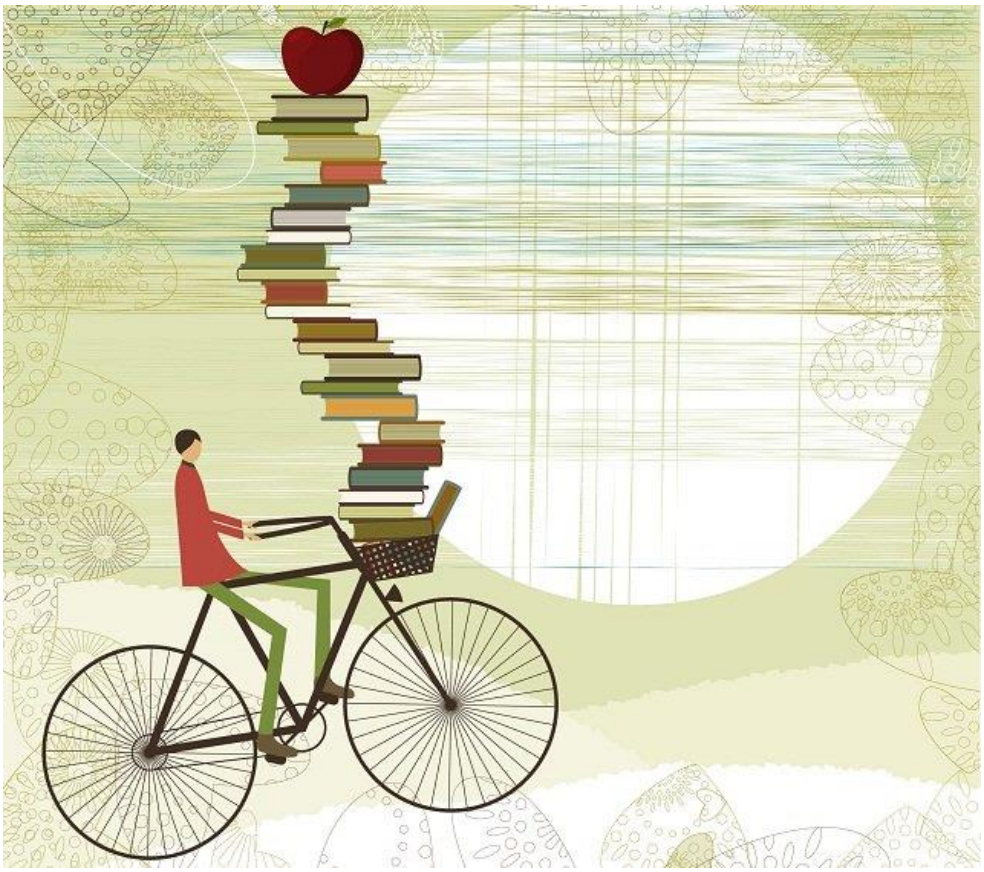
Summer Vacation Task
Class X
Session 2019-20



ARMY PUBLIC SCHOOL & COLLEGE, DHA-II, WING-II, ISLD

English:

1. Write Essay of 200 words on following topics;
    a. Spreading Greenery for a healthy living
    b. How can we avoid accidents?
    c. Advantages of Libraries
    d. How can men change their destiny through determination and hard work?
    e. Traffic problems of a big city
2. Write a letter to in charge Police Station SHO about law and order situation in your locality.
3. Write a letter to the Editor of newspaper complaining about load shedding in your city.
4. Write a letter to the Editor of newspaper about the evil of begging as a profession.
5. Write an application to the Principal to arrange Sports Week in your school.
6. Write an application to the Managing Director of a firm for the post of a Manager.
7. Write an application to the Principal of your school for cancellation of fine.

Urdu:

جماعت دہم: اسباق (۱ تا ۶) حمد۔نعت کا کرایا گیا کام اور پانچ سالہ پرچہ جات کا حصہ معروضی کی دہرائی۔

روداد میلہ جشن بہاراں۔سکول میں منعقدہ کھیلوں کے مقابلے۔

Mathematics:

Practice of unit no 1 and 2

Physics:

Chapter: 10: Simple Harmonic Motion and Waves

Section-B

1) Define Simple harmonic motion and write down its important features or characteristics?
2) Tell whether or not these motions are simple harmonic motion or not?
    a) Up and down motion of leaf in pond
    b) Motion of a ceiling fan
    c) Motion of hands of clock
    d) Motion of plucked string fixed at both of its ends
    e) Motion of honey bee
3) Write down some basic conditions for SHM?
4) Explain the relation $F = -kx$?
5) Show that expression for acceleration of a body executing SHM?
6) What is the displacement of an object in Simple harmonic motion (SHM), when K.E and P.E energies are equal?
7) A body of mass 0.5kgis attached to a spring placed on a horizontal frictionless surface. If the spring constant of this spring is $8Nm^{-1}$ then find the time period of the body?
8) Why does the vibrating body move away from the mean position?

