

EVERWIN VIDHYASHRAM

9.12.19

PA3 REVISION

STD: XI

Physics

Marks:25

I. Answer the following:

5x1=5

1. In a game of tug of war, one team is slowly giving way to the other. Which team is doing positive work and which team negative?
2. A spring is cut into two equal halves. How is the spring constant of each half affected?
3. Can energy be created or destroyed? Comment.
4. In case of earth, at what points is its gravitational field zero?
5. Why do different planets have different escape speeds?

II. Answer in short:

3x2=6

6. Show that the orbital Velocity of a satellite revolving the earth is  $7.92 \text{ Kms}^{-1}$ .
7. Calculate the power of an electric engine which can lift 20 tonne of coal per hour from a mine 180 m deep.
8. A lawn roller has been pushed by a gardener through a distance of 30m. What will be the work done by him if he applies a force of 30 kg-wt in the direction inclined at  $60^\circ$  to the ground?  
 $g = 10 \text{ m/s}^2$ .

III. Answer the following in brief :

3x3=9

9. In a ballistics demonstration, a police officer fires a bullet of mass 50g with Speed  $200 \text{ ms}^{-1}$  on soft plywood of thickness 2 cm. The bullet emerges with only 10% of its initial kinetic energy. What is the emergent speed of the bullet?
10. Explain perfectly inelastic collision in one dimension.
11. Derive an expression for Variation of acceleration due to gravity with altitude

IV. Answer in detail:

1x5=5

12. Obtain an expression for potential energy of a spring.

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Chemistry

Marks:25

SECTION – A

I. Answer in one sentence:

5x1=5

1. Define bond length.

2. Name two phenomena that can be explained on the basis of surface tension.

3. How would you explain LiI is more soluble than KI in ethanol?

4. What is baryta water? Give its one use.

5. What are nucleophiles? Give examples.

II. Answer in short:

3x2=6

6. Which is more polar: CO<sub>2</sub> or N<sub>2</sub>O? Give reason.

7. Compressibility factor, Z of a gas is given as  $Z = pv/nRT$ .

i) What is the value of z for an ideal gas?

ii) For real gas what will be the effect on value of Z above Boyle's temperature?

8. i) What is meant by homolytic cleavage?

ii) What is resonance effect?

III. Answer in brief:

3x3=9

9. Explain the non-planar shape of PCl<sub>3</sub> using valence shell electron pair repulsion theory.

10. When heated in air, the alkali metals form various oxides?

11. Explain Inductive effect with an example.

IV. Answer in detail:

1x5=5

12. Define hybridisation and explain the various type of hybridisation involving S and P orbitals.

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Business Studies

Marks:25

SECTION -A

I. Give one word answer for : 2x1=2

1. A government company is any company in which the paid up capital held by the government is not less than how much?
2. Who is called as a partner whose association with the firm is unknown to the general public?

SECTION-B

II. Give short answers for : 4x3=12

1. What is Hundi?
2. What is Partner by estoppel? Explain  
(or)

State the various types of organisations in the Private Sector?

3. Explain warehousing and its functions.
4. What are the ethical concerns involved in Out-Sourcing?

SECTION-C

III. Give Long answer for : 1x5=5

1. Explain any five objectives of business.  
(or)

Describe Various types of insurance and examine the nature of risks.

SECTION -D

IV. Elaborate the answer: 1x6=6

1. Elaborate the steps involved in online Trading.  
(or)

What do you understand by sole proprietorship firm? Explain its merits and limitations.

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Economics Part -I

Marks:25

I. Give one word answers for :

2x1=2

1. What kind of diagram are more effective in representing the components of cost in a factory?

2. What do we call the difference between the largest and the smallest observations?

II. Answer in short:

1x3=3

1. Give two examples each of sample, population and variable.

(or)

What is "Loss of Information" in classified data?

III. Answer in Detail:

2x4=8

1. Explain the "exclusive" and "inclusive" methods used in classification of data.

2. Does the lottery method always give you a random sample?

Explain.

(or)

"You have unlimited wants and limited resources to satisfy them."

Explain this statement by giving two examples.

IV. Answer in brief:

2x6=12

1. Which of the following method give better results and why?

a) Census

b) Sample

2. Prepare a frequency distribution by inclusive method taking class interval of 7 from the following data.

28	17	15	22	29	21	23	27	18	12	7
2	9	4	1	8	3	10	5	20	16	12
8	4	33	27	21	15	3	36	27	18	9
2	4	6	32	31	29	18	14	13	15	11
9	7	1	5	37	32	28	26	24	20	19
25	19	20	6	9						

(or)

"The Government and policy makers use statistical data to formulate suitable policies of economic development". Illustrate with two examples.