UPSEE 2019

PAPER-EE: CODE AA*

ANSWER KEY, Examination Date: 21-04-2019

1	C	26	C	51	A	76	D
2	A	27	B	52	A	77	A
3	A	28	D	53	A	78	A
4	C	29	A	54	A	79	C
5	D	30	C	55	B	80	A
6	C	31	C	56	A	81	A
7	B	32	A	57	B	82	B
8	A	33	C	58	B	83	C
9	D	34	B	59	B	84	D
10	B	35	B	60	C	85	C
11	D	36	A	61	D	86	C
12	B	37	A	62	C	87	D
13	B	38	A	63	B	88	D
14	A	39	B	64	A	89	A
15	B	40	A	65	A	90	B
16	B	41	A	66	A	91	C
17	B	42	A	67	A	92	A
18	A	43	B	68	A	93	C
19	A	44	A	69	B	94	C
20	B	45	D	70	B	95	D
21	D	46	D	71	A	96	B
22	C	47	A	72	C	97	C
23	B	48	B	73	C	98	A
24	A	49	B	74	D	99	A
25	D	50	B	75	A	100	C

Note: In case of any grievance, it must be reported at upseegrievance@aktu.ac.in along with Students Roll No. with Paper Code, Question Booklet Code, Question No. and suggested answer with supporting documents on or before 03rd May 2019.

*प्रश्न पुस्तिका क्रमांक **AA** का प्रश्नपत्र एवं कुंजी प्रकाशित की जा रही है। प्रश्न पुस्तिका क्रमांक **BB, CC** तथा **DD** में प्रश्नों एवं उनके विकल्पों का क्रम परिवर्तित है कृपया तद्नुसार उत्तर मिलान करें।

✂   ✂

| No. of Pages in Booklet including title | **16** | Time **2** Hours | Marks **400** | No. of Questions in Booklet | **100** |

EE

Roll No.

Question Booklet Sr. No.

Name of Candidate :

Signature of the Invigilator

Q. Booklet Code

AA

INSTRUCTIONS TO CANDIDATE

1.	Use BLUE or BLACK BALL POINT PEN only for all entries and for filling the bubbles in the OMR Answer Sheet.
2.	Before opening the SECURITY SEAL of the question booklet, write your Name, Roll Number (In figures), and OMR Answer-sheet Number in the space provided at the top of the Question Booklet. Non-compliance of these instructions would mean that the Answer Sheet can not be evaluated leading the disqualification of the candidate.
3.	Each question carries FOUR marks. There will be negative marking on wrong answer. FOUR marks will be awarded for each correct answer and ONE mark will be deducted for each wrong answer. No marks will be deducted/awarded for unattempted questions.
4.	Each multiple choice question has only one correct answer. More than one answer indicated against a question will be treated as incorrect answer.
5.	Use of log table, mobile phones, any electronic gadget and slide rule etc. is strictly prohibited. Non-programmable calculator is permitted.
6.	Candidate will be allowed to leave the examination hall at the end of examination time period only.
7.	If a candidate is found in possession of books or any other printed or written material from which he/she might derive assistance, he/she is liable to be treated as disqualified. Similarly, if a candidate is found giving or obtaining (or attempting to give or obtain) assistance from any source, he/she is liable to be disqualified.
8.	OMR sheet is placed within this paper and can be taken out from this paper but seal of paper must be opened only at the start of paper.
9.	This booklet contains TWO Sections, Section A (Aptitude & Mathematics) has 30 Questions to be attempted and Section B (Subject domain) has 70 Questions to be attempted.

