ELELCTRICAL ENGINEERING DEPARTMENT

SAMPLE MCQs
PROGRAM: ELELCTRICAL ENGINEERING
COURSE CODE: EE5961
COURSE TITLE: ELECTRICAL MACHINES OPERATION AND CONTROL

Q1. In an induction motor, rotor slots are usually not quite parallel to the shaft but are given a slight skew

a) To reduce the magnetic hum
b) **To reduce the locking tendency of the rotor**
c) Both (a) and (b) above
d) To increase the speed of the motor

Q.2 Starters are used in induction motor because

a) Its starting torque is high
b) It is run against heavy load
c) It cannot run in reverse direction
d) **Its starting current is five times or more than its rated current**

Q.3. The emf induced in the rotor of an induction motor is proportional to

a) Voltage applied to stator
b) Relative velocity between flux and rotor conductors
c) **Both (a) and (b) above**
d) Slip

Q.4. If the field of a synchronous motor is under excited, the power factor will be
a) **Lagging**
b) Leading
c) Unity
d) More than unity

Q.5. The V-curves of a synchronous motor show relationship between

a) Excitation current and back e.m.f
b) Field current and p.f.
c) **D.C. field current and A.C. armature current**
d) Armature current and supply voltage

Q.6. Alternator works on the principle of

a) Self and mutual induction
b) Self mutual induction
c) **Faraday's law of electromagnetic induction**
d) Mutual induction

Q.7. The advantage of salient poles in an alternator is

a) Reduced windage loss
b) Reduced noise
c) Reduced bearing loads and noise
d) **Adaptability to low and medium speed operations**

Q8. Out of the following motors, which will give the highest starting torque?

a) Universal motor
b) **Capacitor start motor**
c) Shaded pole motor
d) All have zero starting torque.

Q.9 Which single phase ac motor will you select for record players and tape recorders?

a) **Hysteresis motor**
b) Shaded pole motor
c) Reluctance motor
d) Two value capacitor motor.

Q10. A universal motor is one

a) which can run on any value of supply voltage
b) which has infinitely varying speed
c) **which can operate on ac as well as dc voltage**
d) which can work as single phase or three phase motor.

Q. 11. Which of the following applications make use of a universal motor?

a) Floor polishing machine
b) Oil expeller
c) **Portable tools**
d) Lathe machines.

Q.12. An 8-pole, 3-phase, 50 Hz induction motor is operating at a speed of 720 rpm. The frequency of the rotor current of the motor in Hz is _____

a) **2**
b) 4
c) 3
d) 1

ANSWER KEY FOR EMOC:-

Q1.(b), Q2. (d), Q3. (c) . Q4. (a), Q5. (c), Q6. (c), Q7. (d) Q8(b), Q9. (a), Q10. (c), Q11. (c) , Q12. (a)

SAMPLE MCQs
PROGRAM: ELELCTRICAL ENGINEERING
COURSE CODE: EE5962
COURSE TITLE: INSTALLATION, TESTING AND MAINTENANCE OF ELECTRICAL EQUIPMENTS

Q1: Precautions to avoid fire due to electrical reasons:

a) Use proper rating of fuses and relays.
b) Indian electricity rules should be followed.
c) A very good earth should be provided to every equipment or machinery.
d) All of the above

Q2: Why are the high voltage test conducted on the rotating machine?

a) To check the winding resistance
b) To check the insulation of windings
c) To check the maximum power rating of the machine
d) All of these

Q3: Electrical injuries are commonly caused by:

a) Unsafe equipment or installations
b) An unsafe environment
c) Unsafe work practices.
d) All of the above

Q4: Which among these is the basic requirement of machine foundation?

a) Horizontal level
b) Rigidity
c) Freedom from vibrations
d) All of these

Q5: Temperature limit up to which class E insulation can be used is_____

a) 120 °C
b) 180 °C
c) 50 °C
d) 90 °C

Q6: Which measuring is used for the measurement of insulation resistance?

a) Kelvin’s bridge
b) Wheatstone bridge
c) Megger
d) None of these

Q7: Maintenance consist of the following action(s)

a) Replace of component
b) Repair of component
c) Service of component
d) All of the above

Q8: Which factor affects the life of transformer?

a) Moisture
b) Varnishes
c) Operating temperature
d) All of these

Q9: What should be the reason? Induction Motor fails to start.

