

# ASN Sr. Sec. School

Mayur Vihar

Class 12

## HOLIDAY HOMEWORK

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### ENGLISH

Read the novel **THE INVISIBLE MAN** and attempt the assignment covering 1-10 chapters in Literature notebook:

1. H.G. Wells has called Mrs .Hall’s guest ‘A Strange Man’ in the first chapter . Do you agree?
2. What explanation did the stranger give Mrs. Hall for coming to Iping and confining to a dark room?
3. Describe the meeting of Teddy Henfrey with the stranger. What seeds of suspicion did he sow in Mr. Hall's mind about the guest?
4. Describe the incident when the stranger was bitten by Fearenside's dog. What was the conclusion drawn about the stranger after this?
5. Why was Cuss so keen to see the stranger? Describe his encounter with the stranger.
6. Do you find the burglary at the vicarage humorous? What traits of the Buntings’ character impress you?
7. Discuss with reference to the furniture hurling episode when the Halls examine his room presuming him to be absent.
8. Mr. Bobby Jaffers, the village constable was a brave man. Discuss in light of the episode when he arrived at the inn.
9. Describe in detail the circumstances that led to the unveiling of the stranger?
10. Describe Thomas Marvel’s first meeting with the Invisible Man.
11. What was the purpose of Mr. Marvel’s visit to the “Coach and Horses”?
12. Compare and contrast the character of Mr. and Mrs. Hall.

### ECONOMICS

1. Define Micro Economics.
2. Give two examples of micro economic studies.
3. What is meant by an economic problem?
4. State the two characteristics of resources.
5. What is the problem of resource allocation?
6. Explain how scarcity and choice go together.
7. Explain the central problems with the help of production possibility curve.

8. Differentiate between marginal opportunity costs and opportunity costs.
9. Why does marginal opportunity cost tend to rise?
10. When can production possibility curve be a straight line?
11. What does slope of PP curve show?
12. Does production possibility frontier indicate the actual level of output or potential level of output?
13. Why is AC curve of U-shaped?
14. What is the area under MC curve called?
15. State true or false and give reasons-
  - The difference between AC and AVC curves tend to increase at higher level of outputs.
  - Average costs falls only when marginal costs fall.
  - Average variable cost can fall even when marginal cost is rising.
  - Should the difference between ATC and AVC be constant because TFC is constant.
  - AS soon as marginal costs starts rising, average variable cost also starts rising
16. State true or false and give reasons-
  - When there are diminishing returns to a factor, total product always decreases.
  - Total product will always only when marginal product increases.
  - Increase in total product always indicates that there are increasing returns to a factor.
  - When there are diminishing returns to a factor, marginal product and total product both always fall.
  - When marginal product falls, average product will also fall.
  - Under diminishing returns to a factor. Total product continues to increase till marginal product reaches zero.
  - Total product always increases whether there is increasing returns or diminishing returns to a factor.
17. Explain the kinds of elasticity of supply with table and diagrams.
18. Explain the causes of shifting of demand curve to the right.
19. Differentiate between expansion in demand and increase in demand.
20. As per CBSE guidelines it requires all Class XII students to make a project file for Economics subject. Following essentials are required to be fulfilled in the project.

Explanation of the concept:

- Meaning and definition
- Application of the concept
- Diagrammatic explanation (if any)
- Numerical explanation related to the concept (if any)
- Students' on views/perception/opinion and learning from the topic

S.No	Heading	Marks allotted
1	Relevance of the topic	3
2	Knowledge content/Research work	6
3	Presentation Technique	3
4	Viva	8
	<b>Total</b>	<b>20</b>

### **Suggested topics from the Syllabus:**

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>-Price Determination</li> <li>-Opportunity cost</li> <li>-Demand and its determinants</li> <li>-Production- Returns to a factor</li> <li>-Monopoly</li> <li>-Money Multiplier</li> <li>-Govt. Budget and its components</li> <li>-Exchange rate systems</li> <li>-Balance of payments</li> </ul> | <ul style="list-style-type: none"> <li>-Price Discrimination</li> <li>-Production Possibility curve</li> <li>-Supply and its determinants</li> <li>-Oligopoly</li> <li>-Monopolistic competition</li> <li>-Central Bank and its Functions</li> <li>-Budget deficit</li> <li>-Foreign exchange markets</li> <li>-Any other topic</li> </ul> |
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### **Suggestive List:**

1. Micro and small scale industries
2. Food supply channel in India
3. Contemporary employment situation in India
4. Disinvestment policy
5. Health expenditure of any state
6. Goods and services tax Act
7. Inclusive growth strategy
8. Human development index
9. Self help groups
10. Any other topic

## **PHYSICS**

### **Do complete**

- (i) Working model of investigatory project, report of project (printed file) ,
- (ii) all five activities in experiment file,

- (iii) experiments in experiment file for which observations have been taken in lab before vacation.  
(iv) all the assignments given till date and questions of unit 1, 2, 3, and 4 of question bank.

