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120961/030961

6th Sem. / Electrical Engg./ Power State Engg. Elect & Elex Engg.

Subject : Utilization of Elect. Energy

Time : 3 Hrs. M.M. : 100

SECTION-A

Note: Objective type questions. All questions are compulsory (10x1=10)

Q.1 Candela is the unit of _____.

Q.2 With the increase in voltage, life of the Lamp_____.

Q.3 Dielectric heating works on _____ supply.

Q.4 In atmoic hydrogen welding, the electrodes used are made of _____.

Q.5 Capacity of Refrigerator is given is _____.

Q.6 EMU stands for _____.

Q.7 _____ Motor is used is domestic refrigerator.

Q.8 _____ is used as return conductor in Electric traction system.

Q.9 In a centrifugals pump the mechanical load is lifting (T/F).

Q.10 The Filament of Incandescent lamp is made of _____.

SECTION-B

Note: Very short answer type questions. Attempt any ten questions out of twelve questions. (10x2=20)

Q.11 Define LUX.

Q.12 Define Reduction Factor.

Q.13 Define Co-efficient of Utilization.

Q.14 Define Galvanisation.

Q.15 Enlist two specification of D.C shunt Motor.

Q.16 Define Glare.

Q.17 Describe Radiation method of heat transfer.

Q.18 Enlist two application of microwave heating.

Q.19 Define welding Electrode.

Q.20 Define Electrolyte.

Q.21 Define Coolant / Refrigerant.

Q.22 Enlist two advantages of Electric traction .

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. (8x5=40)

Q.23 Differentiate between A.C and D.C welding.

Q.24 Explain Direct Resistance heating.

Q.25 Differentiate between CFL and LED Lamps.

Q.26 Explain the application of Electrolysis in refining of metals.

Q.27 Describe the five important features of a good Refrigerant.

Q.28 Differentiate between Individual and Group Drive.

Q.29 Explain the speed- time curve of a train.

Q.30 Enlist any five advantages of Electric Breaking of Drives over Mechanical breaking.

Q.31 Describe Projection welding along with its applications.

Q.32 Explain Faraday's Law of Electrolysis.

SECTION-D

Note: Long answer type questions. Attempt any three questions out of four questions. (3x10=30)

Q.33 Explain the Laws of illumination.

Q.34 Explain the construction and working of ajase wyatt type induction furnace.

Q.35 Describe vapour compression refrigeration cycle and show how cooling effect is produced.

Q.36 Explain the block diagram of Electric Locomotive.

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120962/105864/31065A

6th Sem. / Electrical Engg.

Subject : PLCs & Microcontrollers

Time : 3 Hrs. M.M. : 100

SECTION-A

Note: Objective type questions. All questions are compulsory (10x1=10)

Q.1 Expand PLC?

Q.2 What is relay?

Q.3 Define SCON?

Q.4 8051 microcontroller has .....pins.

Q.5 Expand RAM?

Q.6 What is timer?

Q.7 What is Rung?

Q.8 PIC stands for.....?

Q.9 Define baud rate?

Q.10 Define Interfacing?

SECTION-B

Note: Very short answer type questions. Attempt any ten questions out of twelve questions. (10x2=20)

Q.11 Name the two Programming Languages of PLC?

Q.12 What is sourcing connection?

Q.13 What is PLC Scanning?

Q.14 Define Machine Language?

Q.15 What is an assembler?

Q.16 Expand EEPROM?

Q.17 What is flag?

Q.18 Write names of any two types of Special function register?

Q.19 What is Ladder Diagram?

Q.20 The full form of RISC is.....?

Q.21 Name the different type of counters?

Q.22 What is the function of ALE pin in 8051 microcontroller?

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. (8x5=40)

Q.23 Write the limitations of relay?

Q.24 Discuss RTC of PLC?

Q.25 Explain the Special function registers of 8051 microcontroller?

Q.26 What are the advantages of PLC?

Q.27 What do you mean by maskable and non maskable interrupts?

Q.28 Discuss about Serial data transmission modes in Microcontroller?

Q.29 What is Ladder programming?