EE

Section - A :
General Aptitude   :   Q. 1 to Q. 15
Mathematics   :   Q. 16 to Q. 30

Section - B :
Electrical Engineering :   Q. 31 to Q. 100

Section - A : General Aptitude

001. Antonym of word "Dissent" is:

(A) Renounce   (B) Adopt

(C) Agree   (D) Give

002. Synonym of work "Impudent" is:

(A) Insolent   (B) Partial

(C) Bankrupt   (D) Restive

003. Find out which part of the sentence has an error. If there is no mistake, the answer is 'No error'

(A) I have seen

(B) that film last year

(C) but I do not remember its story

(D) No error

004. Chose the correct meaning of the phrase "To get into hot water":

(A) To be impatient

(B) To suffer huge financial loss

(C) To get into trouble

(D) To be in confused state of mind

005. Find out the word with correct spelling:

(A) Brassere   (B) Brissiere

(C) Brasiiere   (D) Brassiere

006. The value of 25-5 [2+3{2-2(5-3)+5}-10]÷4 is

(A) 5   (B) 23.25

(C) 23.75   (D) 25.75

007. If the sum of a number and its square is 182, what is the number?

(A) 12   (B) 13

(C) 28   (D) 91

008. The sum of the ages of a father and his son is 45 years. Five years ago, the product of their ages was 34. The ages of the son and the father are respectively:

(A) 6 and 39   (B) 7 and 38

(C) 9 and 36   (D) 11 and 34

009. A number, when 35 is subtracted from it, reduces to its 80%. What is four fifth of that number?

(A) 70   (B) 90

(C) 120   (D) 140

010. If the ratio of areas of two circles is 4:9 then the ratio of their circumstances will be:

(A) 3:2   (B) 2:3

(C) 4:9   (D) 9:4

011. Army is related to Soldier as Galaxy is related to:

(A) Planet   (B) Satellite

(C) Meteor   (D) Star

012. IGH:TRS::?:KIJ

(A) POQ   (B) QOP

(C) OPQ   (D) QPO

013. '1+2+3' stands for the 'the brave boy' '2+3+4' stands for 'brave boy swims' '1+2+4+5' stands for 'the brave girl swims'. What stand for 'brave'?

(A) 1   (B) 2

(C) 3   (D) 4

014. Manipulate the symbol and find the missing number.

If   3*6=18

     4*7=22

     9*1=20

then 5*2 =?

(A) 14   (B) 10

(C) 7   (D) 3

015. In a row of children, Kamal is sixth from the left and Appu is fourth from the right. When Kamal and Appu exchange positions, Appu becomes seventeenth from the right. Which will be Kamal's position from the left?

(A) Twentieth

(B) Nineteenth

(C) Twenty-first

(D) Seventh

Section - A : Mathematics

016. If $A = \begin{bmatrix} 3 & -3 & 4 \\ 2 & -3 & 4 \\ 0 & -1 & 1 \end{bmatrix}$, then

(A) $A^2 = A^{-1}$ (B) $A^3 = A^{-1}$

(C) $A^4 = A^{-1}$ (D) $A^5 = A^{-1}$

where A^{-1} is the inverse matrix of A.

017. The rank of the matrix

$A = \begin{bmatrix} 1 & 1 & -1 & 1 \\ -1 & 1 & -3 & -3 \\ 1 & 0 & 1 & 2 \\ 1 & -1 & 3 & 3 \end{bmatrix}$ is

(A) 1   (B) 2

(C) 3   (D) 4

018. If $A = \begin{bmatrix} 1 & 0 & 0 \\ 1 & 0 & 1 \\ 0 & 1 & 0 \end{bmatrix}$ then for every integer n $\geq$ 3

(A) $A^n = A^{n-2} + A^2 - I$

(B) $A^n = A^{n-2} - A^2 + I$

(C) $A^n = A^{n-3} + A^2 - I$

(D) $A^n = A^{n-3} - A^2 - I$

where I is the identity matrix of order 3.

019. $\lim\limits_{x \to 0} x \sin\frac{1}{x} =$

(A) 0   (B) 1

(C) ∞ (D) $-\infty$

020. If $f(x) = \begin{cases} \dfrac{x\left(e^{\frac{1}{x}} - e^{\frac{1}{x}}\right)}{\left(e^{\frac{1}{x}} + e^{\frac{1}{x}}\right)}, & x \neq 0 \\ 0, & x = 0 \end{cases}$, then

(A) f is continuous and derivable at $x=0$

(B) f is continuous but not derivable at $x=0$

(C) f is discontinuous at $x = 0$

(D) f is derivable everywhere.

