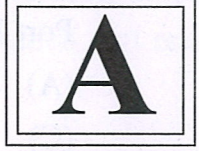


પ્રશ્નપુસ્તિકા નંબર
400033

EEGBU-2024



ઉમેદવારનો બેઠક નંબર

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કુલ પ્રશ્નો : 100

કુલ ગુણ : 100

સમય : 120 મિનિટ

Total Que. : 100

Total Marks : 100

Time : 120 Minutes



તમને સૂચના આપવામાં ન આવે ત્યાં સુધી પ્રશ્નપુસ્તિકા ખોલવી નહીં.

- (01) આ પ્રશ્નપત્રમાં કુલ 100 પ્રશ્નો છે. પ્રત્યેક પ્રશ્નનો ઉત્તર A, B, C અને D પૈકી કોઈ એક છે. ઉમેદવાર જો જવાબ ન આપવા માંગતા હોય તો તેના માટે OMR ઉત્તરપત્રમાં વિકલ્પ E આપેલ છે. બધા જ પ્રશ્નોના ઉત્તર આપવા ફરજિયાત છે. આ સાથે અલગ આપેલ OMR ઉત્તરપત્રમાં જ ઉત્તર આપવાના છે.
- ઉદાહરણ તરીકે :
- ભારતના રાષ્ટ્રપિતા તરીકે કોણ ઓળખાય છે?
- A) સરદાર પટેલ B) સુભાષચંદ્ર બોઝ
C) મહાત્મા ગાંધી D) વિનોબા ભાવે
- ઉત્તરપત્ર (OMR SHEET) માં.
- (A) (B) (C) (D) (E)
- ઉપર્યુક્ત ઉદાહરણનો જવાબ “C” છે. આથી “C” નું વર્તુળ ઘાટું (encode) કરેલ છે. સાચી અને ખોટી પદ્ધતિથી વર્તુળ ઘાટું કરવા બાબતની સૂચના OMR માં આપેલ છે જેની નોંધ લેવી.
- (02) 1 થી 100 પ્રશ્નો પુરેપૂરા છાપાયેલા છે કે કેમ તેની પ્રથમ ખાતરી કરી લો. જો પ્રશ્નો પૂરા છાપાયા ન હોય અથવા કોઈ પૃષ્ઠ ફાટેલું હોય કે કોઈ પૃષ્ઠ સામેલ ન હોય અથવા તો અન્ય કોઈ ક્ષતિ જણાય તો તરત જ નિરીક્ષક પાસેથી પ્રશ્નપુસ્તિકા અચૂક બદલાવી લેવી.
- ઉમેદવારને OMR ઉત્તરપત્ર મળ્યા બાદ જો તેઓ દ્વારા તેનો નાશ કરવામાં આવશે કે ગુમ કરવામાં આવશે તો તે ઉમેદવારને ગેરલાયક ઠરાવવામાં આવશે.
- (03) પરીક્ષા શરૂ થયેથી ઉમેદવાર અધવચ્ચેથી પરીક્ષા ખંડ છોડી શકશે નહીં.
- (04) ઉમેદવારે પોતાના બેઠક ક્રમાંકની પ્રશ્નપુસ્તિકા અને OMR ઉત્તરપત્ર મળેલ છે તેની ખાતરી કરી લેવી અન્યથા ખંડ નિરીક્ષકનું તરત જ ધ્યાન દોરવું. ઉમેદવારને OMR ઉત્તરપત્ર મળે કે તરત જ તેમાં નિયત કરેલ જગ્યાએ પોતાનો બેઠક ક્રમાંક સ્વચ્છ અક્ષર લખવાનો રહેશે તેમજ બેઠક ક્રમાંક નીચે આપેલ વર્તુળ પણ ઘાટું (encode) કરવાનું રહેશે. મળેલ પ્રશ્નપુસ્તિકાનો કોડ નિયત જગ્યાએ લખીને તેની સાથે આપેલ વર્તુળ પણ ઘાટું (encode) કરવાનું રહેશે. લખેલી વિગતો અને ઘાટું (encode) કરેલ વર્તુળની વિગતો યોગ્ય રીતે ભરાયેલ છે તેની ખાતરી કરી લેવી.
