**MILESTONE ACADEMY**

**CLASS – XII (Science) VACATION HOME-WORK SUBMISSION DATE – 17/06/19**

**PC/MS/2019-20/XII/016**

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**ENGLISH**

I. Write an article on ‘Digital India’ in about 150-200 words

 II. Prepare an Illustrated report and express your feelings on **any two** of the following topics

 **in 120-150 words each:**

Streamline your expression along the following lines:

a. Meaning of the topic

b. Case Studies and examples of people who served for the cause, despite challenges.

c. What would you do as an individual to contribute to the cause.

 1. Dignity of Human Life

 2. The Power of Saying ‘No!’ to vices viz.

 Drugs, Alcohol, Bad Company etc.

 3. Being A True Citizen of the Nation

 III. Write a letter to **an imaginary friend** of a different nationality from yours writing about your

 life and lifestyle as an Indian Teenager. (The letter should be in proper format with a Word

 Limit of 120 words)

**PHYSICS-**

1. Statement of Gauss's theorem and its applications to find field due to infinitely long straight wire,

 uniformly charged infinite plane sheet and uniformly charged thin spherical shell.
2. Equipotential surfaces, electrical potential energy of a system of two point charges
3. Capacitance of a parallel plate capacitor with and without dielectric medium between the plates and

 Spherical capacitor.

4. NCERT problems of Back Exercise of Unit - 1 Electrostatics and Unit – 2 Current Electricity

**BIOLOGY- Draw colourful diagrams based on any one of the following topics in full size chart paper**

1. Flowers adapted to pollination by different agencies (wind, insects, birds).
2. Pollen germination on stigma through a permanent slide.
3. Identification of stages of gamete development, i.e., T.S. of testis and T.S. of ovary through permanent slides (from grasshopper/mice).
4. Meiosis in onion bud cell or grasshopper testis through permanent slides.
5. T.S. of blastula through permanent slides (Mammalian).
6. Controlled pollination - emasculation, tagging and bagging.
7. Common disease causing organisms like *Ascaris, Entamoeba, Plasmodium*, any fungus causing ringworm through permanent slides or specimens. Comment on symptoms of diseases that they cause.
8. Two plants and two animals (models/virtual images) found in xeric conditions. Comment upon their morphological adaptations.
9. Two plants and two animals (models/virtual images) found in aquatic conditions. Comment upon their morphological adaptations.

**EG -** Chapter 1 - Isometric Projection from examples 10 to 27 (NCERT Book).

**CHEMISTRY-**

1. Back Exercise of Chapter 2 - Solutions and Chapter 5 - Surface Chemistry (NCERT Book)

**MATHS**

Q1. Find the area of triangle, whose vertices are (2, 7), (1, 1) and (10, 8).

Q2. Evaluate

Q3. If , show that Q4. Find , if is singular.

Q5. If show that Hence, find .

Q6. If , then find the value of , so that . Hence, find

Q7. If , then find and show that

Q8. If and then find the product AB and use this result to solve the

 following system of linear equations :

 and

Q9. The sum of three numbers is 6. If we multiply third number by 3 and add second number to it, we get

 11. By adding first and third numbers, we get double of the second number. Represent it algebraically

 and find the numbers using matrix method.

Q10. Using matrices, solve the following system of equations:

 and

Q11. If then find and hence solve the system of equations

 and

Q12. A merchant plans to sell three types of personal computers – a palmtop model, a portable model and a

 desktop model that will cost Rs 8000/-, Rs 10500/- and 10000/- respectively. He makes the survey of

 two persons, one person estimates that the total monthly demand of computers will be 70 units and the

 other person says that palmtop model type computers will be demanded 30 units and total units

 required is 273 units. If a dealer wants to invest Rs 7 lakh on it. Represent the above situation

 algebraically and find each type of unit sales. How can we use computer in student life and which is

 the best computer model for students?

Q13. Find the value of

Q14. Write the value of

Q15. Prove that

Q16. Prove that

Q17. Prove that :

Q18. If then prove that

Q19. Prove that

Q20. Prove that :

Q21. If prove that

**Physical Education**

Answer the following questions and write them in separate sheet of paper.

**Ch – 1 Planning in Sports**

1. Define Planning.
2. Write the formula for giving bye.
3. Enlist two objectives of intra murals.
4. Briefly explain the advantages and disadvantages of knock-out tournament.
5. Draw a fixture of 19 teams on knock out basis.
6. Draw a fixture of 21 team on knock out basis.
7. Draw a fixture of 9 team on league basis according to the cyclic methods.
8. Draw a fixture of 6 team on league basis according to staircase method.

**Ch – 2 Sports and Nutrition**

1. Define balanced diet.
2. What is food intolerance?
3. Enlist two non-nutritive components of diet.
4. Discuss any three pitfalls of dieting.
5. What do you mean by micro nutrients? Explain in brief about minerals as micronutrients in details.
6. Enlist the macro nutrients.

**Informatics Practice**

Back Exercise of Unit 1 - Networking and Open Standards (Sumita Arora Book)

**Computer Science**

Back Exercise of Unit 1 - Concept of OOP, Constructor & Destructor (Sumita Arora Book)

**CREATIVE EXPRESSION**-**.**

Record and write the conversation between you and the travel agent for a complete package

(food, lodging, sight view, transport, etc.) a complete trip planned for summer vacation.

**For Eg. :- Written Conversation**

Child :- Sir please brief about the tour packages for different cities.

Agent :- Well ! Just come down to our office and I will give you all the details.

**LIFE SKILLS-** Think of situations where you can “give” yourself to others, gifts which money cannot buy –

such as kindness, thoughtfulness, courtesy, consideration, good nature, courage, tolerance, appreciation. Do not make up stories. Talk about a genuine act - do not boast. Write the incident and your experience of situations where you had given yourself.

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