## **COMPUTER SCIENCE**

### Project Work

The project has to be developed in C++ language with Object Oriented Technology and also should have use of Data files.

Theme of the project can be

Any subsystem of a System Software or Tool

Any Scientific or a fairly complex algorithmic situation

School Management, Banking, Library Information System, Hotel or Hospital Management System, Transport query system

Quizzes / Games

Tutor, Computer Aided Learning Systems

## **BIOLOGY**

### **Reproduction in Organisms**

1. What is reproduction ?
2. What is life span ?
3. Give two examples of organisms in which budding occurs.
4. What is a clone?
5. What do you understand by the process-post fertilization events?
6. What is syngamy?
7. Name the kind of reproduction in bees in which drones are produced.
8. What are gemmules?
9. Which are the two major pre-fertilization events?
10. How does Penicillium reproduce asexually ?
11. What is the significance of sexual reproduction?
12. Give four modes of asexual reproduction.
13. What is vegetative propagation ? Give two suitable examples.
14. What is the basic difference between binary fission and budding ?
15. Coconut palm is monoecious while date palm is dioecious. Why are they called so?
16. How does yeast reproduce asexually ? Show it diagrammatically.
17. What do you understand by the term gametogenesis?
18. Distinguish between oviparous and viviparous animals.
19. Describe the significance of parthenogenesis.
20. Describe the major events in sexual reproduction.
21. Where does syngamy occur ? What is the significance of syngamy?

### **Sexual Reproduction in Flowering Plants.**

1. What is the site of microsporogenesis?
2. What do you understand by double fertilization?
3. Name the male and female reproductive structures in the flower?
4. Define anemophily.
5. Explain the term cleistogamy.
6. What do you understand by artificial hybridisation?
7. What is apomixis?
8. Define self-incompatibility

9. Name a cultivated plant in which neither fruits nor seeds are formed.
10. List two characteristics of pollen grains that favour anemophily in plants.
11. List any three biotic agencies that bring about pollination.
12. What are parthenocarpic fruits?
13. What is emasculation? Explain its importance in hybridization.
14. Mention the various functions of tapetum.
15. Draw a sectional view of a pollen grain and label
  - (i) Intine (ii) Exine (iii) Germ Pore (iv) Generative Cell
16. Define triple fusion! What is the product of this process. What does the product develop into?
17. Mention the characteristics of water pollinated flowers.
18. Differentiate between microsporogenesis and megasporogenesis
20. Give the origin, structure and function of the pollen tube.
21. Draw a labeled diagram of L.S. of an anatropous ovule of an angiosperm:-
  - (i) Nucellus (ii) Integuments (iii) Antipodal cells (iv) Secondary nucleus
22. What is double fertilization? Describe the post-fertilization changes leading to the formation of seed.
23. Briefly describe the structure of seed. Describe the importance of seeds.

### **Human Reproduction**

1. When a male is known as sterile?
2. What is meant by regeneration?
3. Which hormone in females stimulates the production of milk during lactation.
4. How many sperms will be produced from 100 primary spermatocytes and how many eggs will be produced from 100 primary oocytes?
5. What is the function of Leydig's cells?
6. What is spermiogenesis?
7. Name the type of placenta in mammals.
8. Name the pregnancy hormone.
9. Why is there no menstrual cycle during pregnancy?
10. Mention the role of relaxin.
11. State differences between spermatogenesis and oogenesis.
12. What is colostrum? What is the important function attributed to it?
13. Describe the formation and the function of corpus luteum.
14. What are the different stages of spermatogenesis, show these stages diagrammatically?
15. Give a labeled diagram of the sectional view of the ovary.
16. Why is the human placenta referred to as haemochorial type? Name the hormone it secretes to facilitate parturition.
17. What is the role of the following hormone in the female reproductive cycle (i) FSH, (ii) LH, (iii) Progesterone?
18. Describe the sequence of changes in the body of a pregnant woman up to the time of parturition.
19. Where does oogenesis take place? Describe diagrammatically the stages of the process?
20. Draw a labeled diagram of the electron microscopic view of the mammalian sperm.
21. Describe the male accessory glands giving their functions.
22. Draw a labeled sketch of the cross section of a part of seminiferous tubule of the testes of an adult human.
23. What is menstruation? What are the specific actions of FSH, LH, estrogen and progesterone in the menstrual cycle?

