INDIAN SCHOOL AL WADI AL KABIR

DEPARTMENT OF SCIENCE 2016-17

HOLIDAY ASSIGNMENT – SUMMER VACATION

CLASS 9

1. Journal completion for Biology and Chemistry.
2. Completion of worksheet on the

 Chapter : Motion.

1. Completion of the numerical based

 worksheet.( attached)

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**Numerical based worksheet -PHYSICS**

1. The velocity-time graph for a car is shown in the figure below



Using this graph, calculate

1. What type of motion is represented by (i) AB (ii) BD (iii) DE?
2. The acceleration in the first two hours , in the next two hours and in the last two hours.
3. The total distance travelled by the car.
4. the average speed of the car.
5. A body is moving in a straight line and its displacements at various instants of time are given are given in the following table:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| TIME | 0 | 1  | 2 | 3 | 4 | 5 | 6 | 7 |
| DISPLACEMENT | 4 | 6 | 10 | 10 | 10 | 16 | 20 | 24 |

Plot the displacement-time graph and calculate the average velocity, in the time interval of 1s to 5s.

1. The following table represents the distance of a car with time in a fixed direction.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| TIME | 0 | 1 | 2 | 3 | 4 |
| DISPLACEMENT | 0 | 10 | 20 | 30 | 40 |

Draw distance-time graph and with its help find

1. The distance travelled by the car at the of 2.5s.
2. The speed of the car.
3. A racing car has a uniform acceleration of 5 m/s2. What distance will it cover in 20 seconds after starting from rest?
4. Brakes applied to a car produce a uniform retardation of 0.9 m/s2. If the car was travelling with a velocity of 27m/s, what distance will it cover before coming to rest?
5. Find the initial velocity of a car that is stopped in 10 seconds by applying brakes.

Retardation due to brakes is 2.5 m/s2.

1. A body undergoes an acceleration of 10 m/s2 starting from rest. Find the distance travelled by it in 5 seconds.
2. A bullet is fired in a wall with velocity of 100 m/s. if the bullet stops at a depth of 10 cm inside the wall, find the retardation provided by the wall.
3. A bus starting from rest moves with a uniform acceleration of 0.1 m/s2for two mins. Find (a) the speed acquired (b) the distance travelled in the period of time.
4. A train is travelling at a speed of 90 km/h. the brakes are applied so as to produce a uniform acceleration of -0.5 m/s2. Find how far does the train go before it is brought to rest?
5. A ball is gently dropped from a height of 20 m. If its velocity increases uniformly at the rate of 10 m/s2, with what velocity will it strike the ground? After what time will it strike the ground?
6. An object dropped from a cliff moves down with a acceleration of 10 m/s2. Find its speed after two seconds it was dropped.
7. A body starts sliding over a horizontal surface with an initial velocity of 0.5 m/s. Due to the friction its velocity decreases at the rate of 0.05 m/s2. How much time will it take to stop?
8. An aeroplane taking off from a field has a run of 500m. What is the acceleration and take off velocity if it leaves the ground 10 seconds after the start?
9. An object undergoes an acceleration of 10 m/s2 starting from rest. Find the distance travelled by it in 5 seconds.
10. A car travelling at 60km/h uniformly retards for 10s and reaches a velocity of 45km/h . Find the retardation.
11. When the brakes are applied to a car, it retarded uniformly at 5 m/s2 and stopped after 15s . Find the initial velocity of the car.
12. A bullet is fired into a wall with a velocity 50 m/s. If the bullet stops at a depth of 10 cm inside the wall, find the retardation provided by the wall.
13. A car travelling at 18 km/h speeds up to 54 km/h in 5 seconds. What is its acceleration?
14. A moving train is brought to rest within 20 seconds by applying brakes. Find the initial velocity if the retardation due to application of brakes is 2 m/s2.
15. A racing car has uniform acceleration of 4 m/s2. How much distance will it cover in 10 seconds after the start?

Prepared by Ms. ANU ANNIE MATHEWS

**CHEMISTRY**

SECTION A

I.Convert the following temperatures to the Celsius scale :

(a)239 K

(b) 417K

(c)373 K

II. Convert the following temperatures to kelvin scale:

(a)10oC

(b)272oC

( c)415oC

(d)15oC

III . Differentiate between:

i)Mixtures and Compounds

ii)Elements and Compounds

iii)Metals and Non metals

IV. Give reasons:

i)Evaporation causes cooling.

ii) Boiling is a bulk phenomenon.

iii) Increase in wind speed increases the rate of evaporation.

iv) Steam causes more severe burns than boiling water.

v) Water droplets are seen on the outer surface of the glass containing ice cold water.

**BIOLOGY**

SECTION B

1.Give any two examples each for:

 i)Indigenous breeds and exotic breeds of cattle

 ii)Indigenous breeds and exotic breeds of poultry

2.What are the two components of cattle feed?

3.State any two desirable traits for developing poultry varieties.

4.How is culture fisheries different from capture fisheries?

5 .How are catlas different from common carps in their feeding aspects?

6 . What is paddy cum fish farming?

7. A major problem in composite fish farming is lack of availability of good quality seeds.

 How is this problem rectified?

8. Name some local bee varieties used for commercial honey production.

9. Briefly explain the following terms:

 i) Lactation period

ii) Maintenance requirement of cattle

iii) Broilers

10. Explain the management practices in dairy farming.

Prepared by Ms. Zeema V