a) Blown fuses
b) Open in one phase.
c) Overload at start.
d) All of these

Q10: Device which is used to test short circuit and ground fault of an armature is

a) Grounder
b) Grower
c) Growler
d) Grounding

QUE	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
ANS	**d**	**b**	**d**	**d**	**a**	**c**	**d**	**d**	**d**	**c**

SAMPLE MCQs
PROGRAM: ELELCTRICAL ENGINEERING
COURSE CODE: EE5963
COURSE TITLE: ELECTRICAL ESTIMATING AND CONTRACTING

Q.01 - Formula to calculate number of poles required in LT distribution line

A) Length/span +1

B) Length/span +10

C) Span/length+1

D) Span /length +10

Q.02 - What should be the height of Roof Pole?

A) More than 3 M

B) Less than 3 M

C) More than 10 M

D) None of the above

Q.03 Material used for making busbar is

A) Silver

B) Aluminium

C) Copper

D) None of the above

Q.04 Maximum load that should be connected to lighting sub-circuit is

A) 1000 Watt

B) 2000 Watt

C) 800 Watt

D) 500Watt

Q.05 Every motor should be connected to

A) One separate earthing

B) Two separate & distinct earthing

C) Three separate & distinct earthing

D) Four earthing

Q.06 Comparative statement is related to

A) Residential installation

B) Industrial installation

C) Tender & contracting

D) Distribution line

Q.07 A stair case point is operated with

A) Two, one way switches

B) Two, two way switches

C) Two, intermediate switches

D) None of these

Q.08 The term coefficient of utilization is related to

A) Electric Testing

B) Illumination

C) Tender

D) Electric distribution

Q.09 – Generally which type of wiring is used for residential electrification?

A) Cleat

B) Batten

C) Conduit

D) None of these

Q.10 The type of wiring selection depends on

A) Location

B) Durability& Cost

C) Safety & appearance

D) All of the above

Answer key ----Q.01-- A Q.02—B Q.03—B Q.04 -C Q.05—B Q.06---C Q.07—B Q.08—B Q.09—C Q.10--D

SAMPLE MCQs
PROGRAM: ELELCTRICAL ENGINEERING
COURSE CODE: EE5964
COURSE TITLE: SWITCHGEAR AND PROTECTION

Q: 1 Most of the faults on overhead systems are _____ faults.

a) L-L b) L-G c) L-L-L d) L-L-L-G

Q: 2 The use of rectors permits the installation of circuit breakers of _____ ratings.

a) Lower b) medium c) High d) very High

Q: 3 The secondary winding of current Transformer is _____

a) Open b) Short c) Loaded d) None of above

Q: 4 The function of Fuse is_____

a) Protection b) Maintenance c) detection of fault d) Detection and clearance of Fault.

Q: 5 The time current characteristic of relay should be _____

a) Parabolic b) Straight line c) Inverse d) Elliptical

Q: 6 The function of auxiliary relay is_____

a) Indication b) annunciation c) repetition d) All of Above

Q: 7 The disadvantages of Static relay

a) Quick response b) Long life c) Quick reset d) Higher cost

Q: 8 Which type of protection system used for busbar protection?

a) Frame leakage protection b) Merz price protection c) Restricted earth fault protection

d) None of above

Q: 9 What are the causes for the overvoltage in power system.

a)Switching surge b) arcing ground c) Resonance d) all of above

Q:10: . Distance relays are generally
a) Impedance type b) MHO type c) Reactance type d) All of these

QUE	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
ANS	**b**	**a**	**b**	**d**	**c**	**d**	**d**	**a**	**d**	**d**

SAMPLE MCQs
PROGRAM: ELELCTRICAL ENGINEERING
COURSE CODE: EE 5965
COURSE TITLE: INDUSTRIAL CONTROL SYSTEM

Q 1. In open loop control system

a) Output is independent of control input
b) Output is dependent of control input
c) Only system parameters have effect on the control output
d) None of the above

Q 2. A relay is used to

a) Break the fault current
b) Sense the fault
c) Sense the fault and direct to trip the circuit breaker
d) All of these

Q3. The primary function of a fuse is to

a) Open the circuit
b) Protect the appliance
c) Protect the line
d) Prevent excessive currents from flow through the circuit

Q 4. Anode of an operational SCR is as

a) Always positive w.r.t. cathode
b) Always negative w.r.t. anode
c) Always positive w.r.t. anode
d) Always negative w.r.t. cathode

