

R - 43
SUMMATIVE ASSESSMENT - III - 2015 - 2016

GENERAL SCIENCE - Paper - I

(Physical Science)

(PART - A&B)

(English Version)

(Max. Marks : 40)

[Time : 2.45 Hrs.

Class : IX]

PART - A

Marks : 30

INSTRUCTIONS

1. In the time duration of 2 hrs 45 min 15 minute is exclusively allotted to read and understand the question paper
2. The question paper comprises of Three sections, I, II, III.
3. All questions are compulsory.
4. There is no overall choice. However there is internal choice to the questions under section - III.

SECTION - I

Note : Answer the following Questions.

4 x 1 = 4

Each question carries 1 mark.

1. Name two quantities that vary periodically at a place in air as a sound wave travels through it.
2. Ramu has saturated sugar solution. What suggestion will you give to change that solution into super saturated solution?
3. Define the law based on the given picture?
4. 32 grams of Oxygen molecule is has 1 mole of particles. Caluclate the number of moles in 8 gms of Oxygen (O_2) molecule.

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SECTION - II

Note : Answer the following questions.

Each question carries 2 marks.

5 x 2 = 10

5. Does a situation occurs when two particles do not exert gravitational force on each other why?
6. Frame any four questions to know whether Tincture of Iodine is a compound or a mixture.
7. Explain the following terms with suitable examples.
a) Pure substance b) Colloidal solution
8. A car covers half the distance at a speed of 60 kmph and the other half at 40 kmph. Find the average speed of the car?
9. Explain how hand pole is beneficial to the tight rope walker in a circus.

SECTION - III

Note : Answer all the question in the following.

4 x 4 = 16

Each question carries 4 marks.

10. A 10 kg ball is dropped from a height of 10 m. Find
 - a) The initial potential energy of the ball.(in Joules)
 - b) The kinetic energy just before it reaches the ground. (In Joules)
(Here take $g = 10\text{m/s}^2$)

(OR)

- a) We know that ultra sounds are used in finding the depth of the sea. Ultra sounds also have wide applications in different fields. Basing on their applications fill the table given below.

1. Industry 2. Medical

| Contd 3rd Page

- b) A research team sends a sonar signal to confirm the depth of a sea. They heard an echo after 6s. Find the depth of the sea. (Speed of sound in sea water is 1500 MS^{-1})

11. How can you find experimentally the relative density of kerosene. Explain?

(OR)

Prove Newton's third law of motion with the help of an activity.

12.

Element	Hydrogen	Oxygen	Carbon	Calcium
Atomic weight	1	16	12	40

- a) Based on the above table calculate the molecular weight of CaCO_3
- b) Assume that the molecular weight of a molecule is 18. If the molecule contains Hydrogen and Oxygen. Write the formula of that molecule.

(OR)

Wooden block	Honey	Lead Shot
Water	Hydrogen gas	Iron rod

According to the properties of matter and based on the materials given in the table, answer the following questions.

- a) Which substance is having high diffusion rate? Why?
- b) Which substance will exhibit evaporation property?
- c) Name the fluids which are incompressible.
- d) Which substances do not change their shape and volume due to less force effect.

[Turn over

13. A race took place between tortoise and rabbit for a target of 1000 m. Ten minutes after the race has been started both took rest for 5 minutes. In the first 10 minutes tortoise covered a distance of 200m and rabbit covered a distance 400 m. Draw the distance time graph for this situation?

(OR)

- a) We know that an atom consists of proton, neutron and electron. Draw a diagram to reflect the structure of a atom.
- b) Why do we neglect the mass of electron, while calculating the atomic mass?



R - 43 A
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GENERAL SCIENCE - Paper - I
(Physical Science)
(PART - B)
(English Version)
(Max. Marks : 10) **[Time : 30 Mts.**

Academic Standard	AS1	AS2	AS3	AS4	AS5	AS6	Total
Question Numbers	1, 7, 8, 10, 14-27	5, 6	3, 11, 28, 29	4, 12, 30, 31	13	2, 9, 32, 33	
Max. Marks Allotted	16	4	6	6	4	4	40
Marks obtained							
Grade							

Name Roll No.

Instructions

- i) Answer all the questions.
- ii) Each question carries 1/2 mark.
- iii) Choose the correct answer and write its letter in the brackets.

