



PhD ENTRANCE EXAM RESULT , VMSBUTU

Answer Key for Electrical Engineering Branch

Question	Options
1 : If AIRLINE is written as ENILRIA7, then RAILWAY will be written as	1) YAWILAR8 2) YAWLIAR7 3) YAWILAR7 4) YAWLIAR8
2 : Which number is wrong in the series 2, 6, 15, 31, 56, 93?	1) 31 2) 56 3) 93 4) 6
3 : If PINK is coded as 1691411, then RED will be coded as	1) 1963 2) 1853 3) 1954 4) 1854
4 : Statement 1: A is bigger than B but shorter than C; Statement 2: D is smaller than C and bigger than A; Statement 3: B is greater than D; If statement 1 and statement 2 are true, statement 3 will be	1) "TRUE" 2) "FALSE" 3) uncertain 4) none
5 : Arrange the following words in a meaningful sequence : 1- sun, 2- rain, 3-child, 4-rainbow,5-happy	1) 2, 1, 4, 3, 5 2) 3, 2, 1, 4, 5 3) 2, 1, 3, 4, 5 4) 4, 5, 1, 3, 2
6 : What is the probability of getting two tails when two coins are tossed?	1) 0.3333333333333333 2) 0.166666666666667 3) 0.5 4) 0.25

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7 : A man covers a distance of 110 km between two cities in 10 hours. He travelled partly on foot at 9 km/hr and partly on a bicycle at 15 km/hr. Find the distance travelled on foot.	1) 92 2) 94 3) 60 4) 80
8 : Vikas and Mohan working together can complete a work in 6 days. If Vikas alone completes the same work in 10 days, in how many days Mohan alone can complete the same work?	1) 13 2) 14 3) 15 4) 16
9 : The HCF of $\frac{2}{3}$, $\frac{8}{9}$, $\frac{64}{81}$ and $\frac{10}{27}$ is	1) 0.666666666666667 2) $\frac{160}{3}$ 3) $\frac{2}{81}$ 4) $\frac{160}{81}$
10 : A 60 liter mixture of milk and water contains 10% water. How much water must be added to make water 20% in the mixture?	1) 8 liters 2) 7.5 liters 3) 7 liters 4) 6.5 liters
11 : Who Invented the 3-D printer?	1) Nick Holonyak 2) Elias Howe 3) Chuck Hull 4) Christiaan Huygens
12 : Which Veda depicts the information about the most ancient Vedic age culture?	1) Atharvaveda 2) Samaveda 3) Yajurveda 4) Rig Veda
13 : The first pico satellite of India is-	1) GSAT-4 2) ANUSAT 3) INSAT 4) STUDSAT
14 : Which of the following is known as the Diamond City of India?	1) Aurangabad 2) Jaipur 3) Panna 4) Jhiria

Question	Options
15 : In which year Forest Conservation Act was passed?	<p>1) 1980</p> <p>2) 1988</p> <p>3) 1986</p> <p>4) 1990</p>
16 : What is a hypothesis in research?	<p>1) A conclusion drawn from data analysis</p> <p>2) A summary of research findings</p> <p>3) A measurement of data accuracy</p> <p>4) A statement of predicted relationship between variables</p>
17 : What is the purpose of a literature review in research?	<p>1) To analyze data</p> <p>2) To summarize research findings</p> <p>3) To collect primary data</p> <p>4) To identify the research gaps</p>
18 : What is a dependent variable in research?	<p>1) The variable that is manipulated by the researcher</p> <p>2) The variable that remains constant throughout the research</p> <p>3) The variable that is measured and observed</p> <p>4) The variable that is not relevant to the research question</p>
19 : What is a research design?	<p>1) A plan for data analysis</p> <p>2) A method for data collection</p> <p>3) A framework for conducting research</p> <p>4) A statistical technique</p>
20 : What is the appropriate statistical analysis for comparing means between two groups?	<p>1) T-test</p> <p>2) Chi-squared test</p> <p>3) Analysis of variance (ANOVA)</p> <p>4) Regression analysis</p>

Question	Options
21 : The the resonance frequency of series R-L-C circuit is	<p>1) $\frac{1}{2} \pi \sqrt{\frac{1}{LC}}$</p> <p>2) $\frac{1}{4} \pi \sqrt{\frac{1}{LC}}$</p> <p>3) $\frac{1}{8} \pi \sqrt{\frac{1}{LC}}$</p> <p>4) None</p>
22 : The domestic applications of single phase IM is/are	<p>1) Hand Tools</p> <p>2) Hair Cutting Tools</p> <p>3) Water Pump</p> <p>4) All of these</p>
23 : The industrial applications of three phase IM is/are	<p>1) Crusher Mills</p> <p>2) Textile Mills</p> <p>3) Power plants</p> <p>4) All of these</p>
24 : The applications of Super-position Theorem is/are	<p>1) Voltage Verifications</p> <p>2) Current Verifications</p> <p>3) Power Verifications</p> <p>4) voltage and current verifications both</p>
25 : The significances of Maximum Power Transfer Theorem is/are	<p>1) Radio</p> <p>2) TV</p> <p>3) Setellite Communications</p> <p>4) All of these</p>
26 : Tellegen's Thereom applicable for	<p>1) Only linear circuits</p> <p>2) only non-linear circuits</p> <p>3) Both liniear and non-linear circuits</p> <p>4) None</p>
27 : The formula for step angle of Stepper Motors is	<p>1) 360 degree /mP</p> <p>2) 360 degree*mp</p> <p>3) mp/360 degree</p> <p>4) None</p>

