54-A

SUMMATIVE ASSESSMENT - I - 2017-2018
PHYSICAL SCIENCE - PAPER - I

(English Medium)

PART - A & B

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

Instructions :

1. 15 Minutes are allotted for reading the question paper (Part A & B) in addition to 2.30 hours for writing the answers.
2. Part - A answers should be written in a separate answer book.
3. There are three Sections in Part - A.
4. Answer all the questions.
5. Every answer should be visible and legible.
6. There is internal choice in Section - III.
7. Part-A & B should be given at the beginning of the exam only.

Marks : 30   **PART-A**

Section - I

Note: 1. Answer all the Questions.

2. Each Question carries 1 Mark

3. Answer each question in 1 or 2 sentences $4 \times 1 = 4$

1. Give two examples for substances that change directly from solid state to gaseous state on heating.

2. Name of the property on which LPG and CNG are filled in cyllinders.

3. Complete the table.

Physical Quantity	Definition	Units
Velocity	Rate of change in displacement	
Acceleration		ms^{-2}

4. Find the momentum of a 6kg ball, moving with $2.2ms^{-1}$ velocity.

Section - II

Note: 1. Answer all the Questions.

2. Each Question carries 2 Marks $5 \times 2 = 10$

5. Though the liquids have mass just as solids, they do not have fixed shape. Justify.

6. The change of momentum due to impulse is 1.8 k.g.m s⁻¹. If the time of impulse is 2sec, then calculate the force produced.

7. Write an equation of motion which gives relation between s, u, a and t. Write the terms of that equation.

8. How can you prove Newtons third law of motion by using two spring balances given to you.

9. A cyclist is moving on a straight road. The distance covered by him with respect to time is given in the table.

   Answer the following questions based on the data.

Time in seconds	0	1	2	3	4	5
Distance in meters	0	4	8	12	16	20

   (i) What type of motion that the cyclist have?

   (ii) Calculate the instantaneous speed at 3rd second.

Section - III

Note: 1. Answer all the Questions.

2. Each Question has internal choice

3. Each Question carries 4 Marks $4 \times 4 = 16$

10. a) Describe the procedure to observe the speed of diffusion of gases.

   (OR)

   b) What are the factors that influence the evaporation and explain how the surface area of a liquid effects the evaporation.

11. a) Suggest an activity to find the acceleraton of an object moving on an inclined track.

(OR)

b)Static inertia and dynamic inertia are the two types of inertia. Explain any one type of inertia with an activity

12. Matter can be existed in solid, liquid or gaseous state.

a) Prepare a comparative table of their properties of these three states.

(OR)

b) Study the temparature vs state change graph and answer the questions given below.
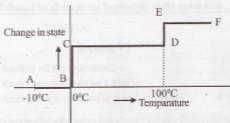
i) Mention the stages between ice at -10°c and water at 100°C   (2m)

ii) Which part of a graph indicates melting of ice.   (1m)

iii) Express the boiling temparature of water in Kelvin scale.   (1m)

13. a) Draw the distance vs time graph when the speed of a body increases uniformly. Name the motion, when an object is moving with constant velocity.

(OR)

b) Draw a diagram for action and reaction forces acting on two different objects. On which law the law of conservation of momentum depends?

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SUMMATIVE ASSESSMENT - I - 2017-2018

PHYSICAL SCIENCE - PAPER- I

(English Medium)

Class IX

Part - B

Time : 30minutes   Marks : 10

Academic standard	AS₁						AS₂	AS₃	AS₄	AS₅	AS₆		T o t a l	G r a d e
Q.No's	1	2	3	4	7	10	14-25	5	26-29	8	11	9	12	13	6	30-33		
Marks																		
Total																		

Name of the Student : .... Roll No.: ....

