

- [4] moistened
- g) Which welding process uses consumable electrodes? 1
 [1] TIG
 [2] MIG
 [3] Laser
 [4] All of the above
- h) Electronic components are joined by which of the following methods? 1
 [1] brazing
 [2] soldering
 [3] spot welding
 [4] seam welding
- i) _____ has the highest value of thermal conductivity. 1
 [1] copper
 [2] aluminum
 [3] brass
 [4] steel
- j) Which of the following will need the highest level of illumination? 1
 [1] Railway platform
 [2] Hospital wards
 [3] Bed room
 [4] Proof reading
- k) Which of the following will need lowest level of illumination? 1
 [1] Auditorium
 [2] Railway platform
 [3] Fine engraving
 [4] Display
- l) The illumination level in houses is in the range 1
 [1] 10 - 20 Lumen / m²
 [2] 25 - 50 Lumen / m²
 [3] 60 - 90 Lumen / m²
 [4] 100 - 140 Lumen / m²
- m) Which of the following motor can be referred as a universal motor? 1
 [1] Permanent magnet motor
 [2] DC Shunt motor
 [3] DC Series motor
 [4] DC compound motor
- n) In DC motors, which of the following types of braking is called plugging? 1
 [1] Reverse current Braking
 [2] Friction Braking
 [3] Regenerative Braking
 [4] Rheostat Braking

Attempt any four questions from Q-2 to Q-8

- Q-2 Attempt all questions (14)
- (a) Enlist the advantages of electric drives (3)
- (b) Illustrate the characteristics of different mechanical loads used in electric drives. (4)
- (c) Enlist the various electric braking and explain in detail any two methods. (7)



- Q-3 Attempt all questions (14)
- (a) Enlist the different types of lamps and its area of application. (3)
 - (b) Give the general ideas about modern street lighting. (4)
 - (c) Discuss construction and working of incandescent lamp and discharge lamp. (7)
- Q-4 Attempt all questions (14)
- (a) Draw thermostat control circuit for domestic water heater (3)
 - (b) Draw and explain the induction heating principle. (4)
 - (c) Explain the various applications of dielectric heating in industrial field. (7)
- Q-5 Attempt all questions (14)
- (a) Discuss principle of arc production. (3)
 - (b) Give comparative statements between AC and DC arc welding. (4)
 - (c) Explain principle of resistance welding. Illustrate various types of resistance welding (7)
- Q-6 Attempt all questions (14)
- (a) Discuss principle of galvanizing. (3)
 - (b) Explain principle of anodizing and its applications. (4)
 - (c) Illustrate electroplating process on non-conducting materials. (7)
- Q-7 Attempt all questions (14)
- (a) Explain principle of air conditioning. (3)
 - (b) Discuss refrigeration cycle. (4)
 - (c) Illustrate the electrical circuit used in water cooler. (7)
- Q-8 Attempt all questions (14)
- (a) Enumerate the advantages of electric traction. (3)
 - (b) Discuss different accessories for track electrification. (4)
 - (c) Draw and explain block diagram of electric locomotive with description of various equipment and accessories. (7)