021. The sum of the serie

$1 - \dfrac{1}{2^2} + \dfrac{1}{3^2} - \dfrac{1}{4^2} + ...$, is equal to

(A) $\dfrac{\pi^2}{4}$ (B) $\dfrac{\pi^2}{6}$

(C) $\dfrac{\pi^2}{8}$ (D) $\dfrac{\pi^2}{12}$

022. The general solution of the partial differential equation

$\left(\dfrac{y-z}{yz}\right)\dfrac{\partial z}{\partial x} + \left(\dfrac{z-x}{zx}\right)\dfrac{\partial z}{\partial y} = \dfrac{x-y}{xy}$, is

(A) $\phi(xyz, x^2 + y^2 + z^2) = 0$

(B) $\phi(xyz, xy + yz + zx) = 0$

(C) $\phi(xyz, x + y + z) = 0$

(D) $\phi(xyz, x^2y + y^2z + z^2x) = 0$

023. A unit vector normal to the surface $x^3 + y^3 + 3xyz = 3$ at the point *(1,2,-1)* is

(A) $\dfrac{\hat{i} + 3\hat{j} + 2\hat{k}}{\sqrt{14}}$ (B) $\dfrac{-\hat{i} + 3\hat{j} + 2\hat{k}}{\sqrt{14}}$

(C) $\dfrac{\hat{i} + 2\hat{j} + 3\hat{k}}{\sqrt{14}}$ (D) $\dfrac{-\hat{i} + 2\hat{j} + 3\hat{k}}{\sqrt{14}}$

024. The vector field defined by

$$\vec{F} = (x + 2y + az)\hat{i} + (bx - 3y - z)\hat{j} + (4x + cy + 2z)\hat{k}$$

is irrotational, if

(A) $a=4, b=2, c=-1$

(B) $a=4, b=-2, c=1$

(C) $a=1, b=2, c=4$

(D) $a=-1, b=4, c=2$.

025. The value of $\oint_c \left(x^2 + xy\right)dx + \left(x^2 + y^2\right)dy$

where C is the square formed by the lines $y = \pm 1, x = \pm 1$, is equal to

(A) 2π (B) 2

(C) 1   (D) 0

026. The only solution of the differential equation $x\dfrac{dy}{dx} - \dfrac{1}{2}y = x + 1$ for which x and y can attain the value unity is given by

(A) $y = 2x - \sqrt{x} + 2$

(B) $y = 2x + \sqrt{x} + 2$

(C) $y = 2x - \sqrt{x} - 2$

(D) $y = 2x + \sqrt{x} - 1$

027. The Laplace transform of $e^x \, x^{\frac{1}{2}}$ is

(A) $\dfrac{x}{\sqrt{s-1}}$ (B) $\dfrac{\sqrt{\pi}}{\sqrt{s-1}}$

(C) $\dfrac{\sqrt{\pi}}{\sqrt{s+1}}$ (D) $\dfrac{\pi}{\sqrt{s+1}}$

028. A die is tossed thrice. A success is getting *1* or *6* on a toss. Then the mean of the number of success is

(A) $\dfrac{1}{2}$ (B) $\dfrac{1}{3}$

(C) $\dfrac{2}{3}$ (D) 1

029. A manufacturer knows that the condensers he makes contain on an average 1% of defectives. He packs them in boxes of 100. The probability that a box picked at random will contain 4 or more faulty condensers is

(A) $1 - \dfrac{8}{3e}$ (B) $1 - \dfrac{3}{8e}$

(C) $1 - \dfrac{4}{3e}$ (D) $1 - \dfrac{3}{4e}$

030. The order of convergence of Newton Raphson method is

(A) 0   (B) 1

(C) 2   (D) 3

Section - B : Electrical Engineering

031. Inductances of unsymmetrical transmission line are unequal and have imaginary part due to:

(A) Mutual inductances

(B) Unsymmetrical spacing

(C) both A and B

(D) None

032. The inductance of phase 'a' of double circuit line with vertical configurations is:

(A) (½)La   (B) 2La

(C) La   (D) La/3

033. Bundled conductors line have advantages of a) reduced corona loss b) low reactance c) larger loading capability d) increases surge impedance loading