Note:

1. **Choose the correct answers from the options given below and write them in CAPITAL letter.**

2. **Each Question carries $\frac{1}{2}$ mark**

14. Which of the following are least diffusable material   (   )

    A) Gases   B) Liquids   C) Solids   D) Both gases and liquids

15. **Ramu :** Change of liquid into vapour at any temparature below its boiling point is evaporation

    Somu : Evaporation is a Surface phenomena.   (   )

    A) Ramu correct, Somu incorrect   B) Ramu incorrect, Somu correct
    C) Both Ramu & Somu incorrect   D) Both Ramu & Somu correct

16. The substance which occurs in three states of matter   (   )

    A) Naphthalene   B) water

    C) Alcohol   D) Iodine

17. Which of the followng substance / Substances is/ are not undergo sublimation ( )

    i) Mercury   ii) Bromine   iii) Spirit   iv) Camphor

    A) only (i)   B) i & ii   C) i, ii & iii   D) Only iv

18. In an Uniform circular motion .... is constant

    A) Velocity   B) acceleration   C) Displacement   D) Speed

19. An object is sliding down on an inclined plane. The velocity changes at a constant rate for 10m/s to 15 m/s in 2 seconds, its acceleration is ( )

    A) 5 m/sec²   B) 3 m/ sec²   C) 2.5 m/sec²   D) 4.5 m/sec²

20. Pick out the odd physical component ( )

    A) Velocity   B) displacement   C) Speed   D) acceleration

21. The wrong statement of the following is: ( )

    P) When direction of velocity and acceleration are one and the same, the speed increases.

    Q) When direction of velocity and acceleration are in opposite directions, the speed decreases

    R) When direction of velocity and acceleration are one and the same, the speed decreases

    S) There exists an acceleroton of a body at a point where its speed becomes zero for an instant , the body returns in the direction of acceleration.

    A) S   B) R   C) Q   D) P

22. **Assertion (A) :** The acceleration produced by a force in the motion of a body depends only upon its arms.

    Reason (R): Larger its the mass of the body lesser will be the acceleration produced.   ( )

    A) Both A & R are correct and R is the correct explanation of 'A'

    B) Both A & R correct but R is not the correct explanation of 'A'

    C) 'A' is correct but 'R' is in correct.

    D) 'A' is incorrect but 'R' is correct.

23. Shock absorbers of vehicles obey _____ ( )

    A) Newton's first law of motion   B) Newtons second law of motion

    C) Newton's third law of motion   D) Law of conservation of momentum

24. Match the following ( )

    i) Mass   P) Newton

    ii) Force   Q) Newton - sec

    iii) Momentum   R) Kilogram

    A) i - P, ii - R, iii - Q   B) i - R, ii - iii - P

    C) i - P, ii - Q, iii - R   D) i - R, ii - P, iii - Q

25. The correct order of the following sentences ( )

    P.   Hold one end of the thread and ask your friend to hold the other end .

    Q.   Pass a thread through straw and tape a balloon on the straw

    R.   Inflate a balloon and press its neck with fingers to prevent air escaping from it.

    S.   Remove your fingers from the balloon neck and observe the movement of a balloon.

    A) Q, R, P, S   B) R,Q,P,S   C) S,R,Q,P   D) S,Q,P,R

26. A car and lorry are having same momentum ,if same breaking force is applied then ( )

    A) Lorry comes to rest in shorter distance

    B) Car comes to rest in shorter distance

    C) Both travel same distance before coming to rest

    D) Can not say.

27. If a body moves in a curved path, the tangent drawn at a point on the curve gives .... at the instant ( )

    A) Speed   B) Instantaneous speed

    C) Uniform velocity   D) the direction of velocity

28. The reason for causing severe burns of steam than hot water ( )

   A) The energy of particles of hot water is less than the particles of vapour

   B) The energy of particles of hot water is more than the Particles of vapour

   C) The energy of particles of hot water is zero

   D) None of the above

29. Pushing of cycle is easier than pushing of a car. Because ( )

   A) Inertia of cycle is more   B) Inertia of a car is more

   C) Size of a bicycle is less   D) None of the above

30. $570°K = \quad ?°C$ ( )

   A) $843°C$ B) $297°C$ C) $273°C$ D) $300°C$

31. Children while playing cricket often use tennis ball instead of cricket ball.
   Because ( )

   A) Impulse caused by a cricket ball is more

   B) Imapulse caused by a cricket ball is less

   C) Tennis ball its lighter than cricket ball

   D) It is easy to play with tennis ball

32. You are riding a motor cycle Speedometer of your bike shows 50 km/h. That
   indicates ( )

   A) Instantaneous speed   B) speed

   C) average speed   D) acceleration

33. Path of a stone projected with a certain angle is ( )

   A) straight line , B) Parabola   C) Circular   D) Perpendicular