism and Tolerance

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**BUSINESS STUDIES**

Make a project on any one of the following topics:

**Principles of Management**

The students are required to visit any one of the following:

- a) Departmental store
- b) An Industrial Unit
- c) A Fast Food Outlet
- d) Any other Organization

**Marketing Management**

The students are required to launch their own product.

**For further details, refer book**

**PSYCHOLOGY**

Q1) We all have some notions about our ideal selves and what we would like to be? Take a time to imagine that you have achieved your ideal self. With this notion of your self, express your attitudes towards these categories :

- (a) Friends (b) School (c) Family (d) Money

Write a paragraph on each describing your ideal attitudes. Next write all these categories on four sheets of paper and ask your two friends and two family members to write about what they perceive to be your real attitudes towards these categories. These four persons will describe your real self as they see you. Compare your ideal descriptions with other's real description in detail. Are they very similar or dissimilar? Prepare a report on this.

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