14. The vector quantity among the following is ()

- a) Mass
- b) Distance
- c) Speed
- d) Velocity

15. Identify the correct statement ()

- i) The process of changing solid to liquid at constant temperature is known as melting
 - ii) The process of changing liquid to solid at constant temperature is known as boiling.
- a) i - true, ii - false
 - b) i - false, ii - true
 - c) i, ii both are true
 - d) i, ii both are false

[Turn over

16. If a vehicle is travelling towards North with a constant speed of 30 m/s then the net force acting on it is ()
 a) 0 N b) 30 N c) 15 N d) 300 N

17. Choose the correct answer from the following ()

Group - A**Group B**

i) oil from water

b) Separating funnel

ii) Ammonium chloride and salt

b) Filtration

iii) Tea leaves from Tea

c) Sublimation

a) i-a, ii-b, iii-c

b) i-a, ii-c, iii-b

c) i-c, ii-b, iii-a

d) i-c, ii-a, iii-b

18. Two bodies having masses 10 kg and 40 kg move in circles of radii 10 m and 20 m respectively. If they complete the circle in equal time, then the ratio of their centripetal accelerations is ()
 a) 4 : 1 b) 1 : 4 c) 2 : 1 d) 1 : 2

19. Choose the correct answer ()

Group - A**Group B**

i) Hydrogen

a) 3

ii) Oxygen

b) 2

iii) Nitrogen

c) 1

a) i-a, ii-b, iii-c

b) i-b, ii-a, iii-c

c) i-a, ii-c, iii-b

d) i-c, ii-b, iii-a

20. Identify the correct statement ()

A : The boat made of wood floats on water

R : The density of wood is less than that of water

a) A is correct, R is incorrect b) A is incorrect, R is correct

c) Both A and R are correct and R is the correct explanation of A

d) Both A and R are correct but R is not the correct explanation of A

21. Identify the correct answer in the symbol of ${}_{15}P^{31}$ Here ()

i) no. of Protons = 15

ii) no. of Neutrons = 15

iii) no. of Electrons = 15

a) i, ii are correct

b) i, iii are correct

c) ii, iii are correct

d) i, ii, iii are correct

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22. Choose the correct statement among the following is ()
- i) Work done by the porter is lifting a suitcase from the platform on to his head is positive
 ii) Work done by force of gravity on a ball thrown up vertically into the sky is negative
- a) i - true, iii - false b) i - false, ii - true
 c) i, ii both are true d) i, ii both are false
23. Equivalent temperature of 227°C in Kelvin scale is ()
- a) 500 K b) 46 K c) 300 K d) 246 K
24. The SI unit of frequency is ()
- a) Metre b) Pascal c) Decibel d) Hertz
25. Identify the correct answer ()
- Evaporation depends on
- i) Surface area ii) Humidity iii) Wind speed
- a) i, ii b) i, iii c) ii, iii d) i, ii, iii
26. A train of length 100 m is moving with a constant speed of 20 m/s. The time taken by the train to cross an electric pole is ()
- a) 10 sec b) 5 sec c) 20 sec d) 15 sec
27. The molar mass of water having 6.022×10^{23} molecules is ()
- a) 18 grams b) 16 grams c) 9 grams d) 23 grams
28. The materials required to conduct an activity to find the acceleration and velocity of an object moving on inclined plane are ()
- a) Glass marbles, table thread
 b) Glass marbles, spring balance, thread
 c) Glass marbles, inclined plane, stop clock
 d) Glass marbles, inclined plane, spring balance
29. Identify the correct answer ()
- the volume of water does not change "On adding a table spoon of salt to 100 ml of water contained in a beaker, In this activity we observe that
- i) There exist some space between water molecules
 ii) There exists force of attraction between water and salt molecules
 iii) Salt molecules are very small
- a) i, ii, iii b) only i
 c) only ii d) both i and ii

[Turn over

30. Table (i) :

S.No.	Name of satellite	Mass of Satellite	Distance of satellite from the source of earth
1.	P	500 kg	5000 km
2.	Q	500 kg	6000 km
3.	R	500 kg	8000 km

By observing the above table, arrange the satellities in the increasing order of gravitational force ()

- a) $P > Q > R$ b) $P > R > Q$
 c) $R > Q > P$ d) $Q > R > P$

31. Table (ii) : ()

Anions → ↓ Cations	Chloride	Hydroxide
Sodium	NaCl	P
Magnesium	Q	$Mg(OH)_2$

The formulae of compounds in the places of P and Q are ()

- a) NaOH, MgCl b) $Na(OH)_2$, MgCl
 c) $Na(OH)_2$, $MgCl_2$ d) NaOH, $MgCl_2$

32. In daily life situation, we find the application of Pascal's law at ()

- a) Hydraulic jacks b) Densitometer
 c) Lactometer d) Barometer

33. In medicine the isotope of cobalt is used in the treatment of ()

- a) Goitre b) AIDS
 c) Cancer d) Swineflu

