Uka Tarsadia University (Diwaliba Polytechnic)
Diploma in Electrical Engineering
MCQ / True and False (Utilization of Electrical Energy)

Unit 1 ILLUMINATION

1. Carbon arc lamps needs frequent adjustment and replacement of carbon rod.

   T

2. Lumen method takes into account the inter-reflections of light inside a room.

   T

3. Luminairs are generally categorized as industrial, commercial or residential.

   T

4. High pressure sodium vapor Lamps use metallic sodium sealed in translucent aluminum oxide tubes.

   T

5. Incandescent-lamp filaments are generally constructed of copper.

   F

6. The luminous efficacy is expressed in lumen output per radiated watt.

   T

7. Lumen is the unit of luminous flux.

   T

8. Illuminance is the density of luminous flux on a surface.

   T

9. A source of one candela emits a total of one lumen.
   F
10. Glare is the condition of comfort produced by an object of luminance.
    F
11. Incandescent lamps should always be used without luminairs.
    F
12. Halogen lamps arc preferred for indoor illumination.
    T
13. Starter in a fluorescent tube is used for preheating the electrodes.
    T
14. After about 4000 hours of use the light output of a fluorescent tube is reduced by 15 to 20 percent.
    T
15. Sodium vapor lamp is also known as cold-cathode low pressure lamp.
    T

16. With use fluorescent tube walls blacken a little and dark ring appear near the ends due to the deposition of active material from the electrodes.
    T
17. Fluorescent tubes operating on dc are generally free from stroboscopic effect.
    T
18. The average life of sodium lamps is estimated at 6000 hrs.
    T
19. Mercury iodide lamps are used for flood lighting.
    T

Unit 3 WELDING

1. During resistance welding heat produced at the joint is proportional to
   I^2R
   kVA
   Current
   Voltage
2. The metal surfaces, for electrical resistance welding must be _____
   Lubricated
   Cleaned
   Moistened
   Rough
3. In a welded joint poor fusion is due to which of the following?
   Improper current
   High welding speed
   Uncleaned metal surface
   Lack of flux
4. For arc welding, DC is produced by which of the following?
   Motor-generator set
   Tungsten alloy
   Stainless steel alloy
   None of the above
5. Which of the following equipment is generally used for arc welding?
   Single phase alternator
   Two phase alternator
   Three phase alternator
   Transformer
6. Which of the following is not an inert gas?
   Argon
   Carbon dioxide
   Helium
   All of the above
7. Welding leads have high flexibility.
   T
8. Welding leads have high current handling capability.
   T
9. Air craft body is riveted.
   T
10. For arc welding current range is usually 100 to 350 A.
    T
11. For arc welding current range is usually 50 to 60 A
    F
12. Spot welding is used for thin metal sheets.
    T
13. Spot welding is used for rough and irregular surface.
    F
14. Spot welding is used for thick section.
    F
15. Motor-generator set for DC arc welding has generator of series type.

F

16. Motor-generator set for DC arc welding has generator of Shunt type.
    F
17. In DC arc welding both Electrode as well as workpiece are made positive.
    F
18. In DC arc welding both Electrode as well as workpiece are made negative.
    F
19. The purpose of coating on arc welding electrodes is to stabilise the arc.
    T
20. The purpose of coating on arc welding electrodes is to provide a protecting atmosphere .
    T
21. The purpose of coating on arc welding electrodes is to provide slag to protect the molten metal.
    T

Unit 4 ELECTRIC DRIVES AND ELEVATORS

1. Speed of hydraulic elevator is 1 m/s.
   T
2. A wound rotor induction motor is preferred over a squirrel cage induction motor when the major consideration involved is high starting torque.
   T
3. Squirrel cage Induction Motor drive can be used for textile industry.
   T
4. Ward Leonard Method type of drive can be used for Hoisting Machinery.
   T
5. In individual drive each machine is driven by its own separate motor with the help of gears and pulley.
   T
6. The advantages of a group driver electric drive is high efficiency.
   T
7. Group drive is also called as Line shaft drive.
   T
8. Cumulatively compounded is most suitable DC motor for elevator.
   T
9. DC series motor is most suitable for lathes.
   T
10. Friction torque and Windage torque are the components of load torque.
    T
11. Alarm button and Limit switch are control used for elevator
    T
12. Machinery in elevator is set away from the roof of the building
    F
13. Price of Electric drive is less.
    T
14. Sensing unit, Motor and control units are elements of Electric Drive.
    T
15. Speed control range, Starting Nature, Environmental condition are the selection factor of electric drive.
    T

Unit 5 TRACTION

1. What is traction system?
   Which involve the propulsion of wheel of vehicle on track
   Which involve the rotation of wheel of vehicle
   Reason for engine start and stop
   None of the above
2. Traction system mainly classify in _____.
   Electrical and mechanical traction system
   Rotation and mechanical traction system
   Electrical and non-electrical traction system
   Electrical and rotation Traction system
3. The first traction system was started by _____ drive.
   Electrical engine
   IC engine
   Diesel engine
   Steam engine
4. Which of the following is not ideal requirement of traction system?
   A traction should have high starting torque
   It should have small over load capacity for short duration of time
   It should have smooth breaking system
   It should be as compact in size as possible
5. Which of the following is ideal requirement of traction system?
   A traction should have high starting torque
   It should have large over load capacity for short duration of time
   It should have smooth breaking system
   All of the above
6. In non-electrical traction system which drives is used?
   Steam engine drive
   IC engine drive
   Both A and B
   None of the above
7. In electrical traction system which drives is used?
   Diesel engine electrical drive
   Battery operated electrical drive
   Electrical drive
   All of the above
8. Which one of the following is the main feature of steam engine drive?
   It has efficiency of about 8 to 10 %
   It require low rate of repair and maintenance
   It has no dependability for fuel and water.
   None of the above
9. Efficiency of steam engine drive is about _____.
   15 to 20
   18 to 22 %
   8 to 10
   11 to 15 %
10. Normal speed of direct IC engine drive is _____ rpm.
    500 to 900
    600 to 1000

750 to 1200
700 to 1100

Unit 6 DOMESTIC APPLIANCES

1. Electric iron works on the principle of_____
   IR
   IR^2
   I^2 R
   (IR)^2
2. Heating elements of electric iron is made of_____
   Steel
   Aluminium
   Alloys
   Nichrome
3. Pressure plate is made of _____.
   Cast iron
   Casting
   Alloys
   Nichrome
4. Where pressure plate is placed in electric iron?
   over heating element
   under the sole plate
   above asbestos plate
   None of the above
5. What is the cause of fault when iron does not become hot?
   No supply
   open supply chord
   Blow fuse
   All of the above
6. Which one of the following are types of water heater?
   Manual and automatic water heater
   Active and Passive water heater
   Immersion and storage water heater
   None of the above
7. In immersion water heater tube is made of _____.
   Copper
   Aluminium
   Alloys
   Nichrome
8. In which water heater storage water is used?
   Automatic water heater
   Passive water heater
   Immersion water heater
   storage water heater
9. In which water heater storage water is not used?
   Automatic water heater
   Passive water heater
   Immersion water heater
   storage water heater
10. In storage water heater tank is made of _____and plated with _____ to avoide corrosion.
    Copper, Tin

Aluminium ,Nichrome
Alloys, Copper
Nichrome, Tin