M - 67

SUMMATIVE ASSESSMENT - I - DECEMBER 2021

GENERAL SCIENCE - Paper I

(Physical Science)

(English Version)

PART - A & B

IX Class] (Max.Marks: 40) [Time: 2.45 Hrs.

Marks : 35] PART - A [Time: 2.15 Hrs.

General Instructions :

i) Answer all the questions in separate answer sheet.

ii) Question paper contains 3 sections.

iii) In Section - III, internal choice is there.

iv) Time for examination is 2.45 min, in which 15 min. are meant for reading the question paper.

* * *

Section - I

Note: i) Answer all the questions.

ii) Each question carries one mark.

iii) Write the answers in 1 or 2 sentences. *7x1=7*

1. Why is it difficult to shoot a fish swimming in water ?

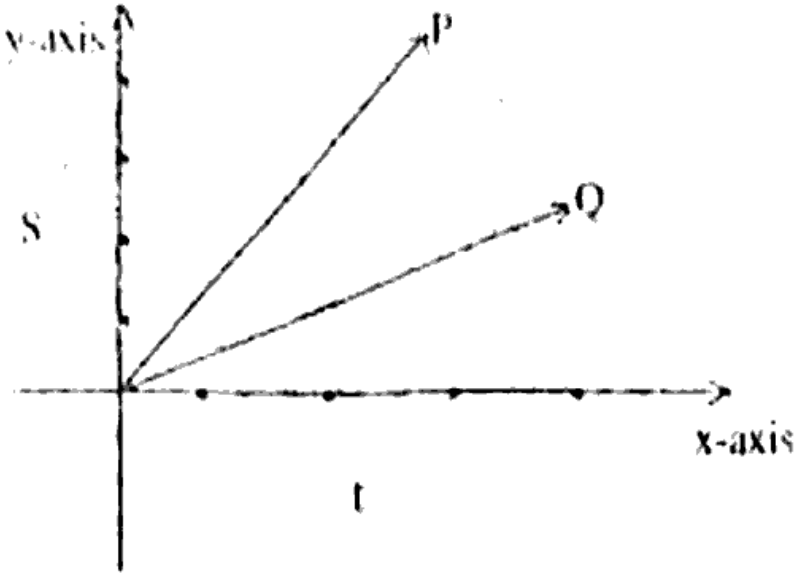
2. Write the formulae for acceleration and explain each terms in it ?

3. What will happens if the diffusion of gases are not taking place ?

4. Explain about Impulse ?

[Turn Over

5.



In the given figure, distance Vs time graphs showing motion of two cars P and Q are given which car moves past ?

6. Write the experimental procedure, the diffusion of liquids ?

7. *Observe the following table.*

Material medium	*Refractive index*
Water	1.33
Ruby	1.71
Diamond	2.42
Ice	1.31

Now, answer the following questions.

i) From the above table, in which medium speed of light is more ?

Section - II

Note: ***i) Answer all the questions.***

ii) Each question carries two marks.

iii) Write the answers in 4 to 5 sentences. *6x2=12*

8. Write the differences between velocity and speed.

9. Draw the diagrams arrangement of Particles in solid, liquids and gases

10. A man of mass 30 kg uses a rope to climb which bears only 450N. What is the maximum accoleration with which he can climb safely.

11. **What would happen if air bags are not used in cars.**

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12. Draw the following figures

i) Refraction when the light ray travels from rarer medium to densor medium.

ii) Refraction when the light ray travels from densor medium to rarer medium. https://www.apboardonline.com

13. Which law is applied in the motion of racket and in the swimming of a person.

Section - III

Note: ***1) Answer all the questions.***

2) Each question carries four marks.

3) In the section, every question has an internal choice. Answer any one alternative.

4) Write the answer in 8-10 sentences. ***4x4=16***

14. a) List out the material required and write the experimental procedure to observe the speed of two gases ?

(OR)

b) List out the material required and write the experimental procedure to verify the Newton's third law of motion.

15. a) Explain the internal reflection and write the applications ?

(OR)

b) Explain Newton's laws of motion with examples.

16. a) Write the properties of solids, liquids and gases ?

(OR)

b) A vehicle travels from the rest and moving with the acceleration of 4m/sec^2, then find the distance travelled at 20th second in kilometers ?

17. a) *Read the following table and answer the questions.*

Vehicle type	*Total distance travelled*	*Total time taken*	*Average speed*
Car	500 m	100 sec	5m/sec
Bike	400 m	200 sec	2m/sec
Auto	300 m	150 sec	–
Lorry	1500 m	500 sec	–

Questions:

i) Find the average speed of Lorry ?

ii) Which of the above vehicles average speed is more ?

iii) What is instantaneous speed ?

iv) Find the average speed of auto ?

(OR)

b) *Observe the following table.*

Mass of the object	*Initial velocity*	*Final velocity*
m_1	v_1	u_2
m_2	u_2	v_2

Now, answer the following questions.

i) What is the initial momentum of the object with mass 'm_1' ?

ii) What is the final momentum of the object with mass 'm_2' ?

iii) What is the change in momentum of the object with mass m_2 ?

iv) What is Rate of change of velocity ?