### **Reproductive Health**

1. What is the chemical constituent of Oral contraceptive pills.
2. Name any copper-releasing IUD.

3. Name the technique used for determining the sex and condition of the foetus.
4. List two most common STDs.
5. Write the full form of the following ( i) MMR , (ii) IVF.
6. Elaborate the following abbreviation.(i)GIFT (ii) ICSI (iii) ART.
7. What is 'Saheli'? Who prepared it?
8. List some reasons of infertility.
9. Given the causal organisms of the following STDs. (i) Syphilis (ii) Genital Herpes.
10. What is periodic abstinence?
11. What is vasectomy?
12. What are test tube babies?
13. Describe the technique by which genetic disorder in a developing foetus can be detected.
14. What do you mean by STDs? Describe Gonorrhoea and Syphilis.
15. Why medical termination of pregnancy is done. Is MTP legalized in India.
16. What is birth Control? Briefly explain the surgical methods of birth control with suitable diagram.
17. Explain various special techniques used in assisted reproduction technologies (ART).

#### PROJECT WORK: TOPICS

- EFFECT OF LIGHT ON GERMINATION OF SEEDS
- EFFECT OF TEMPERATURE ON GERMINATION OF SEEDS
- EFFECT OF MICROBES ON FERMENTATION OF JUICES
- COAGULABLE AND NON COAGULABLE PROTEINS OF MILK
- EFFECT OF ANTIBIOTICS ON MICROBES OF MILK
- NUTRIENTS PRESENT IN DRY LEAF
- EXTRACTION OF PIGMENTS FROM DIFFERENT FLOWERS
- NEW RESEARCH IN FIELD OF BIOLOGY

TO BE RECORDED AND SUBMITTED IN FILE  
COMPLETION OF PRACTICAL FILE

### **PSYCHOLOGY**

Q1) Develop a case profile of an individual who has excelled in areas like sports, academics, music etc or having special needs like learning disability , autism etc. or those with interpersonal social problems i.e poor body image, obesity , temper tantrums , not getting along with peers, withdrawn etc. Or any other psychological disorder. Find the background information and development history of the individual.

Q2). PRACTICAL FILE:

- Complete writing the following in the practical file. Use the Class 11 Text book for information on the 1st practical.

#### GUIDE LINE FOR INTRODUCTION TO PSYCHOLOGICAL TESTING

- Introduction- Definition of psychology
- Goals of psychological inquiry
- Definition of a "Psychological Test"
- Characteristics of a "Psychological Test"- Explain standardization (Reliability, Validity and norms, in detail)

- Types of Psychological Tests
- Uses of Psychological tests
- Conclusion – summarizing

#### PRACTICAL RAVENS STANDARD PROGRESSIVE MATRICES PROBLEM:

- To assess the intelligence level of the subject using Raven's Progressive Matrices

#### BASIC CONCEPTS

21. Define Intelligence-any two Binet Simon, Weschler, Sternberg Classical approaches- Spearman, Thurstone, Cattell, Guilford, Jensen Contemporary approaches- Gardner and information processing models- Sternberg, PASS Model Assessment of Intelligence
22. Types of intelligence tests
23. Methodology Description of the test Reliability/validity
24. Materials required
25. Subject details
26. Procedure Instructions (first person)
27. Precautions
28. Conduction of the test
29. Behavioural note
30. Introspective report
31. Data analysis based on manual as discussed in class
32. CONCLUSION- GIVEN IN GRADES

#### CHEMISTRY

1. o-nitrophenol is more volatile than p-nitrophenol. why?
2. Give a reaction to prepare unsymmetrical ether.
3. How can you change--- 2-propanol to 1-propanol.
4. What happens when phenol is treated with Br<sub>2</sub> in a non polar solvent.
5. Ethanol has high boiling point than methanol. Why?
6. Write Friedel Craft alkylation of anisole.
7. How is picric acid prepared?
9. How can you distinguish--- 1-phenyl ethanol and 2-phenyl ethanol.
10. How can you change--- phenol to 1-phenyl ethanol.
11. Why phenol is acid but ethanol is neutral? [Foreign 2002]
12. Mention two important uses of methanol. [A.I. 2002]
13. Give the structural formula and name of the product of following reaction. Phenol is treated with excess of aqueous bromine. [A.I. 2002]
14. How is tertiary butyl alcohol obtained from acetone? [A.I. 2005 C]
15. Give chemical test to distinguish between the following pair of compounds (phenol and benzoic acid) [A.I. 2003 C]
16. Write the structure of the molecule of a compound whose IUPAC name is 1-phenylpropan-2-ol. [A.I. 2010]
17. Give reason for the following: Orthonitrophenol is more acidic than orthomethoxyphenol.

