



# **SARALA BIRLA PUBLIC SCHOOL**

## **WINTER ASSIGNMENT (2019-20)**

STD - XI

Name : \_\_\_\_\_ Class and Section : \_\_\_\_\_ UID No. : \_\_\_\_\_

## **ENGLISH**

1. Design an attractive poster on Digital India.
  2. The music sensation, Lady Gaga is coming to India and will perform at Red Fort in Delhi. Draft an attractive commercial advertisement announcing the concert and giving details regarding the event.
  3. You are Mohan/ Mohini of 48, New Bank Enclave, Lucknow. Write a letter to the editor of local daily complaining about the badly maintained parks of your Colony.

# PHYSICS

1. A wire is stretched to double its length. The strain is  
(a) 2      (b) 1      (c) zero    (d) 0.5
  2. What is the number of Degrees of freedom for a diatomic gas molecule?  
(a) 1      (b) 3      (c) 5      (d) 7
  3. An SHM is given by “ $X = 6.0 \cos(100t + \pi/4)$ ”, where x is in cm and t in second. What is the  
(i) Displacement    (ii) Frequency?
  4. Explain (i) Undamped oscillation                (ii) Forced oscillation
  5. A simple pendulum is transferred from earth to the surface of moon. How will its time period be affected?
  6. Explain law of equipartition of energy with statement.

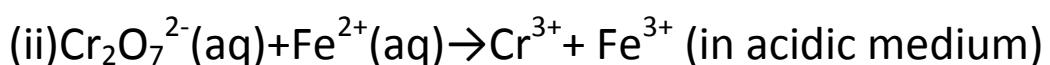
7. Find the value of internal energy of one mole of a diatomic gas. Also, find the value of  $C_V$  and  $C_p$  for the sample of above gas.
8. Derive the expression for speed of the longitudinal waves in an ideal gas (Newton's formula) and also deduce the modified Laplace correction.
9. A spring balance has a scale that reads from 0 to 50 kg. The length of the scale is 20 cm. A body suspended from this spring, when displaced and released, oscillates with a period of 0.60s. What is the weight of the body?
10. State Newton's law of cooling. Deduce the relations:  $\log_e (T - T_0) = -kt + c$ .
11. Give analytical treatment with necessary diagram of stationary waves in a stretched string fixed at both the ends.

OR

- (a) What are beats? Prove that the number of beats per second is equal to the difference between the frequencies of the two superimposing waves.
- (b) Draw the fundamental modes of vibrations of stationary waves in
  - (i) Closed organ pipe
  - (ii) An open organ pipe.

### CHEMISTRY

1. Draw Cis and Trans isomers of CHBr = CHBr. Also write their IUPAC name.
2. Write IUPAC names of the following compounds:
  - i)
  - ii)  $\text{CH}_3\text{-CHOH-CH}_2\text{Cl}$
  - iii)  $(\text{CH}_3)_2\text{-CH - CH = CH}_2$
3. Define with example:
  - i) Inductive effect
  - ii) Carbocation
4. Balance the following redox reaction by ion electron method ;
  - (i)  $\text{MnO}_4^-(\text{aq}) + \text{I}^-(\text{aq}) \rightarrow \text{MnO}_2(\text{s}) + \text{I}_2(\text{s})$  (in basic medium)



5. What is the oxidation state of Cr and S in (i)  $\text{CrO}_5$  and  $\text{H}_2\text{SO}_5$  and why.

### **BIOLOGY**

1. Give the schematic representation of glycolysis.
2. Why photorespiration is a wasteful process?
3. Give the schematic representation of an overall view of Krebs' cycle

### **ECONOMICS**

1. Explain how are equilibrium price and quantity affected when income of the consumers  
a. Increase  
b. Decrease
2. Why price remain unaffected when supply curve is perfectly elastic and demand curve shifts?
3. Write short notes on  
a. Price Ceiling  
b. Price Floor  
c. Viable Industry  
d. Non-Viable Industry
4. List the three ways in which oligopoly firms may behave.
5. Discuss briefly the meaning of 'Price discrimination' and 'product differentiation' with example.