Q.30 Draw the pin diagram of PIC mirocontroller?

Q.31 Explain star delta starter with the help of PLC?

Q.32 Explain any two Assembler directives.

SECTION-D

Note: Long answer type questions. Attempt any three questions out of four questions. (3x10=30)

Q.33 With the help of block diagram explain the working of different blocks of 8051 microcontroller?

Q.34 Explain the Architecture of PLC with block diagram?

Q.35 What are the different addressing modes in 8051 microcontroller? Explain them with example?

Q.36 Write short note on:

a) PLC operation

b) ON-delay timers of PLC.

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120963/30963

6th Sem. / Electrical Engg.

Subject : Power-II / Electrical Power-II

Time : 3 Hrs. M.M. : 100

SECTION-A

Note: Objective type questions. All questions are compulsory (10x1=10)

Q.1 Faults occurs because of _____ failure.

Q.2 Double line fault is a type of _____fault.

Q.3 Rating of a circuit breaker is given in _____

Q.4 ELCB Stands for _____.

Q.5 What is the purpose of fuse.

Q.6 Define Earthing.

Q.7 Voltage in single phase is _____ Volts.

Q.8 The fusing factor is always greater than one. True/Flase.

Q.9 A Buchholz relay operates on the principle of _____.

Q.10 A lightning arrestor in connected between _____ and_____.

SECTION-B

Note: Very short answer type questions. Attempt any ten questions out of twelve questions. (10x2=20)

Q.11 What is the difference between isolator & circuit breaker.

Q.12 Define making & breaking capacity of circuit breakers.

Q.13 Which relay is used for the protection of transformer.

Q.14 Explain arc extinguish process in circuit breakers.

Q.15 Define static relay.

Q.16 Define lightning.

Q.17 Explain two part tariff.

Q.18 Define surge diverter.

Q.19 Explain system earthing as per indian electricity rules.

Q.20 Name the different protection scheme available for transformer.

Q.21 Name various types of faults in underground system.

Q.22 What are the main characteristics of relays.

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. (8x5=40)

Q.23 What are the merits & demerits of oil circuit breaker over air blast circuit breaker.

Q.24 Write a short note on maintenance of circuit breakers.

Q.25 What are the internal & external causes of over voltages in a power system.

Q.26 What are the requirements of a good lightning arrestors.

Q.27 Explain the impedance protection scheme.

Q.28 Explain with the help of diagram the terms arc voltages, restriking voltages and recovery voltage.

Q.29 Explain with the help of neat diagram the working of a thermal relay.

Q.30 What are the various types of faults on overhead transmission line.

Q.31 Describe the construction, principle of operation and application of a) Rod gap b) Expulsion type lightning arresters.

Q.32 What are the desirable characteristics of a tariff?

SECTION-D

Note: Long answer type questions. Attempt any three questions out of four questions. (3x10=30)

Q.33 Explain with neat diagram a single pressure puffer type sulphur hexafluoride circuit breaker.

Q.34 Draw a neat sketch of an induction type over current relay and describe its operation.

Q.35 Describe in detail the Merz Price system of protection for a 3-phase star-Delta transformer.

Q.36 Explain different types of tariffs in detail . Mention the advantages and disadvantages of each system.

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120264/030364/105243/105252/
105351/03262/030361/30151

6th Sem. / Common to All

Subject : E.D.M.

Time : 3 Hrs. M.M. : 100

SECTION-A

Note: Objective type questions. All questions are compulsory (10x1=10)

Q.1 Full form of NABARD is .....

Q.2 Meaning of Partnership.

Q.3 Expand MSME.

Q.4 Full form of TBI is .....

Q.5 Meaning of Market Survey.

Q.6 WHO is father of management?

Q.7 Theory of Motivation is given by .....

Q.8 Expand EOQ.

Q.9 Full form of JIT is .....

Q.10 Meaning of Trade Mark.

SECTION-B

Note: Very short answer type questions. Attempt any ten questions out of twelve questions. 10x2=20

Define the following terms.

Q.11 Line organisation.

Q.12 Leadership style.

Q.13 Business opportunity.