- (05) પ્રત્યેક સાચા જવાબદીઠ 1 (એક) ગુણ મળવાપાત્ર થશે. ગુણાંકન પદ્ધતિમાં માર્ઠનસ પદ્ધતિ રાખવામાં આવી છે. જે મુજબ - પ્રત્યેક ખોટા જવાબદીઠ, ખાલી છોડેલ જવાબદીઠ, છેકછાક કરેલ હોય તેવા જવાબદીઠ તથા OMR માં જણાવ્યા પ્રમાણેની ખોટી પદ્ધતિથી કે એક કરતાં વધુ વિકલ્પ દર્શાવેલ જવાબદીઠ 0.25 ગુણ કાપવામાં આવશે. જો ઉમેદવાર જવાબ આપવા માંગતા ન હોય અને વિકલ્પ (E) ઘાટું (encode) કરશે તો 0.25 ગુણ કાપવામાં આવશે નહિં.
- (06) OMR ઉત્તરપત્રમાં નિશ્ચિત જગ્યા સિવાય ઉમેદવારે પોતાનો બેઠક ક્રમાંક લખવો નહીં તથા પોતાની ઓળખ છતી થાય તેવી નામ કે અન્ય કોઈ પણ પ્રકારની નિશાની દર્શાવવાની સખત મનાઈ છે. તેમ છતાં પણ કોઈ પણ નિશાની કે ઓળખ કર્યાનું માલૂમ પડશે તો તેને સંપૂર્ણ ગેરશિસ્ત ગણવામાં આવશે અને પરીક્ષા માટે ગેરલાયક ગણવામાં આવશે.
- (07) ઉત્તરપત્ર (OMR SHEET) માં ઉમેદવાર તથા નિરીક્ષક બંનેની સહી ફરજિયાત છે. બંનેની સહી વિનાની OMR SHEET (ઉત્તરપત્ર) વાળા ઉમેદવાર ગેરલાયક ઠરશે.
- (08) પરીક્ષા દરમ્યાન ઉમેદવાર પાસેથી કોઈ પણ સાહિત્ય, માર્ગદર્શિકા, કાપલી, અન્ય હસ્તલિખિત કે પ્રિન્ટેડ સાહિત્ય, મોબાઈલ ફોન, પેજર, કેલક્યુલેટર, બ્લુટુથ, સ્માર્ટ વોચ કે અન્ય વીજાણુ ઉપકરણો હોવાનું જણાશે તો ઉમેદવારને ગેરલાયક ગણવામાં આવશે.
- (09) આ જવાબવહી કોમ્પ્યુટર દ્વારા તપાસાવાની હોવાથી તે વળે, ફાટે કે બગડે નહિ તેની ખાસ કાળજી રાખવી તથા જવાબવહીની ગડી વાળવી નહીં.
- (10) પ્રશ્નપુસ્તિકામાં કોરી જગ્યામાં રફ કામ કરવું. તે માટે અલગ કાગળ આપવામાં આવશે નહીં. જવાબવહીમાં કઈ પણ રફ વર્ક કરવું નહીં. પ્રશ્નપુસ્તિકામાં જવાબો લખવાની મનાઈ છે.
- (11) પ્રશ્નપુસ્તિકામાં કોઈ પૃષ્ઠ ફાડવા કે જુદાં કરવાની મનાઈ છે.
- (12) ચાલુ પરીક્ષા દરમ્યાન અંદરોઅંદર ગુસપુસ કરવી, અવાજ કરવો કે નિરીક્ષકની સૂચનાઓનું ઉલ્લંઘન કરવું કે અન્ય કોઈ ગેરરીતી કરવી તે ગેરશિસ્ત ગણાશે.
- (13) ઉમેદવારે ભૂરી/કાળી બોલપોઈન્ટ પેનથી ઉત્તરો લખવાના છે. અન્ય શાલી કે પેન કે પેન્સિલ તથા સફેદ શાલીનો ઉપયોગ કરી શકાશે નહીં તથા સફેદ શાલી (White Ink), બ્લેડ કે રબરથી કે અન્ય કોઈ પણ રીતે પ્રશ્નના જવાબમાં કરેલા સુધારા માન્ય ગણાશે નહીં.

પરીક્ષા આપનાર ઉમેદવારે ઉત્તરપત્ર (OMR SHEET) વર્ગનિરીક્ષકને પરત કર્યા બાદ જ વર્ગખંડ છોડવાનો રહેશે. તેમ કરવામાં કસુર થયેથી શિસ્તભંગના પગલાં ગણી પરીક્ષા માટે ઉમેદવારને ગેરલાયક ઠેરવવામાં આવશે.