#### TWO MARKS QUESTIONS

1. Why is it that phenol is acidic and hexanol is neutral towards a solution of NaOH?
2. Explain giving reasons why- i) Phenol has a smaller dipole moment than methanol? ii) It undergoes electrophilic substitution reactions? [DELHI 2002]
3. How are the following conversions carried out: Propene to 1-propanol  
Phenol to Salicylic acid [DELHI 2006]
4. Describe the mechanism of alcohol reacting both as nucleophiles and as electrophiles in their reactions. [FOREIGN 2008]
5. How would you obtain Picric acid (2, 4, 6-trinitrophenol) from phenol



- I)  $\text{CH}_3\text{C}(\text{Cl})_2\text{-CH}(\text{C}_2\text{H}_5)\text{-CH}_2\text{-CH}_2\text{-OH}$       (II)  $\text{BrCH}_2\text{-CH}(\text{Cl})\text{-CH}_2\text{-CH}_3$       iii)  
 $(\text{CCl}_3)_3\text{C-Cl}$   
 (iv)  $\text{CH}_3\text{-CH}=\text{C}(\text{Br})\text{-CH}(\text{Cl})\text{-CH}_3$

1 -MARK

1. From the given compounds, identify the compound which will undergo  $\text{SN}^1$  reaction faster:



2. What are chiral and achiral objects?
3. Out of ethyl bromide and bromobenzene which can be more easily hydrolyzed?
4. Define the term optical activity of a compound?
5. What happens when  $\text{Cl}_2$  is passed in boiling toluene in the presence of sunlight?

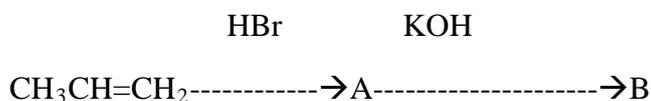
6. Give reason:-vinyl chloride is less reactive than alkyl chloride towards nucleophilic substitution reaction.

7. In the following pairs of halogen compounds, which is faster undergoing  $\text{S}_\text{N}^2$  reaction?  
 2-Bromo 2-methylbutane and 2-Bromopentane.

2-MARK----

8. p-dichlorobenzene has high melting point and solubility than o- or m- dichloro benzene. Why?

9. Write the IUPAC name of the compound A and B in the following reactions:-



10. Define the terms:

(a) Asymmetric molecule

(b) Enantiomers

11. Haloalkanes are insoluble in water but are soluble in benzene. Why?

12. A chloro derivative (A) on treatment with Zn-Cu gives hydrocarbon with 5 carbon atoms. A on reaction with Na in dry ether gives 2,2,5,5-Tetramethyl hexane. Find out the formula of compound A.

13. Define the term retention with an example.

14 Give reasons:-a. Chloroform is kept in dark colour bottles, filled up to the brim  
 b. Grignard reagent should be prepared under anhydrous conditions.

15. Explain with example---

i. Sandmeyer reaction

ii. Dehydrohalogenation

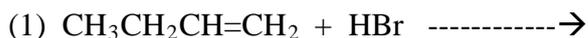
16. Give the uses of-----

i). DDT

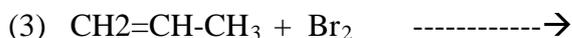
ii). iodoform

3mark-----

17. Complete the following



Light/heat



18. How can you change:-

a. Ethanol to ethyl fluoride

b. But-1-ene to But-2-ene

c. Benzene to biphenyl

19. Give reasons:-

a. Chlorobenzene is less reactive than chloromethane towards nucleophilic substitution reaction.

b. Alkylhalides with aqueous KOH leads to the formation of alcohols but in the presence of alcoholic KOH, alkenes are the major products.

c. Alkylhalides have high boiling point than alkane.

20. How can you change---

i) Ethane to bromoethene

ii) Aniline to Bromobenzene

iii) propene to 1-nitropropene

21. Primary alkyl halide A on reaction with KOH(alc) gave compound B. B on reaction with HBr gave C, the isomer of A. When A was reacted with Na metal it gave a compound D  $\text{C}_8\text{H}_{18}$  that is different than the compound when n-butyl bromide was reacted with Na. Give the structural formula of A and write the equations for all the reactions.

22. Define the following with examples:-

(1) Finkelstein reaction.