(A) a only

(B) b and c only

(C) all a, b, c, d

(D) a and b only

034. Higher frequency transmission can cause skin effect to:

(A) decrease   (B) increase

(C) no change   (D) None

035. Capacitance of a transmission line in the presence of earth :

(A) Decrease   (B) Increase

(C) No change   (D) None

036. String efficiency of string of insulators for DC line is :

(A) 100%   (B) 50%

(C) 40%   (D) 30%

037. Galloping of conductors have frequency of the order of:

(A) 1.5 cycles/sec

(B) 3 cycles/sec

(C) 5 cycles /sec

(D) 7 cycles/sec

038. The cost of insulators beyond 50 kV is proportional to V^x, the x is:

(A) >2   (B) <2

(C) <0.5   (D) =1

039. Corona loss in hilly area is more than in plain region due to:

(A) high pressure

(B) low pressure

(C) dust

(D) temperature

040. If δ is the loss angle of the cable, its power factor is:

(A) sinδ

(B) cosδ

(C) independent of δ

(D) None

041. In a 4 pole DC machine with lap winding, then lap winding replaced wave winding with the same number of turns, the induced emf will

(A) increase

(B) Decrease

(C) remains the same

(D) become half

042. In DC generator, the polarity of interpole is

(A) The polarity of the next main pole

(B) The polarity of the main pole immediately following the interpole

(C) The polarity of main pole opposite to the interpole

(D) same as the polarity of the pole

043. The number of the conductors of the compensating winding in a DC machine

(A) is always more than the number of armature conductor per pole

(B) is always less than the number of armature conductor per pole

(C) may be more or less than the number of armature conductor per pole

(D) is always one.

044. A shunt generator can self excite

(A) only if resistance of the field winding is less than a critical value

(B) only if resistance of the field winding is more than a critical value

(C) irrespective of the value of the resistance in the field circuit
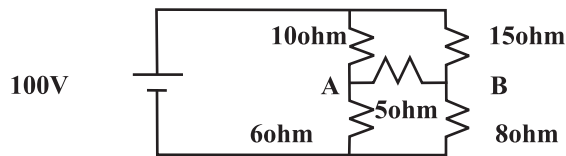
(D) only if the field is open circuited

045. Swinburne test can be used only for

(A) Series motors

(B) shunt motors

(C) series and shunt motors

(D) Shunt and compound motors

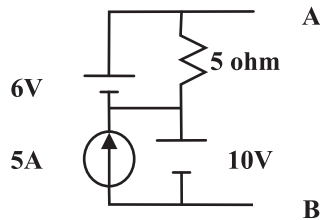**046.** What will be the value of R1 for the following transformation
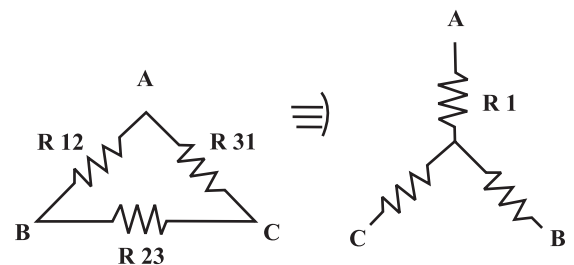
(A) $R_{23} / R_{12} + R_{23} + R_{31}$

(B) $R_{12}R_{23} / R_{12} + R_{23} + R_{31}$

(C) $R_{23}R_{31} / R_{12} + R_{23} + R_{31}$

(D) $R_{12}R_{31} / R_{12} + R_{23} + R_{31}$

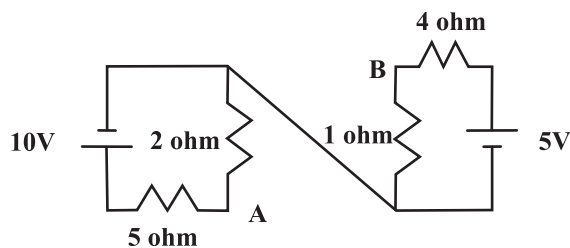**047.** Find current in 5Ω resistance in the circuit shown in figure.