001. In which year, name of Kandla Port Trust is renamed as Pandit Deendayal Port Trust?

- (A) 2016 (B) 2017
(C) 2018 (D) 2019

002. "Adalaj ni Vav" was built by Mahmud Begada in _____.

- (A) 1411 (B) 1512
(C) 1610 (D) 1380

003. Which of the following is / are objective(s) of NITI Aayog?

- (A) To evolve a shared vision of national development priorities, sectors and strategies with the active involvement of States.
(B) To create a knowledge, innovation and entrepreneurial support system through a collaborative community of national and international experts, practitioners and other partners.
(C) To focus on technology upgradation and capacity building for implementation of programmes and initiatives
(D) All of the above

004. Economic Survey is published by _____.

- (A) Ministry of Finance (B) NITI Aayog
(C) Indian Statistical Institute (D) Indian Economic Service

005. નીચે આપેલ પૈકી કયું સાચું છે?

- (A) સત્ + નારી = સત્રારી (B) શાળા + ઉપયોગી = શાળોપયોગી
(C) પરમ + ઈશ્વર = પરમેશ્વર (D) આપેલ તમામ


006. નીચેના માંથી કયો દ્વન્દ્વ સમાસ નથી?

- (A) ભરતીઓટ (B) હાડમાંસ
(C) છળકપટ (D) રાવણવધ

007. Article 29 belongs to which part of Indian Constitution?

- (A) Part II (B) Part III
(C) Part IV (D) Part V

008. Fundamental Duties were included in the Constitution on the recommendation of which of the following committee?
(A) Swaran Singh Committee
(B) Santhanam Committee Shah Committee
(C) J. B. Kripalani Committee
(D) None of the given
009. Scissors : Cloth :: Axe : ?
(A) Wood (B) Grinder
(C) Stone (D) Brick
010. Aakash and Aman have to travel from Ahmedabad to Rajkot in their respective vehicles. Aakash is driving at 80 kmph while Aman is operating at 120 kmph. Obtain the time taken by Aman to reach Rajkot if Aakash takes 3 hrs.
(A) 4 hrs (B) 2 hrs
(C) 2 hours and 45 minutes (D) None of the given
011. What are the two categories of cells which nervous system is made up of?
(A) Gastric chief cell, Parietal cell
(B) Satellite cell and Boettcher cell
(C) Neurons and Glial cells
(D) Tendon cell and Macula densa cell
012. The concept of ICT is related to
(A) storing digital information (B) recording digital information
(C) sending digital information (D) All of the given
013. Give synonym of the following word: "Audacity"
(A) Courage (B) Accurate
(C) Rude (D) Cowardice
014. Give antonym of the following word: "Barrier"
(A) Fertile (B) Obstacle
(C) Assistance (D) Barricade
015. With reference to higher education, E stands for what in NMEICT?
(A) E-content (B) Education
(C) Equal (D) None of the given

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016. Which of the following is an online store house of all academic awards like certificates, diplomas, degrees marksheets etc.?
(A) SWAYAM
(B) National Digital Library
(C) National Academic Library
(D) National Academic Depository
017. The fourth vertical of HECI will be the _____, which will frame expected learning outcomes for higher education programmes, also referred to as 'graduate attributes'.
(A) National Accreditation Council
(B) Higher Education Grants Council
(C) National Higher Education Regulatory Council
(D) General Education Council
018. NEP 2020 stated to establish a National Repository of high-quality resources on foundational literacy and numeracy on Government Digital Platforms. What is the name of the Government's Digital Platform?
(A) DIKSHA
(B) DISHA
(C) NISHTHA
(D) SHIKSHA
019. If the administrative authority within a department is vested in a single individual, then that system is known as _____.
(A) Board
(B) Bureau
(C) Commission
(D) None of the given
020. Which of the following act prohibits the improper use of State Emblem of India for professional and commercial purposes?
(A) The State Emblem of India Act, 2005
(B) The National Emblem of India Act, 2005
(C) The Improper Use and Proper Use of State Emblem of India Act, 2005
(D) None of the given

