

PHY 9am Wed

1 :- sound of irregular frequency is termed as

CORRECT ANSWER =

noise

2 :- the amount of heat needed to raise the temperature of 1kg of copper by 1K is its

CORRECT ANSWER =

specific heat capacity

3 :- the volume of a given mass of gas at 27 °C and 75mmHg is 152cm³. calculate the volume of this gas at -23 °C and 76mmHg

CORRECT ANSWER =

125cm³

4 :- from the diagram above, what is the value of the resistor R at balance point?

CORRECT ANSWER =

27Ω

5 :- the minimum velocity with an object would escape from the influence of the earth's gravitational field is

CORRECT ANSWER =

escape velocity

6 :- a resistance thermometer has a resistance of 10Ω at 100 °C. If it records 50Ω in a certain medium, the temperature of the medium is

CORRECT ANSWER =

80°C

7 :- what quantity of current is consumed by an electric bulb labelled 240V, 90W?

CORRECT ANSWER =

0.375A

8 :- for formation of pure spectrum the following components are needed

CORRECT ANSWER =

two convex lenses

9 :- calculate the energy expended when a 2000W electric motor runs for 5 hours

CORRECT ANSWER =

10kWh

10 :- how long will it take an observer to hear the reflected sound from a wall 30m away?

CORRECT ANSWER =

0.185

11 :- how long will it take 2kg of water from 20 °C to 80 °C in an electric kettle taking 5A from a 220V supply?

CORRECT ANSWER =

4585

12 :- in P-type semiconductor, the minority carriers are

CORRECT ANSWER =

electrons

13 :- which of the statements above are the uses of an electroscope?

CORRECT ANSWER =

I, II and IV only

14 :- which of these happens when hydrogen bubbles are formed on the cathodes of a simple cell?

CORRECT ANSWER =

a decrease in flow of current

15 :- which of the following is a derived unit?

CORRECT ANSWER =

Newton

16 :- the magnitude of charges on two bodies are to be compared. Which of the following instruments would be most suitable?

CORRECT ANSWER =

gold leaf electroscope

17 :- given an a.c. current source as $I = 5 \sin 100t$. Calculate the rms value of the current

CORRECT ANSWER =

3.5A

18 :- the hydrometer is an instrument used for measuring

CORRECT ANSWER =

humidity of fluid

19 :- when a fixed mass of gas is cooled at constant volume, its pressure decreases because its molecules

CORRECT ANSWER =

collide less frequently

20 :- mirrors that produce a wide parallel beam of light of constant intensity light source is placed at its focus is

CORRECT ANSWER =

parabolic mirror

21 :- from the circuit above, calculate the emf of the cell if it has negligible internal resistance

CORRECT ANSWER =

10V

22 :- how will an increase in pressure affect the freezing point of water?

CORRECT ANSWER =

it decreases

23 :- what part of the human eye corresponds to the diaphragm of a camera?

CORRECT ANSWER =

Iris

24 :- when a wire is stretched by a large external force and could not regain its original shape after removing the force, it is said to have reached its

CORRECT ANSWER =

elastic limit

25 :- what does an atom become when it loses or gains a charge?

CORRECT ANSWER =

an ion

26 :- what is the effect of using split-rings in a simple d.c motor?

CORRECT ANSWER =

the current in the coil

27 :- if a force of 100N is inclined at 50° to the horizontal. Its vertical component is

CORRECT ANSWER =

$100 \sin 50^\circ$

28 :- which of the capillary tubes will have the highest level when dipped in a mercury

CORRECT ANSWER =

IV

29 :- calculate the time taken for a mango fruit that falls from the tree 20 m to the ground

CORRECT ANSWER =

2s

30 :- power is transmitted at a very high voltage from the generating station to sub-station in order to reduce

CORRECT ANSWER =

heating in the coil

31 :- which of the following optical instruments is used to correct myopia?

CORRECT ANSWER =

Concave lens

32 :- the velocity of ratio of an inclined plane is

CORRECT ANSWER =

$1/\sin Q$

33 :- what is the value of the angle of dip at the equator

CORRECT ANSWER =

0°

34 :- the process by which cloud is formed is

CORRECT ANSWER =

evaporation

35 :- hardness of X-rays implies

CORRECT ANSWER =

penetrating ability

36 :- a red paint mixed with blue will appear

CORRECT ANSWER =

purple

37 :- a red paint mixed with blue will appear

CORRECT ANSWER =

2.0 m/s

38 :- a 10kg mass is hung on a spring balance. If the kinetic energy with which the mass moves when hung on the spring is 20J. What is its speed?

CORRECT ANSWER =

yellow

39 :- when red light is mixed green light, the resulting colour is

CORRECT ANSWER =

circular motion

40 :- which of the following motions is equivalent to orbital motion?

CORRECT ANSWER =

gas turbine