(A) 0.193A   (B) 0.213A

(C) 0.243A   (D) 0.313A

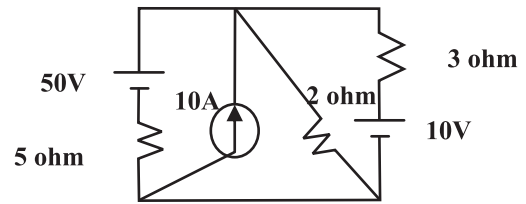**048.** Find RAB using Thevenins' Theorem shown in Figure.

(A) Zero Ohm   (B) 5 Ohm

(C) 10 Ohm   (D) None

049. Determine V_{AB} using Thevenins' Theorem

(A) 2.85 V   (B) 1.85 V

(C) 1.75 V   (D) 3.85V

050. Find current delivered by 50 V source

(A) 5.50 A   (B) 5.47 A

(C) 6.54 A   (D) 6.47 A

051. Laplace transform of 1/s3(s2-1) is

(A) $-1-t^2/2+\cosh t$

(B) $1-t^2/2+\cosh t$

(C) $-1+t^2/2+\cosh t$.

(D) $-1-t^2/2-\cosh t$

052. A unit step response of a system is given as $c(t)=\dfrac{5}{2}+5t-\dfrac{5}{2}e^{-2t}$, the transfer function C(s)/R(s) is given as:

(A) $\dfrac{10(s+1)}{s(s+2)}$ (B) $\dfrac{15(s+1)}{s(s+2)}$

(C) $\dfrac{5(s+1)}{s(s+2)}$ (D) $\dfrac{10(s-1)}{s(s+2)}$

053. A unity feedback system is characterized by an open loop transfer function $G(s)=\dfrac{K}{s(s+10)}$, for damping ratio of 0.5, the values of K is:

(A) 100   (B) 120

(C) 10   (D) 50

054. A servo system for position control has the closed loop transfer function $\dfrac{6}{s^2 + 2s + 6}$, the percentage overshoot if the input is moved to a new position is

(A) 24.4% (B) 23.4%

(D) 25.3% (D) 14.4%

055. A certain feedback system is described by the following transfer function $G(s) = \dfrac{12}{s^2 + 4s + 16}$, $H(s) = Ks$ for damping factor of system =0.8, the overshoot of the system is

(A) 1.4% (B) 1.5%

(C) 5.1% (D) 4.1 %

056. The open loop transfer function of unity feedback system is $\dfrac{K}{s(s + 3)(s^2 + s + 1)}$, for a sustained oscillations, the value of K is

(A) 39/16 (B) 93/61

(C) 16/39 (D) 61/93.

057. An amplifier having an output resistance of 4 ohm gives an open circuit output voltage of 6V (rms). The maximum power that it can deliver to the load is:

(A) 1.5W (B) 2.25W

(C) 2.4 W (D) 9 W.

058. An active load is used in the collector of the differential amplifier of an op-amp to:

(A) increase the output resistance

(B) increase the differential gain A_d

(C) increase the maximum peak to peak output voltage

(D) eliminates the load resistance from the circuit.

059. The slew rate of an op-amp is 0.5V/micro sec. The maximum frequency of a sinusoidal input of 2V rms that can be handled without excessive distortion is:

(A) 3 kHz (B) 30 kHz

(C) 200 kHz (D) 2 Mhz.

060. High power efficiency of the push-pull amplifier is due to the fact that:

(A) each transistor conducts on different cycles of the input

(B) transistors are placed in CE configuration

(C) there is no quiescent collector current

(D) low forward biasing voltage is required.

061. In CMOS inverter, the power dissipation is:

(A) low only when V_{in} is low

(B) low only when V_{in} is high

(C) high during dynamic operation

(D) low during dynamic operation.