021. Which of the following is correct as per rule 141A of General Financial Rules (GFR), 2005?
- (A) GeM may be utilized by Government buyers for direct online purchases upto Rs. 1,00,000/- through any of the available supplier on the GeM, meeting the requisite quality, specifications and delivery period;
- (B) GeM may be utilized by Government buyers for direct online purchases upto Rs. 5,00,000/- through any of the available supplier on the GeM, meeting the requisite quality, specifications and delivery period;
- (C) GeM may be utilized by Government buyers for direct online purchases upto Rs. 50,000/- through any of the available supplier on the GeM, meeting the requisite quality, specifications and delivery period;
- (D) None of the given
022. An appointment to any service or post included in the State service shall be made by the State Government or by an authority duly empowered in that behalf by the State Government _____.
- (A) on the result of a competitive examination held for the purpose
- (B) by promotion or transfer
- (C) by direct selection
- (D) All of the given
023. Qualifying service for the purpose of pension of a government employee does not include as per Gujarat Civil Service (Pension) Rules, 2002.
- (A) Service on fixed pay basis (B) Service as an apprentice
- (C) Service on contract basis (D) All of the given
024. As per Gujarat State Biotechnology Policy, indicative list of Ecosystem strengthening projects includes _____
- (A) Genome Sequencing
- (B) Plug and Pay facilities
- (C) Clinical Testing including Animal Testing Facilities
- (D) All of the given
025. Who is the Director General of Gujarat Biotechnology University?
- (A) Shri Dilip Shanghvi (B) Shri Sudhir Vaid
- (C) Dr. Subeer S. Majumdar (D) Dr. J. C. Lilani

026. As compared to BJT, a power MOSFET has
 (A) Higher switching losses and higher conduction losses
 (B) Lower switching losses and higher conduction losses
 (C) Lower switching losses and lower conduction losses
 (D) Higher switching losses and lower conduction losses
027. In a 24 phase full wave rectifier, if supply frequency is 50 Hz, then the ripple frequency will be
 (A) 2400 Hz (B) 1200 Hz
 (C) 600 Hz (D) 50 Hz
028. The reason of connecting a resistance and capacitance across Gate circuit is to protect the SCR against
 (A) Over voltages (B) Over current
 (C) Noise signals (D) dv/dt
029. The TRIAC can be used only in
 (A) Cycloconverter (B) Inverter
 (C) Rectifier (D) Chopper
030. A DC chopper has a $T_{ON} = 5$ ms (millisecond) and frequency is 100 Hz. What will be its duty cycle?
 (A) 100 % (B) 75 %
 (C) 200 % (D) 50 %
031. If $100_b = 16_{10}$, then the value of b is
 (A) 8 (B) 6
 (C) 4 (D) 2
032. Consider the truth table shown below:
- | Input | | Output |
|-------|---|--------|
| A | B | f |
| 1 | 0 | 1 |
| 0 | 1 | 1 |
| 1 | 1 | 0 |
- The logic gate represented by the above truth table is
 (A) NOR (B) EX-OR
 (C) NAND (D) OR

033. A device which changes from serial data to parallel data is
(A) Flip-flop (B) Counter
(C) Multiplexer (D) Demultiplexer
034. A weighted resistor digital to analog converter using n-bits required a total of
(A) n - precision resistors (B) 2n - precision resistors
(C) n - 1 precision resistors (D) n + 1 precision resistors
035. How many address bits are required to represent a 32 k memory?
(A) 12 bits (B) 10 bits
(C) 16 bits (D) 14 bits
036. The operator del (∇) is a
(A) Scalar space function (B) Vector space function
(C) Scalar time function (D) Vector time function
037. Two spheres of radius r_1 and r_2 are connected by a conducting wire. Each of the sphere has been given a charge Q. Now
(A) Both the spheres have the same potential.
(B) Larger sphere will have greater potential.
(C) Larger sphere will have smaller potential.
(D) Smaller sphere will have zero potential.
038. An air-gap is usually inserted in magnetic circuits so as to
(A) Increase the flux (B) Increase the inductance
(C) Increase in mmf (D) Prevent saturation
039. The conductance in electric circuit is analogous to _____ in magnetic circuit.
(A) reluctance (B) flux
(C) permeance (D) Relative permeability
040. Two coils are coupled in such a way that the mutual inductance between them is 8 mH. If the inductance of the coils are 10 mH and 40 mH respectively, the co-efficient of coupling is
(A) 0.8 (B) 0.2
(C) 0.4 (D) 0.5

