



## Department of Electrical and Electronics Engineering

### EE 8015 – Electric Energy Generation Utilization and Conservation

#### Unit I – MCQ Bank

1. Which of the following instruments is used for the comparison of candle powers of different sources?

- (A) Radiometer
- (B) Bunsen meter
- (C) Photometer**
- (D) Candle meter

**Answer: (C)**

2. A reflector is provided to

- (A) protect the lamp
- (B) provide better illumination
- (C) avoid glare
- (D) do all of the above**

**Answer: (D)**

3. The illumination at various points on a horizontal surface illuminated by the same source varies as

- (A)  $\cos^3\theta$**
- (B)  $\cos \theta$
- (C)  $1/r^2$
- (D)  $\cos^2\theta$ .

**Answer: (A)**

4. Floodlighting is NOT used for purposes.

- (A) **reading**
- (B) aesthetic
- (C) advertising
- (D) industrial.

**Answer: (A)**

5. Which of the following lamp has minimum initial cost of installation but maximum running cost ?

- (A) **incandescent**
- (B) fluorescent
- (C) mercury vapour
- (D) sodium vapour.

**Answer: (A)**

6. An incandescent lamp can be used

- (A) in any position
- (B) on both ac and dc supply
- (C) for street lighting
- (D) **all of the above.**

**Answer: (D)**

7. The average working life of a fluorescent lamp is about----hours.

- (A) 1000
- (B) **4000**
- (C) 3000
- (D) 5000.

**Answer: (B)**

8. The luminous efficiency of a sodium vapour lamp is about----lumen/watt.

- (A) 10
- (B) **30**

(C)50

**(D)70**

**Answer: (D)**

9.Which of the following statements is correct?

(A) Light is a form of heat energy

(B) Light is a form of electrical energy

(C) Light consists of shooting particles

**(D) Light consists of electromagnetic waves**

**Answer: (D)**

10.Luminous efficiency of a fluorescent tube is

(A)10 lumens/watt

(B)20 lumens/watt

(C)40 lumens/watt

**(D) 60 lumens/watt**

**Answer: (D)**

11.Candela is the unit of which of the following?

(A) Wavelength

**(B) Luminous intensity**

(C) Luminous flux

(D) Frequency

**Answer: (B)**

12.Colour of light depends upon

(A) frequency

(B) wave length

**(C) both (a) and (b)**

(D) speed of light

**Answer: (C)**

13. Illumination of one lumen per sq. metre is called

- (A) lumen metre
- (B) lux**
- (C) foot candle
- (D) candela

**Answer: (B)**

14. A solid angle is expressed in terms of

- (A) radians/metre
- (B) radians
- (C) steradians**
- (D) degrees

**Answer: (C)**

15. The unit of luminous flux is .

- (A) watt/m<sup>2</sup>
- (B) lumen**
- (C) lumen/m<sup>2</sup>
- (D) watt

**Answer: (B)**

16. Filament lamps operate normally at a power factor of

- (A) 0.5 lagging
- (B) 0.8 lagging
- (C) unity**
- (D) 0.8 leading

**Answer: (C)**

17. The filament of a GLS lamp is made of

- (A) tungsten
- (B) copper
- (C) carbon
- (D) aluminium

**Answer: (A)**

18. Find diameter tungsten wires are made by

- (A) turning
- (B) swaging
- (C) compressing
- (D) wire drawing

**Answer: (D)**

19. What percentage of the input energy is radiated by filament lamps?

- (A) 2 to 5 percent
- (B) 10 to 15 percent
- (C) 25 to 30 percent
- (D) 40 to 50 percent

**Answer: (B)**

20. Which of the following lamps is the cheapest for the same wattage?

- (A) Fluorescent tube
- (B) Mercury vapour lamp
- (C) GLS lamp
- (D) Sodium vapour lamp

**Answer: (C)**

21. Which of the following is not the standard rating of GLS lamps?

- (A) 100 W
- (B) 75 W

(C)40 W

(D)15 W

**Answer: (B)**

22. In houses the illumination is in the range of

(A)2-5 lumens/watt

(B)10-20 lumens/watt

(C)35-45 lumens/watt

**(D)60-65 lumens/watt**

**Answer: (D)**

23. Desired illumination level on the working plane depends upon

(A) age group of observers

(B) whether the object is stationary or moving

(C) Size of the object to be seen and its distance from the observer

**(D) all above factors**

**Answer: (D)**

24. On which of the following factors does the depreciation or maintenance factor depend?

(A) Lamp cleaning schedule

(B) Ageing of the lamp

(C) Type of work carried out at the premises

**(D) All of the above factors**

**Answer: (D)**

25. For the same lumen output, the running cost of the fluorescent lamp is

- (A) equal to that of filament lamp
- (B) less than that of filament lamp**
- (C) more than that of filament lamp
- (D) any of the above

**Answer: (B)**

26. Sometimes the wheels of rotating machinery, under the influence of fluorescent lamps appear to be stationary. This is due to the,

- (A) low power factor
- (B) stroboscopic effect**
- (C) fluctuations
- (D) luminescence effect

**Answer: (B)**

27. The flicker effect of fluorescent lamps is more pronounced at

- (A) lower frequencies**
- (B) higher frequencies
- (C) lower voltages
- (D) higher voltages

**Answer: (A)**

28. .... is a cold cathode lamp.

- (A) Fluorescent lamp
- (B) Neon lamp**
- (C) Mercury vapour lamp
- (D) Sodium vapour lamp

**Answer: (B)**

29. For normal reading the illumination level required is around

- (A) 20-40 lumens/m<sup>2</sup>
- (B) 60-100 lumens/m<sup>2</sup>**
- (C) 200-300 lumens/m<sup>2</sup>
- (D) 400-500 lumens/m<sup>2</sup>

**Answer: (B)**

30. Which gas can be filled in GLS lamps?

- (A) Oxygen
- (B) Carbon dioxide
- (C) Xenon
- (D) Any inert gas**

**Answer: (D)**