(2) Gatterman's reaction.

(3) Swartz reaction.

23. How do the products differ when ethyl bromide reacts separately with :

(1) aq KOH and alc. KOH

(2)  $\text{KNO}_2$  and  $\text{AgNO}_2$

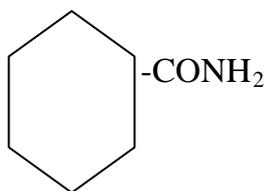
(3) KCN and AgCN

24. Give an example for  $\text{SN}^1$  mechanism for haloalkanes.

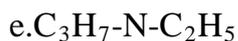
## **ORGANIC COMPOUNDS CONTAINING NITROGEN**

Write the IUPAC names of the following :-

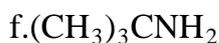
a.



|



|



2. Draw the structures of the following:-

a. N-isopropylaniline

b. p-Toluidine      c. t-butylamine

1 MARK----

1. How can you change :-Aniline to iodobenzene

2. How can you find out whether a given amine is a primary amine? write the chemical reaction involved in the test.

3. It is difficult to prepare pure amine by the ammonolysis of alkylhalides. Explain.

4. Why are alkyl amines stronger base than acylamines?

5. Why does electrophilic substitution on aromatic amines takes place more readily than in benzene?

6. Why does aniline not show Friedel craft reaction?

2 MARKS---

1. Arrange the following in decreasing order of basic strength –

(i) aniline, p-nitroaniline, p-toluidine

(ii)  $\text{NH}_3$ ,  $\text{CH}_3\text{NH}_2$ ,  $(\text{CH}_3)_2\text{NH}$ ,  $(\text{CH}_3)_3\text{N}$

2.  $\text{NH}_2$  group is an ortho and para directing but nitration of aniline gives meta-derivative also. Explain.

3. How can you change aniline to nitrobenzene

4. Explain diazotization with example.

5. Give reasons--

i) Aromatic primary amines cannot be prepared by Gabriel phthalimide synthesis.

ii) Methyl amine is more basic than aniline.

6. How can you change---

i. Nitromethane to dimethylamine

ii. Aniline to chlorobenzene.

7. Give reasons---

i.  $\text{pK}_a$  value of aniline is more than methylamine.

ii. Ethyl amine is soluble in water but aniline not.

8. Explain with example----

i. Carbyl amine reaction.

ii. Gatterman reaction.

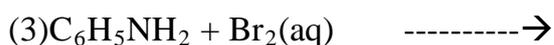
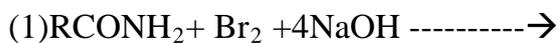
9. How can you distinguish-----

i. Methylamine and aniline

ii. Dimethylaniline and aniline

3 MARK-----

1. Complete the following:-



2. Give reasons—

I. ii. diazonium salts of aromatic amines are more stable than those of aliphatic amines..

3. Explain Hinsberg test. Give required reactions.

4. . How can you distinguish-----

i. Methylamine into ethylamine

ii. Aniline to fluorobenzene

5. Write short notes on---

i. Hofmann bromamide reaction

ii. Ammonolysis

iii. Coupling reaction

6. An aromatic compound A on treatment with aqueous ammonia and heating forms compound B. B on heating with  $\text{Br}_2$  and NaOH forms a compound C of molecular formula  $\text{C}_6\text{H}_7\text{N}$ . Write the structure of the compound A, B and C also write the required reactions.

7. What happens when---

i. ethylamine is treated with chloroform and ethanolic KOH.

ii. sodium nitrite is added in a solution of ethylamine in HCl.

iii. aniline is treated with acetyl chloride.

8. . How can you distinguish-----

i. aniline and phenol

ii. methyl amine and methanol

iii. methyl amine and di methyl amine

9. How can you change---

I aniline to 1,3,5-tribromobenzene

ii. Aniline to acetanilide

iii. aniline to p-hydroxyazobenzene

## **PHYSICAL EDUCATION**

1- CHAPTER IV – PHYSICAL EDUCATION AND SPORTS FOR DIFFERENTLY ABLED.

(I) Concept of disability and Disorder.

(ii) Types, causes and intellectual disability.

(iii) Disability Etiquette.

- (iv) Physical activities for children with special needs.
- (v) Strategies to make physical activities accessible for children.

2- CHAPTER- V- CHILDREN AND SPORTS:

- (i) Exercises for different stages of growth and development.
- (ii) Weight Training.
- (iii) Correct and Bed posture.
- (iv) Postural deformities.
- (v) Corrective measures for postural deformities.

Define and explain the above mentioned topics in Physical Education Notebooks