041. According to KVL, the algebraic sum of all IR drops and emfs in any closed loop of a network is always _____
 (A) Positive (B) Zero
 (C) Negative (D) Determined by battery emf
042. A constant current source supplied a current of 250 mA to a load of 2 k Ω . When the load is changed to 1 k Ω , the current supplied by the source will be
 (A) 250 mA (B) 125 mA
 (C) 500 mA (D) 100 mA
043. Three resistances of 24 Ω , 12 Ω and R Ω are connected in parallel. The current through 24 Ω is 2 A. The total current of the supply is 14 A. The value of resistance R will be _____.
 (A) 3 Ω (B) 18 Ω
 (C) 9 Ω (D) 6 Ω
044. A 40 W light bulb burns on an average of 10 hours a day for one week. The weekly consumption of energy will be
 (A) 2.8 units (B) 1.4 units
 (C) 5.6 units (D) 2.1 units
045. When two wattmeter method of measurement of power is used to measure power in a balanced 3-phase circuit, the reading of one wattmeter is zero. Then the power factor of the circuit is
 (A) Unity (B) 0
 (C) 0.5 (D) 0.8
046. A voltage of $V = 100 \angle 30^\circ$ V is applied to an impedance of $z = 3 + j4 \Omega$. The value of P, Q and S will be
 (A) 1600 W, 1200 VAR, 2000 VA
 (B) 1200 W, 1600 VAR, 2000 VA
 (C) 600 W, 800 VAR, 1000 VA
 (D) 800 W, 600 VAR, 1000 VA
047. In finding the Norton equivalent of a given network, the value of Norton current $I_N = 20$ A. The Norton equivalent resistance of the given network $R_N = 100 \Omega$ and the load resistance $R_L = 50 \Omega$. The value of the load current I_L will be
 (A) 3.33 A (B) 6.66 A
 (C) 13.33 A (D) 20 A

048. A 2 H inductor has 1000 turns. What should be the number of turns to increase the value of the inductance to 8 H?
(A) 1000 turns (B) 500 turns
(C) 4000 turns (D) 2000 turns
049. Which of the following quantity maintains the same direction whether DC machine runs as a generator or as a motor?
(A) Armature current (B) Field current
(C) Supply current (D) Induced emf
050. In a 6 pole DC machine, 90 mechanical degrees corresponds to ___ electrical degrees.
(A) 270 (B) 180
(C) 90 (D) 45
051. Which of the following method would give a lower than actual value of regulation of an alternator?
(A) ASA method (B) Zpf method
(C) Emf method (D) Mmf method
052. A transformer has negative voltage regulation when its load power factor is ____
(A) zero (B) unity
(C) leading (D) lagging
053. When a 400 Hz transformer is operated at 50 Hz, its kVA rating is ____
(A) Increase 8 times (B) Reduced to 1/8
(C) Increase 16 times (D) unaffected
054. Inverted V curve of a synchronous motor is the plot of
(A) Armature current against the field current
(B) Armature current against the power factor
(C) Power factor against the field current
(D) None of the above
055. In a 3-phase induction motor, the starting torque will be maximum when
(A) $R_2 = X_2$ (B) $R_2 = (X_2)^2$
(C) $R_2 = 1/(X_2)$ (D) $R_2 = \sqrt{X_2}$

056. A 6 pole, 50 Hz, 3-phase induction motor is running at 950 rpm and has rotor copper loss of 5kW. Its rotor input is ____ kW.
 (A) 10 kW (B) 50 kW
 (C) 200 kW (D) 100 kW
057. The positive sequence current of a transmission line is:
 (A) 3 times negative sequence current
 (B) Equal to negative sequence current
 (C) Always zero
 (D) 1/3 of negative sequence current
058. Zero sequence fault current is absent when fault is
 (A) Line to line fault (B) Single line to ground fault
 (C) Double line to ground fault (D) Triple line to ground fault
059. Generally in load flow solutions the load is modelled as a
 (A) Constant current load (B) Constant impedance load
 (C) Constant power load (D) Dynamically varying load
060. In a solutions of a load flow equations if slack bus is changed
 (A) Choice of slack bus has no effect on solution of load flow equation
 (B) Only complex voltages will change, losses will be the same
 (C) Complex voltages do not change however line losses will be affected.
 (D) Complex voltages and losses will change.
061. The relay most likely to mal-operate during the power swing is
 (A) Mho relay (B) Impedance relay
 (C) Reactance relay (D) Both B & C
062. An over current relay of current rating of 5 A and setting 150% is connected to the secondary of CT of ratio 300/5A. The current in the line for which the relay will pick up is :
 (A) 300 A (B) 150 A
 (C) 450 A (D) 200 A
063. A 500 MVA synchronous machine has $H_1 = 4.6$ MJ/MVA and 1500 MVA machine has $H_2 = 3$ MJ/MVA. The two machines operates in parallel in a power station, the equivalent H for the two, relative to 100 MVA base will be:
 (A) 45 MJ/MVA (B) 68 MJ/MVA
 (C) 34 MJ/MVA (D) 22 MJ/MVA