### **ENTREPRENEURSHIP**

1. Enlist any four product oriented benefits from marketing mix.
2. List any four factors that influence the pricing decisions.
3. Define 'Personal Financing'. Give its sources.
4. Discuss the role and importance of mentoring.
5. What purpose does 'Information' serve for an entrepreneur?

### **BUSINESS STUDIES**

1. Discuss the features of a departmental store. How are they different from multiple shops or chain stores?
2. How would you differentiate between street traders and street shops?
3. Why is it said that licensing is an easier way to expand globally?
4. What is international business? How is it different from domestic business?
5. Differentiate between Domestic and International Business.

## **ACCOUNTANCY**

1) Prepare Trading and Profit and Loss Account and Balance Sheet from the following balances, relating to the year ended 31st March, 2019:

	₹		₹
Capital	1,00,000	Wages	50,000
Creditors	12,000	Bank	10,000
Returns Outward	5,000	Repairs	500
Sales	1,64,000	Stock on 1st April, 2018	20,000
Bills Payable	5,000	Rent	4,000
Plant and Machinery	40,000	Manufacturing Expenses	8,000
Sundry Debtors	24,000	Trade Expenses	7,000
Drawings	10,000	Bad Debts	2,000
Purchases	1,05,000	Carriage	1,500
Returns Inward	3,000	Fuel and Power	1,000

*Additional Information:*

(i) Closing Stock was valued at ₹ 14,500.

- (ii) Depreciate Plant and Machinery by ₹ 4,000.
- (iii) Write off Bad Debts ₹ 5,000.
- (iv) ₹ 400 is due for repairs.

2) What will be the treatment of following expenses:

- 1) Carriage inward
- 2) Carriage outward
- 3) Wages to factory workers
- 4) Wages to office peon
- 5) Sales tax collected

3) Why is it necessary to pass adjusting entries at the time of preparing final accounts?

4) What will be the treatment for following adjustments detected after preparation of trial balance:

- 1) Outstanding expenses
- 2) Unaccrued income
- 3) Closing stock
- 4) Bad debts
- 5) Bad debts recovered

5) What are hidden adjustments ?

### **COMPUTER SCIENCE**

1. Write a program in PYTHON to display the pattern like right angle triangle using an asterisk.

Sample Output:

Input number of rows: 5

```
*  
**  
***  
****  
*****
```

2. Write a program in PYTHON to display the pattern like right angle triangle with

number.

Sample Output:

Input number of rows: 5

1

12

123

1234

12345

3. Write a program in PYTHON to make such a pattern like right angle triangle using number which will repeat the number for that row.

Sample Output:

Input number of rows: 5

1

22

333

4444

55555

4. Write a program in PYTHON to make such a pattern like right angle triangle with number increased by 1.

Sample Output:

Input number of rows: 4

1

2 3

4 5 6

7 8 9 10

5. Write a program in PYTHON to make such a pattern like a pyramid with numbers increased by 1.

Sample Output:

Input number of rows: 4

1

2 3

4 5 6

7 8 9 10

## **INFORMATIC PRACTICES**

1. Write a program in PYTHON to find the frequency of each digit in a given integer.

Sample Output:

Input any number: 122345

The frequency of 0 = 0

The frequency of 1 = 1

The frequency of 2 = 2

The frequency of 3 = 1

The frequency of 4 = 1

The frequency of 5 = 1

The frequency of 6 = 0

The frequency of 7 = 0

The frequency of 8 = 0

The frequency of 9 = 0

2. Write a program in PYTHON to input any number and print it in words.

Sample Output:

Input any number: 8309

Eight Three Zero Nine

3. Write a program in PYTHON to print all ASCII character with their values.

Sample Output:

Input the starting value for ASCII characters: 65

Input the ending value for ASCII characters: 75

The ASCII characters:

65 --> A

66 --> B

67 --> C

68 --> D

69 --> E

70 --> F

71 --> G

72 --> H

73 --> I

74 --> J

75 --> K

4. Write a program in PYTHON to find power of any number using for loop.

Sample Output:

Input the base: 2

Input the exponent: 5

$2 ^ 5 = 32$