062. Z-transform of the time function $\sum\limits_{k=0}^{\infty} \delta(n-k)$ is:

(A) $\dfrac{z-1}{z}$ (B) $\dfrac{z}{(z-1)^2}$

(C) $\dfrac{z}{(z-1)}$ (D) $\dfrac{(z-1)^2}{z}$

063. Fourier transform of $u_0(T_1-t) + u_0(T_1+t)$ is

(A) $\cos(wT_1)$ (B) $2\cos(wT_1)$

(C) $2\sin(wT_1)$ (D) $2j\sin(wT_1)$.

064. The impulse response of a filter matched to rectangular pulse is:

(A) an attenuator

(B) a low pass filter

(C) a high pass filter

(D) an equalizer.

065. Inverse Z-transform of $z/(z+2)$ is:

(A) $(-1)^k.\ 2^k$

(B) 2^k

(C) $2^k/k$

(D) $(-1)^k/2^k$

066. The Z-transform of $n\pi/2$ is:

(A) $\dfrac{z^2}{z^2+1}$ (B) $\dfrac{z^2}{z+1}$

(C) $\dfrac{z}{z^2-1}$ (D) $\dfrac{z^2}{z-1}$

067. The region of convergence of the Z-transform of a unit step function is:

(A) $|z| > 1$

(B) $|z| < 1$

(C) Real part of $z > 0$

(D) real part of $z < 0$.

068. Which of the following combinations of 3-phase transformers can operate successfully in parallel

(A) Δ-Y and Y- Δ

(B) Y-Y and Δ-Y

(C) Δ- Δ

(D) Δ- Δ and Y- Δ

069. Fractional pitch windings results in

(A) higher terminal voltage

(B) better voltage waveform and savings in material

(C) higher efficiency

(D) higher power factor

070. An AC winding has two slots per pole per phase. The slot harmonics will be

(A) 5th and 7th

(B) 11th and 13th

(C) 17th and 19th

(D) 23rd and 25th

071. A salient pole machines have

(A) Large number of poles and small length-to-diameter ratio

(B) Small number of poles and small length-to-diameter ratio

(C) Large number of poles and high length-to-diameter ratio

(D) Any of the above

072. Under short conditions, the power factor of the synchronous machine is

(A) 1

(B) about 0.8 lag

(C) almost zero lagging

(D) about 0.5 lag

073. In modern large size synchronous machines, the Zs is about

(A) 0.2 p.u.   (B)   0.5 p.u.

(C) 1.0 p.u.   (D)   0.05 p.u.

074. In a single phase power factor meter, the controlling torque is:

(A) provided by the spring control

(B) provided by the gravity control

(C) provided by the stiffness of the suspension

(D) not required.

075. Which of the following transducers can be used for the measurements of the pressures as high as 100,000 atmosphere:

(A) Mcleod gauge

(B) Pirani gauge

(C) Bridgman gauge

(D) Knudsen gauge.

076. Which of the following transducers are classified as active transducer?

(A) Metallic strain gauges

(B) Capacitive microphone

(C) LVDT

(D) Piezoelectric transducer.

077. A spring controlled moving iron voltmeter draws a currant of 1 mA for full scale value of 100 V. If it draws a current of 0.5mA, the meter reading is:

(A) 25 V   (B)   50 V

(C) 100V   (D)   200V

078. Applying DeMorgan's theorem to the expression $\overline{ABC}$, we get

(A) $\overline{A} + \overline{B} + \overline{C}$

(B) $\overline{A+B+C}$

(C) $A + \overline{B} + C\overline{C}$

(D) A(B+C)

079. How many flip-flops are required to make a MOD-32 binary counter?

(A) 3   (B) 45

(C) 5   (D) 6

080. The eigen value of the matrix $\begin{matrix} a & 1 \\ a & 1 \end{matrix}$

(A) (a+1), 0   (B) a, 0

(C) (a−1), 0   (D) 0, 0

081. The impedance of generator is 0.2 p.u. on the base of 11 kV and 50 MVA, the value on 22 kV and 150MVA base will be:

(A) 0.15 p.u.   (B) 0.2 p.u.