064. The critical clearing angle of the power system is related to
 (A) Short circuit limit (B) Steady state stability limit
 (C) Reactive power limit (D) Transient stability limit
065. When generating units are loaded to equal incremental costs, its results in
 (A) Maximum fuel cost
 (B) Maximum loading of generating units
 (C) Minimum fuel cost
 (D) Fuel costs are not affected.
066. The fuel cost of the unit is given by $F = 5 + 40P + 0.1 P^2$ Rs/Hr where P unit output in MW, the incremental fuel cost at an output of 100 MW is :
 (A) 60 Rs/MW hr (B) 80 Rs/MW hr
 (C) 20 Rs/MW hr (D) 40 Rs/MW hr
067. A ramp function occurs at $t = a$, its Laplace Transform is:
 (A) e^{-as} (B) $e^{-as/s}$
 (C) $e^{as/s}$ (D) None of these
068. The type and order of the system described by the open loop transfer function $\frac{s(s+1)}{(s+2)(s+3)}$ are respectively
 (A) 0 and 2 (B) 0 and 1
 (C) 1 and 2 (D) 1 and 1
069. Due to positive feedback
 (A) Stability of the system is increased but gain is reduced.
 (B) Both Stability and gain of the system is reduced.
 (C) Stability of the system is reduced but gain is increased.
 (D) Both Stability and gain of the system is increased.
070. In a force current analogy, stiffness constant K is analogous to _____
 (A) capacitance (B) Reciprocal of inductance
 (C) inductance (D) Reciprocal of capacitance
071. Damping in a control system is a function of
 (A) $\frac{1}{gain}$ (B) \sqrt{gain}
 (C) $\frac{1}{\sqrt{gain}}$ (D) gain

072. The highest integer that can be stored in a 8-bit accumulator is
(A) 255 (B) 64
(C) 128 (D) 256
073. Consider the following:
1. Sign flag 2. Parity flag 3. Trap flag 4. Auxiliary carry flag
Which of the above flag is/are present in 8085 microprocessor?
(A) 1, 2 (B) 2, 3
(C) 1, 2 and 4 (D) 1,2 and 3
074. The first machine cycle of an instruction is always:
(A) Input-output read cycle (B) Memory read cycle
(C) Memory write cycle (D) Fetch cycle
075. The number of address lines required to address 8 K bytes of memory is:
(A) 15 (B) 13
(C) 16 (D) 14
076. Which of the 8085 instructions uses stack?
(A) DCR A (B) JMP
(C) RET (D) MOV
077. HVDC transmission is prefer to EHV AC because
(A) System stability can be improved
(B) Harmonic problem is avoided.
(C) HVDC terminal equipments are inexpensive.
(D) VAR compensation is not required in HVDC
078. A three phase 12 pulse rectifier is fed from a transformer with nominal voltage of 220 kV/110 kV, if the primary voltage is 230 kV and the effective turns ratio T is 0.48, Determine the extinction angle δ when the ignition delay angle α is 20° and the commutation angle μ is 18° .
(A) 2° (B) 38°
(C) 4° (D) 19°
079. In HVDC system a converter acts as a rectifier when the firing angle α has a value
(A) $90^\circ < \alpha < 180^\circ$ (B) $0^\circ < \alpha < 120^\circ$
(C) $0^\circ < \alpha < 90^\circ$ (D) None of these

