



CAPF AC PYQ

(SUBJECT WISE)

(Institute for Defence exam)

SUBJECT : SCIENCE

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Telegram Link :- <https://t.me/krishnakuamar>

YouTube Link :- <https://www.youtube.com/@krishnasahu148>

Website Link :- <https://pathtoias.com/>

8. Which one of the following is the correct taxonomic hierarchy ?

- (a) Kingdom – phylum – order – genus – family – class – species
- (b) Kingdom – order – class – phylum – family – genus – species
- (c) Kingdom – class – order – phylum – family – species – genus
- (d) Kingdom – phylum – class – order – family – genus – species

9. The subunits of DNA are known as :

- (a) Nucleotide
- (b) Nucleosome
- (c) Nucleoside
- (d) Polypeptide



10. The process of using microbes to treat areas of land or sea that have been contaminated by pesticides, oil or solvents is known as :

- (a) Eutrophication
- (b) Nitrification
- (c) Ammonification
- (d) Bioremediation

22. A change of state directly from solid to gas without changing into liquid state is called :

- (a) Fusion
- (b) Sublimation
- (c) Diffusion
- (d) Emulsion



11. How is the rate of transpiration affected by decreasing humidity and by decreasing light intensity ?

Decreasing humidity	Decreasing light intensity
---------------------	----------------------------

- | | |
|---------------|-----------|
| (a) Decreases | Decreases |
| (b) Increases | Decreases |
| (c) Increases | Increases |
| (d) Decreases | Increases |

12. Vaccination involves :

- (a) injecting the body with materials that stimulate the body to produce antibodies
- (b) injecting the body with materials that stimulate the body to produce antigens
- (c) the use of monoclonal antibodies to cure a disease
- (d) use of antibiotics to cure diseases

23. Water at 273 K is less effective in cooling than ice at the same temperature. It is because :

- (a) water is difficult to handle
- (b) water at 273 K has less energy than ice at the same temperature
- (c) water at 273 K has more energy than ice at the same temperature
- (d) water is not a cooling agent

24. Which one of the following statements is **not** correct ?

- (a) The rate of evaporation depends on temperature
- (b) The rate of evaporation does not depend on surface area exposed to the atmosphere but on volume of the liquid
- (c) The rate of evaporation depends on humidity of the surroundings
- (d) The rate of evaporation depends on the wind speed

25. Which one of the following is **not** a colloid ?

- (a) Milk
- (b) Mud
- (c) Butter
- (d) Boric acid



26. Match List I with List II and select the correct answer using the code given below the Lists :

List I (Isotope)	List II (Application)
A. Carbon	1. Treatment of goitre
B. Cobalt	2. Calculation of age of the earth
C. Iodine	3. Treatment of cancer
D. Uranium	4. Fuel in nuclear reactors

Code :

	A	B	C	D
(a)	2	3	1	4
(b)	2	1	3	4
(c)	4	1	3	2
(d)	4	3	1	2

34. Arrange the following substances in their order of increasing hardness :

- 1. Gypsum
- 2. Topaz
- 3. Fluorite
- 4. Feldspar

Select the correct answer using the code given below :

- (a) 4-3-2-1
- (b) 1-3-4-2
- (c) 3-4-2-1
- (d) 1-4-3-2



38. Which one of the following statements is **not** correct ?

- (a) Graphite is a non-metal
- (b) Graphite is an allotrope of carbon
- (c) Graphite is a conductor of electricity
- (d) Graphite has a tetrahedral structure

37. Which one of the following statements is **not** correct ?

- (a) Bleaching powder is prepared by the action of Chlorine on dry slaked lime $[\text{Ca}(\text{OH})_2]$
- (b) Bleaching powder acts as a reducing agent in many chemical industries
- (c) Bleaching powder is also known as chlorinated lime
- (d) Bleaching powder is used for disinfecting drinking water

39. Consider the following physical quantities :
Energy, power, pressure, impulse,
temperature, gravitational potential
Which of the above is / are the vector
quantity/quantities ?
(a) Impulse only
(b) Impulse and pressure only
(c) Impulse, temperature and pressure
(d) Gravitational potential

40. A piece of stone tied to a string is made to
revolve in a circular orbit of radius r with
other end of the string as the centre. If the
string breaks, the stone will :
(a) move away from the centre.
(b) move towards the centre.
(c) move along a tangent.
(d) stop.

41. Which one of the following statements is
not true ?
(a) The gravitational force of earth acting
on a body of mass 1 kg is 9.8 newton
(b) The force acting on an object of mass
5 kg moving with a uniform velocity
of 10 m/s on a frictionless surface is
zero

(c) The SI unit of weight is kg
(d) The momentum of a man having mass
100 kg walking with a uniform velocity
of 2 m/s is 200 newton second

42. Which one of the following statements is
correct ?
(a) Acceleration due to gravity decreases
with the increase of altitude
(b) Acceleration due to gravity increases
with the increase of depth (assuming
earth to be a sphere of uniform density)
(c) Acceleration due to gravity decreases
with the increase of latitude
(d) Acceleration due to gravity is
independent of the mass of the earth

43. A Barometer kept in an elevator reads
760 mm when the elevator is at rest. When
the elevator moves in the upward direction
with increasing speed, the reading of the
Barometer will be:
(a) 760 mm
(b) < 760 mm
(c) > 760 mm
(d) Zero



44. Which one of the following statements is
not correct ?
(a) The earth's magnetic field is due to the
motion of metals like iron and nickel
in the core of the earth
(b) The magnetic field lines of force are
widely separated near the poles of a
magnet but these lines come closer to
one another at other places

(c) If the cross-sectional area of a magnetic
field increases, but the flux remains the
same, the flux density decreases
(d) When the speed of a conductor moving
through a magnetic field is increased,
the induced voltage increases

45. Let a resistor having 4 ohm resistance be connected across the terminals of a 12 volt battery. Then the charge in coulomb passing through the resistor per second is :

- (a) 12
- (b) 4
- (c) 3
- (d) 0.33



125. Which of the following statements is /are correct ?

1. Gravitational Waves were predicted by Albert Einstein in 1916 on the basis of his theory of General Relativity
2. Gravitational waves do also exist in the Newtonian theory of Gravitation
3. Gravitational Waves are to be detected by very sensitive detectors known as Interferometers

Select the correct answer using the code given below :

- (a) 1 only
- (b) 1 and 3 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