Question	Options
28 : In power grids, the frequency stability/instability depends on	<p>1) Real Power only</p> <p>2) Reactive Power only</p> <p>3) Both Real power and Reactive Power</p> <p>4) None</p>
29 : Sub-Synchronous Resonance related with	<p>1) Mechanical Vibrations</p> <p>2) More Load demands</p> <p>3) Less Load demands</p> <p>4) All of these</p>
30 : The Foster and Cauer forms realizations is/are applicable for	<p>1) Only for R-L combinations</p> <p>2) Only for R-C combinations</p> <p>3) only for L-C combinations</p> <p>4) All of these</p>
31 : The examples of LC impedance functions is/are	<p>1) $s(s^2+4)/(s^2+3)(s^2+5)$</p> <p>2) $s(s^2+11)/(s^2+9)(s^2+13)$</p> <p>3) $s(s^2+11)/(s^2+7)(s^2+17)$</p> <p>4) All of these</p>
32 : The features of Infinite bus-bar is/are	<p>1) Zero impedance</p> <p>2) Infinite moment of inertia</p> <p>3) Constant voltage</p> <p>4) All of these</p>
33 : The properties of phase modifier circuit is/are	<p>1) Under excited synchronous motors</p> <p>2) Over excited synchronous motors</p> <p>3) Normal excited synchronous motors</p> <p>4) All of these</p>
34 : Which one of the following plots is not frequency domain analysis of control systems?	<p>1) Bode Plots</p> <p>2) Nyquist Plots</p> <p>3) Root Locus Plots</p> <p>4) None</p>

Question	Options
35 : The "Routh Hurwitz Criterion" belong from which one of the following categories?	1) Frequency Domain 2) Time Domain 3) Both Frequency and Time Domain 4) None
36 : Which one of the following is/are non-linear elements?	1) FETs 2) BJTs 3) MOSFETs 4) All of these
37 : Which one of the following is/are examples of lumped network?	1) Transmission Lines 2) FETs 3) Diode 4) All of these
38 : The dual Theorem of Norton's is	1) Superposition Theorem 2) Compensation Theorem 3) Thevenin's Theorem 4) None
39 : Which one of the following is/are faster switch in power electronics?	1) SCR 2) IGBT 3) GTO 4) All of these
40 : The application of cyclo-converter is/are	1) As frequency changer 2) As voltage changer 3) As both frequency and voltage changers 4) All of these
41 : The main function of AC-AC voltage regulators is/are	1) Voltage variations 2) Current variations 3) Both Voltage and Current variations 4) None

Question	Options
42 : Which one of the following converter directly utilized for AC-DC drives?	<p>1) Rectifiers</p> <p>2) Voltage Regulators</p> <p>3) Inverters</p> <p>4) None</p>
43 : Which one of the following plots not associated with frequency domain?	<p>1) Bode Plots</p> <p>2) Root Locus Plots</p> <p>3) Nyquist Plots</p> <p>4) None</p>
44 : Which one of the following is/are not multiport networks?	<p>1) LAN</p> <p>2) WAN</p> <p>3) Power Transmission Lines</p> <p>4) All of these</p>
45 : The two port networks can be characterised by:	<p>1) 6 ways</p> <p>2) 4 ways</p> <p>3) 2 ways</p> <p>4) None</p>
46 : How many possible tree for a given graph?	<p>1) [A]</p> <p>2) Determinat of $\{AA^T\}$</p> <p>3) [AA]</p> <p>4) [AAA]</p>
47 : The necessary and sufficient conditions for Positive Real Functions (PRF) is	<p>1) Mode of function matrix is allways greater or equal to zero</p> <p>2) Mode of function matrix is allways less than or equal to zero</p> <p>3) Both</p> <p>4) None</p>
48 : Which one of the following is/are releted with Compensation Theorem?	<p>1) Real Power only</p> <p>2) Reactive Power only</p> <p>3) Both Real and Reactive Power</p> <p>4) None</p>

Question	Options
49 : Which one of the following machines used in SUGAR Mills?	1) Poly Phase IMs 2) Stepper Motors 3) Single Phase IMs 4) None
50 : Which one of the following machines used in Xerox or Printer?	1) Stepper Motors 2) Single Phase Ims 3) Three Phase Ims 4) None

Best of luck for the future!