080. The equivalent circuit of the bipolar link represented as a monopolar link of + 500 kV. The inverter ideal no-load voltage is 600 kV. Determine the power factor at the inverter HT bus?
- (A) 0.5 (B) 0.833
(C) Unity (D) Zero
081. Back-to-back HVDC is used to
- (A) Reduce voltage drop
(B) Decrease line losses
(C) Provide stable interconnection
(D) Increase the transmission capability
082. If p is the pulse number and n is the integer, what is the order of harmonics on AC side and DC side?
- (A) np and $(np \pm 1)$ respectively
(B) $(np \pm 1)$ and np respectively
(C) $(np - 1)$ and $(np + 1)$ respectively
(D) $(np + 1)$ and $(np - 1)$ respectively
083. A perfect diffuser system is one that
- (A) Absorbs all the incident light
(B) Diffuses all the incident light.
(C) Transmits all the incident light
(D) Scatters light uniformly in all directions
084. The filament lamp of a GLS lamp is made of
- (A) Copper (B) Carbon
(C) Aluminium (D) Tungsten
085. The flicker effect of fluorescent lamps is more pronounced at
- (A) Lower frequencies (B) Higher frequencies
(C) Lower voltages (D) Higher voltages
086. Generally for electrical industrial wiring system, permissible voltage drop is _____.
- (A) 2 % of system voltage (B) 10 % of system voltage
(C) 5% of system voltage (D) 20 % of system voltage

087. "The illumination is directly proportional to the cosine of the angle made by the normal to the illuminated surface with the direction of the incident flux". This statement is associated with
- (A) Plank's law
 - (B) Lambert's cosine law
 - (C) Bunsen's law of illumination
 - (D) Macbeth's law of illumination
088. The objective of energy management includes
- (A) Minimising waste
 - (B) Minimising energy cost
 - (C) Minimising environmental degradation
 - (D) All of the above
089. The ratio of current year's production of energy to the reference year's is called
- (A) Production factor
 - (B) Load factor
 - (C) Utilisation factor
 - (D) Demand factor
090. Transit time method is used in which of the instruments?
- (A) Lux meter
 - (B) fyrite
 - (C) Ultrasonic flow meter
 - (D) Pilot tube
091. The legal framework for energy efficiency in India is given by
- (A) Indian electricity act 1910
 - (B) Energy conservation act 2001
 - (C) Electricity act 2003
 - (D) Electric supply act 1958
092. Star rating is a part of _____ programme of BEE.
- (A) DSM
 - (B) S & L
 - (C) BLY
 - (D) None of the above
093. An energy policy provides the _____ for setting performance goal and integrating energy management into an organization's culture.
- (A) Foundation
 - (B) Budget
 - (C) Delivery mechanism
 - (D) Action plan
094. Which of the following is a commonly used material in solar cells?
- (A) Germanium
 - (B) Copper
 - (C) Aluminium
 - (D) Silicon

095. As per the Gujarat solar power policy 2021, the surplus energy not consumed by the consumer shall be compensated by the DisComs at which unit rate for first five years?
(A) Rs. 1.50 per unit (B) Rs. 2.00 per unit
(C) Rs. 2.25 per unit (D) Rs. 3.00 per unit
096. As per waste to energy policy 2016, which agency is the nodal agency for facilitation and implementation of this policy?
(A) SLDC (B) GETCO
(C) GEDA (D) Power Grid corporation of India
097. As per the Gujarat small Hydel policy 2016, the size of the micro Hydel projects limits is
(A) Up to 50 kW (B) Up to 200 kW
(C) Up to 250 kW (D) Up to 100 kW
098. Internet of Things (IOT) is the natural extension of
(A) I 3.0 (B) SCADA
(C) Computer (D) Smart factory
099. POWERGRID has demonstrated the Smart Grid Technology capabilities at
(A) Puducherry (B) Mysore
(C) Bangaluru (D) New Delhi
100. WAMS stands for
(A) Wide area Automation and Management Systems
(B) Wide Area Management Systems
(C) Wide Area Measurement Systems
(D) Waste Automatic Management Systems

પરીક્ષા પૂરી થયા બાદ (OMR SHEET) ઉત્તરપત્ર વર્ગ નિરીક્ષકને
પરત કર્યા બાદ જ વર્ગખંડ છોડવાનો રહેશે.
તેમ કરવામાં કસૂર થયેથી તેને શિસ્તભંગનાં પગલાં ગણી
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