Q 5. Number of PN junction in an SCR is

a) Two
b) Three
c) Four
d) Five

Q 6. In rectifiers, load current flow is

a) Unidirectional
b) Bidirectional
c) Either (a) or(b)
d) Nondirectional

Q 7. Applications of Cycloconverters include

a) speed control of ac drives
b) induction heating
c) static VAR compensation
d) all of the mentioned

Q 8.Inverters converts

a) dc power to dc power
b) dc power to ac power
c) ac power to ac power
d) ac power to dc power

Q 9. A step - down choppers can be used in

a) Electric traction
b) Electric vehicles
c) Machine tools
d) All of these

Q 10. The rate of heat produced by dielectric heating is increased by

a) Increasing frequency and voltage supply
b) Increasing frequency and decreasing voltage supply
c) Decreasing frequency and voltage supply
d) Decreasing frequency and increasing voltage supply

Answers : Q1 (a) , Q2 (c) , Q 3 (d), Q 4 (a), Q 5 (c), Q 6 (a), Q 7 (d), Q 8 (b), Q 9 (d), Q 10 (a)

SAMPLE MCQs
PROGRAM: ELELCTRICAL ENGINEERING
COURSE CODE: EE 5966
COURSE TITLE: INDUSTRIAL AUTOMATION

Q 1.The linking of PC's with communication systems is referred as

a) Workstations
b) Streaming
c) Networking
d) None of the above

Q 2.A solenoid is an example of an output device
a) True
b) False
c) None of the above

Q3.One of the following is an input device
a) Motor
b) Light
c) Valve
d) Sensor

Q 4.How are the status of the carry, auxiliary carry and parity flag affected if the write instruction
MOV A,#9C
ADD A,#64H

a) CY=0, AC=0, P=0
b) CY=1, AC=1, P=0
c) CY=0, AC=1, P=0
d) CY=1, AC=1, P=1

Q 5. If we push data onto the stack then the stack pointer

a) Increases with every push
b) decreases with every push
c) increases & decreases with every push
d) none of the mentioned

Q 6.The part that monitors the inputs and makes decisions in a PLC is the CPU
a) True
b) False
c) None of the above

Q7. Which one of the following is not a PLC manufacturer?

a) Siemens
b) Mitsubishi
c) Microsoft
d) ABB

8. To increase the number of inputs and outputs of the PLC, one can use expansion modules

a) True

b) False

c) None of the above

Q 9.An example of discrete (digital) control is:

a) Varying the volume of a music system
b) Turning a lamp ON or OFF
c) Varying the brightness of a lamp
d) Controlling the speed of a fan

Q 10.If one site fails in distributed control system then _____

a) the remaining sites can continue operating
b) all the sites will stop working
c) directly connected sites will stop working
d) none of the mentioned

Answers : Q1 (c) , Q2 (a) , Q 3 (d), Q 4 (b), Q 5 (a), Q 6 (a), Q 7 (c),Q 8 (a), Q 9 (b), Q 10 (a)

SAMPLE MCQs
PROGRAM: ELELCTRICAL ENGINEERING
COURSE CODE: EE 5973
COURSE TITLE: ENERGY CONSERVATION AND AUDIT

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1) Energy conservation act was formed in the year ----

a) 1998 b) 2000 c) 2001 d) 1996

2) Which is the major energy source to meet the Indian energy demand?

a. Coal

b. Oil

c. Natural gas

d. Lignite

3) Energy conservation in heaters can be done through

a) Maintaining thermostat at highest temperature

b) Use heaters at very little time span

c) Set proper temperature of heater

d) None of above

4) Causes of low power factor in the system are due to

a) Transformers

b) Induction motors

c) Fluorescent Lamps

d) All of the above

5) Cost of Energy efficient motors is ---------- than conventional motors

a) Less

b) More

c) Same

d) None of these

6) Tariff is applied for which kind of consumers?

a. Big consumers.

b. Small consumers.

c. Residential consumers.

d. All of these.

7) Flat rate tariff is charged on what basis?

a. Connected load.

b. Units consumed.

c. Maximum demand.

d. Both (a) and (b).