Q.14 State Financial Corporations.

Q.15 IPR.

Q.16 Necessity of TQM.

Q.17 Demand forecasting.

Q.18 What is meaning of MRP?

Q.19 Define HRM.

Q.20 What is Income Tax?

Q.21 What are objectives of NSIC?

Q.22 Give importance of marketing.

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. 8x5=40

Q.23 What do you understand by Entrepreneurship?

Q.24 Discuss functions of MSME.

Q.25 What do you understand by Commercial banks?

Q.26 Enlist the various factors governing sales forecasting.

Q.27 Explain briefly PPR.

Q.28 Enlist in brief the importance of management.

Q.29 What do you understand by democratic leadership?

Q.30 What is the importance of Human Resource Management?

Q.31 Explain in detail about Sales Tax.

Q.32 Explain CRM and its need.

SECTION-D

Note: Long answer type questions. Attempt any three questions out of four questions. 3x10=30

Q.33 What are qualities and functions of Entrepreneur?

Q.34 Explain in detail what factors should be Considered While making a final selection at the Product to be manufactured.

Q.35 Explain the following :

a) Common Errors in Project report Preparation.

b) Objectives of Management.

Q.36 Discuss following :

a) Sales Promotion Techniques

b) Performance Appraisal Methods.

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120965A/30965A

6th Sem. / Electrical/ PSE

Subject : Energy Management

Time : 3 Hrs. M.M. : 100

SECTION-A

Note: Very Short Answer type questions. Attempt any 15 parts. (15x2=30)

Q.1 a) Define energy efficiency

b) What do you mean by renewable source of energy.

c) Name two energy efficient lamps.

d) Define ISI.

e) All lamps are rated in watt/kw (True/False)

f) Name two losses in motor.

g) What os geothermal energy source.

h) Bio diesel is _____ alternative.

i) What is specific energy consumption.

j) What is LED.

k) EIA is not global process (True/False)

l) What is the need of energy efficient devices.

m) Copper has low electrical conductivity than AL(True/False)

n) Incandescent lamp is least expensive to buy but most expensive to operate (True/False)

o) A person can design a machine which operate with no wasted energy(True/False)

p) Define EIA

q) What is lumen output.

r) What is the function of power factor controller.

SECTION-B

Note: Short answer type questions. Attempt any ten parts 10x4=40

Q.2 i) What is the significance of energy management.

ii) Explain in brief solar energy.

iii) Explain solar water pump as stand by energy source.

iv) How do you conserve energy in domestic sector.

v) What is the purpose of BIS codes.

vi) What are the barriers to energy efficient lighting.

vii) How can we improve low power factor.

viii) What is the format of energy audit report.

ix) State advantages of LED.

x) What is format of energy audit report.

xi) What are amorphous transformer.

xii) Write short note on energy security.

xiii) What are non avoidable losses.

xiv) How do you select size of capacitor.

xv) Compare energy efficient motors to standard motors.

SECTION-C

Note: Long answer type questions. Attempt any three questions. 3x10=30

Q.3 What are renewable energy sources. Explain in detail types of renewable energy source used today.

Q.4 Explain in detail different strategies of energy management.

Q.5 What is the need of transformer. How conventional transformer is different from energy efficient amorphous transformer.

Q.6 Compare and contrast various forms of energy impact assessments.

Q.7 Explain following in brief:-

i) Compare CFL and LED

ii) Geothermal energy

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120965A/030965A

6th Sem. / Electrical Engg.

Subject : Energy Management

Time : 3 Hrs. M.M. : 100

SECTION-A

Note: Objective type questions. All questions are compulsory (10x1=10)

Q.1 Define energy.

Q.2 What is EIA.

Q.3 HVDC stands for _____.

Q.4 Define efficiency.

Q.5 BIS full form is_____.

Q.6 What is HVAC.

Q.7 What is relation between Power, voltage and current.

Q.8 Define power factor.

Q.9 What do you mean by UPS.

Q.10 Write down two sources of renewable energy sources.