(C) 0.3 p.u.   (D) 2.4 p.u.

082. For a transmission line with negligible capacitance, the transmission line constant A is:

(A) 0   (B) 1

(C) −1   (D) R+jX

083. Transmission lines are transposed to:

(A) Reduce cu loss

(B) Reduce skin effect

(C) Prevent interference with neighboring transmission lines

(D) Prevent short circuit between two lines

084. If the fault current is 2 kA, the relay setting is 25% and the CT ratio is 400/5, then plug setting multiplier will be:

(A) 25   (B) 15

(C) 50   (D) 12.5

085. Resistance switching is normally resorted in case of:

(A) Bulk oil C. B

(B) Minimum oil C.B.

(C) Air Blast C. B.

(D) SF6 C. B.

086. The corona loss of a particular system at 50 Hz is 1 kW/phase/km. The corona on the same system with supply frequency of 25 Hz will be:

(A) 1 kW/phase/km

(B) 0.5 kW/phase/km

(C) 0.667 kW/phase/km

(D) 2 kW/phase/km

087. A system is said to be effectively grounded if:

(A) neutral is effectively grounded

(B) Ratio of X0/X1 is greater than 3.0

(C) Ratio of R0/X1 is greater than 2.0

(D) Ratio of X0/X1 is less than 3.0

088. If r is the radius of the conductor and R is the radius of the sheath of the cable, the cable operates stably from the view point of dielectric strength if:

(A) r/R is greater than 1.0

(B) r/R is less than 1.0

(C) r/R is less than 0.632

(D) r/R is less than 0.368

089. Four identical generators are rated for 20 MVA, 11 kV having a subtransient reactance of 16% are working in parallel. The short circuit level at the bus bar is:

(A) 500 MVA   (B) 400 MVA

(C) 125 MVA   (D) 80 MVA

090. The magnetizing inrush current in transformer is rich in:

(A) 3rd harmonic component

(B) 2nd harmonic component

(C) 5th harmonic component

(D) 7th harmonic component

091. While using ABCB, current chopping phenomenon is observed when:

(A) a long line is switched off

(B) a bank of capacitor is switched off

(C) a transformer on no load is switched off

(D) a heavy load is switched off

092. A transmission line of 210 km long has certain values of parameters A, B, C, D. If length of line is reduced to 100 km, thus the parameter:

(A) A increases B decreases

(B) A decreases B decreases

(C) A and B both increase

(D) A decreases and B increases

093. The number of discs in a string insulator for 220 kV ac overhead transmission line is in the range of:

(A) 22 to 25   (B) 20-21

(C) 15-16   (D) 9-10

094. The inertia constant H of a machine of 200 MVA is 2 pu. Its value corresponding to 400 MVA will be:

(A) 4.0   (B) 2.0

(C) 1.0   (D) 0.5

095. A 3-phase CB is rated at 2000 MVA, 33 kV. Its making current is:

(A) 35 kA   (B) 49 kA

(C) 70 kA   (D) 89 kA

096. A 4 pole DC generator runs at 1500 rpm. The frequency of the current in the armature winding is

(A) 25 Hz   (B) 50 Hz

(C) Zero Hz   (D) 100 Hz

097. When two transformers of different kVA ratings are connected in parallel, they share the load in proportion to their kVA ratings when their:

(A) kVA ratinga are identical

(B) efficiencies are equal

(C) pu impedance are equal

(D) equivalent impedances are equal

098. Eddy current loss in a core of a transformer is:

(A) inversely proportional to resistively of core material

(B) directly proportional to resistively of core material

(C) directly proportional to square of resistively of core material

(D) none of these above

099. A 100/10 V, 50 VA transformer is converted to 100/110 V auto transformer, the rating of the auto transformer is:

(A) 550 VA   (B) 500 VA

(C) 110 VA   (D) 100 VA

100. An emf induced per phase in the rotor of 3-phase induction motor is 100 V at stand still. Under full load, what will be its approximate value :

(A) 100 V   (B) 50 V

(C) 4 V   (D) 0.2 V

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