8) What can acid rains pollutes?

a) Trees

b) House

c) Air

d) Clouds

9) The objective of energy management includes

a) Minimising energy costs

b) Minimising waste

c) Minimising environmental degradation

d) All the above

10) Lux meter is used to measure……

a) Illumination level

b) Sound intensity and illumination level

c) Harmonics

d) None of these

SAMPLE MCQs
PROGRAM: ELELCTRICAL ENGINEERING
COURSE CODE: EE 5974
COURSE TITLE: RENEWABLE ENERGY SOURCES & ITS APPLICATION

Q.01 - Global radiation =

A) Direct radiation – diffuse radiation

B) Direct radiation +diffuse radiation

C) Direct radiation / diffuse radiation

D) Direct radiation X diffuse radiation

Q.02 - Value of solar constant is

A) 1347 W/square m

B) 1357 W/square m

C) 1367 W/square m

D) 1377 W/square m

Q.03 Which of the following type of collector is used for low temperature application?

A) Flat plate

B) Parabolic

C) Dish

D) All of the above

Q.04 Maximum efficiency is obtained in

A) Flat plate collector

B) Evacuated tube collector

C) Parabolic dish collector

D) Line focusing collector

Q.05 KVIC digester is related to

A) Solar energy
B) Tidal energy
C) Biomass energy
D) Ocean energy

Q.06 Minimum wind speed required for electric power generation

A) 10 m/s

B) 25m/s

C) 3m/s

D) 50m/s

Q.07 The term Biomass often refers to

A) Inorganic matter

B) Organic matter

C) Chemicals

D) Ammonia

Q.08 The % of carbon dioxide in methane is

A) 25-30

B) 32-43

C) 50-60

D) 70-80

Q.09 The term Double basin system is related to

A) Solar energy

B) Geothermal energy

C) Ocean energy

D) MHD generation

Q.10 Which energy accounts for largest share in India

A)Wind

B) Solar

C) Hydel

D) Nuclear

Answer key ----Q.01-- B Q.02—C Q.03—A Q.04 -C Q.05—C Q.06---C Q.07—B Q.08—B Q.09—C Q.10--C

SAMPLE MCQs
PROGRAM: ELELCTRICAL ENGINEERING
COURSE CODE: EE5978
COURSE TITLE: MODERN MACHINE DRIVE

Q1. Which of the following motor runs from a low dc supply and has permanently magnetized salient poles?

(a) Permanent magnet DC motor
(b) Disk DC motor
(c) Brushless dc motor
(d) Permanent magnet synchronous motor

Q.2 Why Field excitation is not needed in PMDC motor?

(a) As it is separately excited
(b) **As field winding is replaced by field magnets**.
(c) As it is self-excited
(d) As it is similar to that of dc motor

Q.3. The rotor of a stepper motor has no

(a) windings
(b) commutator
(c) brushes
(d) **all of the above.**

Q.4. Which of the following phase switching sequence represents half-step operation of a VR stepper motor ?

(a) A, B, C, A ……..
(b) A, C, B, A ……..
(c) AB, BC, CA, AB ……..
(d) **A, AB, B, BC** ……..

Q.5. A switched reluctance motor differs from a VR stepper motor in the sense that it

(a) has rotor poles of ferromagnetic material
(b) **rotates continuously**
(c) is designed for open-loop operation only
(d) has lower efficiency.

Q.6. This motor can run at very high speed upto 30,000 rpm in hazardous atmosphere.

(a) PMDC motor
(b) SRM
(c) VRSM
(d) PMSM

Q.7. In the biomedical instruments like artificial heart pumps, the commonly used motor is

(a) Permanent magnet d.c. motor
(b) **Brushless d.c. motor**
(c) Ward-Leonard system
(d) Series motor

Q8. The BLDC motor is electrically commutated by power switches instead of brushes

(a) True
(b) False
(c) None of the above
(d) All the above

Q.9 The hysteresis motor are mainly used in tape recorders because

(a) **Of its extremely steady torque**
(b) Constant speed
(c) Reduced initial current
(d) None of these

Q10. One of the basic requirements of a servomotor is that it must produce high torque at all

(a) Loads
(b) Frequencies
(c) Speeds
(d) Voltages.

Q. 11. Grounding transformer is _____

(a) Step-up transformer
(b) **Step-down transformer**
(c) Autotransformer
(d) Any transformer can be grounding transformer

Q.12. The Torque in the motor is produced by the interaction of the axial flux and the current flowing through the armature disc.

(a) Eddy current coupling machine
(b) Hysteresis motor
(c) Printed circuit motor
(d) Servomotor

Q1.(a), Q2. (b), Q3. (d) . Q4. (d), Q5. (b), Q6. (b), Q7. (b) Q8(a), Q9. (a), Q10. (c), Q11. (b) , Q12. (c)