DPP
DAILY PRACTICE PROBLEMS

Class : XIIh **Subject : PHYSICS**
Date : **DPP No. : 9**

Topic :-Electro Magnetic Wave

1. The upper atmosphere layer is known as
(A) troposphere **(B)** mesosphere **(C)** ionospere **(D)** chromosphere

2. Greenhouse effect keeps the earth surface
(A) cold in night **(B)** dusty and cold **(C)** warm in night **(D)** moist in night

3. Greenhouse effect is due to
(A) visible radiations **(B)** red colour radiation **(C)** violet colour radiation **(D)** infra - red radiation

4. Ozone layer in atmosphere exist at the height of
(A) 20 km **(B)** 50 km **(C)** 120 km **(D)** 150 km

5. Ozone layer exist in
(A) ionosphere **(B)** mesosphere **(C)** troposphere **(D)** stratosphere

6. Ozone layer protectes the living cells from
(A) ultraviolet radiations **(B)** unfra –red radiations
(C) X–rays **(D)** all the radiations

7. The ionosphere does not allow to pass the waves which are termed as
(A) microwaves **(B)** visible light waves
(C) 1 and 2 both **(D)** amplitude modulated waves

8. Practically ozone layer absorbs the radiation of wavelength
(A) less than 3×10^{-7} m **(B)** greater than 3×10^{-7} m
(C) equal to 3×10^{-7} m **(D)** all the above

9. The waves which can travel directly along surface of the earth are known as
(A) ground waves **(B)** X–rays
(C) α–rays **(D)** sky waves

10. The ionosphere bends the e. m. waves having the frequencies
(A) less than 40 MHz **(B)** beyond 40 MHz
(C) nothing is certain **(D)** depends on the moisture present

11 The S.I unit of displacement current is
(A) H **(B)** A **(C)** Fm^{-1} **(D)** C

12 Transmission of T. V. signals from the surface of the moon can be received on earth. But transmitted T. V. Signals from Delhi can not be received beyond 110 km distance. The reason is
(A) there is no atmosphere on the moon
(B) strong gravitational effect on T. V. signals
(C) T. V. signals travel along a straight line, they do not follow the curvature of earth

(D) there is atmosphere around the earth

13. The number of radio frequency carrier waves transmitted by a television transmitter is
(A) three **(B)** two **(C)** one **(D)** four

.14. The speed of electromagnetic waves is independent of
(A) wavelength **(B)** frequency **(C)** intensity **(D)** medium, in which it travels

15. An electromagnetic radiation of frequency ν, wavelength λ, travelling with velocity c in air, enters a glass slab of refractive index μ. The frequency, wavelength and velocity of light in the glass slab will be respectively :
(A) , and **(B)** ν, and
(C) ν, 2λ and **(D)** , and c

16. If ε_0 and μ_0 are the electric permittivity and magnetic permeability in free space, ε and μ are the corresponding quantities in a medium, then index of refraction of the medium is
(A) **(B)** **(C)** **(D)**

17 Dimension of $\varepsilon_0\mu_0$ is :
(A) LT^{-1} **(B)** $L^{-1}T$ **(C)** L^2T^{-2} **(D)** $L^{-2}T^2$

18. For television transmission, the frequency employed is normally in the range
(A) 30–300 MHz **(B)** 30–300 GHz **(C)** 300–300 kHz **(D)** 30–300 Hz

19. Red light differs from blue light in its
(A) speed. **(B)** frequency **(C)** intensity **(D)** amplitude

20. If an electromagnetic wave propagating through vacuum is described by
$E = E_0 \sin(kx - \omega t)$; $B = B_0 \sin(kx - \omega t)$,
(A) $E_0 k = B_0 \omega$ **(B)** $E_0 B_0 = \omega k$ **(C)** $E_0 \omega = B_0 k$ **(D)** $E_0 B_0 = \omega / k$