9) Explain the relation between velocity and acceleration of a body performing SHM?
10) What are the factors on which time period of simple pendulum depends?
11) Does time period depend on the amplitude of pendulum and mass of the bob?
12) Find the time period of one-meter-long length of simple pendulum on the surface of earth and moon respectively?
13) Why does a pendulum lose time in summer and gain time in winter?
14) What is the use of simple pendulum?
15) What is second pendulum?
16) What is the frequency of second pendulum?
17) What will be the time period of simple pendulum at the center of the earth?
18) Why the bob of a swinging pendulum does, comes to rest after sometime?
19) Why the bob of a swinging pendulum does come to rest after sometime?
20) Why total energy of vibrating simple pendulum at its mean position is in K.E form?
21) Write differences between transverse and longitudinal waves?
22) Differentiate between mechanical and electromagnetic waves?
23) Prove relation $v = f\lambda$?
24) Describe the condition for diffraction phenomena?
25) What do the dark and bright fringes on the screen of ripple tank represent?
26) Answer the following question:(Ref: Fig.10.18)
    a) What happens to the direction of wave when water waves pass from deep to shallow water?
    b) Are the magnitudes of angle of incidence and angle of refraction equal?
    c) Which angle is greater?

Section-C

1. Prove that the motion of mass attached to a spring is SHM?
2. What are damped oscillations? How damping progressively reduces the amplitude of oscillation?
3. Explain the following properties of waves with reference to ripple tank experiment?
    a) Reflection
    b) Refraction
    c) Diffraction

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    e) Refraction
    f) Diffraction

Chemistry:

WORKSHEET 2 (Ch 10&11)

Section-B

1. Define and give examples of Lewis acids.
2. Define heterocyclic compounds. Draw the structure of pyridine and thiophene.
3. What is pH? Write down its any two valuable applications.

4. Write the equation for the self-ionization of water.
5. Briefly explain neutralization with the help of examples.

Section-C

1. (a) Classify following salts as normal or acidic salts

a.$NaHSO_4$ b.Na_2SO_4 c.$KHCO_3$ d.K_2CO_3

(b) Identify Lewis acids and bases

$AlCl_3$, Ag+, CH_3OH, CH_3-NH_2

(c) List major commercial sources of alkanes

(d) What do you know by destructive distillation?

Chap 12: CHEMICAL EQUILIBRIUM

SECTION-B

Q1: Explain the Le - Chatellier principle.
Q2: Predict three chemical equations in which KC has no unit.
Q3: Write the macroscopic properties of reversible reaction.
Q4: What is the importance of equilibrium constant for a chemical reaction?
Q5: Write the KC expression for $CoCl_3 \Leftrightarrow CoCl_3.6H_2O$.
Q6: Differentiate between the reversible and irreversible reaction.
Q7: Define Catalyst and give examples.
Q8: State conditions for equilibrium.

SECTION-C

Q: a. State law of mass action. Derive the expression for equilibrium constant for the given reaction

$$C_6H_{12}O_6 + 6O_2 \Leftrightarrow 6CO_2 + 6H_2O$$

$$H_2 + CO_2 \Leftrightarrow H_2O + CO$$

b. Draw the concentration-Time graph for chemical equilibrium.
c. Explain the preparation of sulphuric acid on large scale.

Pakistan Studies

Write political concepts accordingly:

1. Stewardship
2. Consolidation of Land
3. Fragmentation of Land
4. Labour Union & Student Union
5. Semi-Rigid Constitution
6. Preamble of 1973 constitution
7. Shariat Appellate Bench
8. Shariat Bench &Federal Shariat Bench
9. 58-2B
10. Floor Crossing in Parliament
11. Bicameral Legislature

12. Geneva Accord
13. Lahore Declaration
14. Privatization Commission vs Nationalization
15. Repeal of 58-2B
16. Presseler Amendment
17. Ojhri Camp Disaster
18. Defensive Policy
19. Retire debt and adorn the country scheme
20. No confrontation Policy
21. PLS Account
22. Federal Shariat courts and subservient courts
23. Zakat and Usher ordinance, Ehtram-e-Ramazan Ordinance
24. Condemnation Resolution, Kargil Invasion

Computers

Section B

i. Write down the algorithm to find exponent of a given number.
ii. Draw a flow chart to find the largest of the three unequal numbers.
iii. Write down the three fundamental elements of a structured language and describe each element briefly.
iv. In which cases a switch statement is a better option than that of Else- If statement? Justify your answer.
v. Why space sequence is used? Explain with examples.
vi. What do you know about preprocessor Directives? Give examples.
vii. Write a note on escape sequence and justify how escape sequence is used in C to control your outputs?

Section C

i. Explain preprocessor directives in detail?
ii. Why it's important to know about order of precedence of operators in C?
iii. Write a C program that reads the Length and Wirth of a Rectangle and prints its area

Biology

Chapter#10(Gaseous Exchange)

Section A

1. Describe gaseous exchange in humans.
2. Assess the adverse effects associated with smoking on health.
3. Point out bad social aspects of smoking
4. Predict how the kidney helps to overcome the problem of dehydration

5. Recognize the right treatment of kidney problems.
6. What is hemodialysis?
7. Trace the movement of a molecule of urea from blood to urethra using flow chart diagram.

Section B

4. Rationalize the importance of cross ventilation in homes.
5. What is Pneumonia; describe its symptoms, causes and treatments.
6. What is lung cancer?

Islamiyat:

جماعت دہم: سورہ الاحزاب آیات (۱ تا ۴۰) الکلمات والتراکیب لکھنے ہیں اور ترجمہ یاد کرنا ہے۔
پانچ سالہ پرچہ جات حصہ معروضی یاد کرنا ہے۔

Note: Kindly do your summer task on loose sheets.