SECTION-B

Note: Very short answer type questions. Attempt any ten questions out of twelve questions. (10x2=20)

Q.11 Write full form of CFL. What are its two advantages?

Q.12 Define Efficiency of light source. How it is measured in.

Q.13 The Sf_6 gas is used in _____. Write down its benefits.

Q.14 Define load. Explain in brief.

Q.15 What is fine tunning. Comment on its uses.

Q.16 What is need of energy conservation.

Q.17 Give two example of energy management.

Q.18 How many units of electrical energy are consumed by a heater of 1000 Watts.

Q.19 Write down the two methods of energy conservation in Agriculture sector.

Q.20 What is dimming of light.

Q.21 Kinetic energy of wind is given by the formula_____.

Q.22 Explain the roll of ozone layer as filter.

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. (8x5=40)

Q.23 Define energy crisis. How it is related with oil and coal crisis.

Q.24 What do you mean by energy conservation. Explain its significance in domestic sector.

Q.25 What do you understand by energy efficient devices. Mention the name of such five devices.

Q.26 Explain the role of voltage on efficiency. Give example.

Q.27 Write a note on location capacitors.

Q.28 Define Energy audit. Mention its two uses.

Q.29 What are the requirements of good lighting system.

Q.30 Explain the two disadvantages of low power factor.

Q.31 Write a small note on wind energy.

Q.32 Discuss the effect of overload on efficiency of motor.

SECTION-D

Note: Long answer type questions. Attempt any three questions out of four questions. (3x10=30)

Q.33 Define and explain format of environmental impact assessment report. Give examples.

Q.34 What is energy audit strategy. Explain its various strategies and methods.

Q.35 Make a list of various Instruments used for energy audit.

Q.36 Explain the various basic reasons of power crisis in India.

Q.29 Write various test to be performed before commissioning of transformer.

Q.30 Explain pole mounted substation.

Q.31 Write various checks to be carried out for the maintenance of motors.

Q.32 Write the name of the tests carried out for testing of transformer oil. Explain anyone.

SECTION-D

Note: Long answer type questions. Attempt any three questions out of four questions. (3x10=30)

Q.33 Explain different types of support structures used in transmission & distribution lines.

Q.34 Write the maintenance schedule of a power transformer.

Q.35 What is the affect of open neutral connection? How location of fault can be found using megger?

Q.36 Explain procedure for overhauling of motors.

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120965C/030962

6th Sem. / Electrical

Subject : Installation & Maintenance of Electrical Equipment

Time : 3 Hrs. M.M. : 100

SECTION-A

Note: Objective type questions. All questions are compulsory (10x1=10)

Q.1 Crimper is used for _____.

Q.2 What is dead end?

Q.3 Full form of ACSR is _____.

Q.4 Cross head screwdriver is used for _____ screws.

Q.5 Write the name of two types of earthing.

Q.6 Write the name of two material commonly used for conductors.

Q.7 Horizontal clearance between two conductors for 11KV lines is _____.

Q.8 Minimum Ground clearance along street for high voltage line is _____.

Q.9 CT stands for _____.

Q.10 Full form of SWG is _____.

SECTION-B

Note: Very short answer type questions. Attempt any ten questions out of twelve questions. (10x2=20)

Q.11 Write name of two type of spanners.

Q.12 Explain danger notice.

Q.13 Define jumpers.

Q.14 Explain suspension type insulators.

Q.15 What is anchor rod?

Q.16 Explain wet flash over test.

Q.17 What are different type of faults which occur in underground cable?

Q.18 Define Substation.

Q.19 What is drying out?

Q.20 Write the name of the tests performed on transformer before commissioning.

Q.21 Define preventive maintenance.

Q.22 Write the cause of dim light.

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. (8x5=40)

Q.23 Write rule 35 for danger notice.

Q.24 Write rule 77 regarding clearance of lowest conductor above ground.

Q.25 Write precaution to be taken while giving first aid to the victim of electric shock.

Q.26 Write the procedure for testing insulation resistance to earth in domestic installation. What is the value of insulation resistance?

Q.27 Draw the block diagram of a transmission & distribution line.

Q.28 Compare overhead and underground cable system.