

DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE ASKED TO DO SO

TEST BOOKLET
A.E.(E)PPCL/2015

Time Allowed : 2 Hours]

[Maximum Marks : 100

All questions carry equal marks.

INSTRUCTIONS

1. Immediately after the commencement of the examination, you should check that test booklet does not have any unprinted or torn or missing pages or items, etc. If so, get it replaced by a complete test booklet.
2. Write your Roll Number only in the box provided alongside.
Do not write anything else on the Test Booklet.
3. This Test Booklet contains **100** items (questions). Each item comprises four responses (answers). Choose only one response for each item which you consider the best.
4. After the candidate has read each item in the Test Booklet and decided which of the given responses is correct or the best, he has to mark the circle containing the letter of the selected response by blackening it completely with Black or Blue ball pen. In the following example, response "C" is so marked :

(A) (B) ● (D)

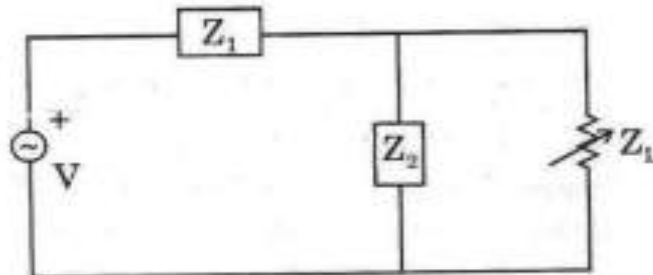
5. Do the encoding carefully as given in the illustrations. While encoding your particulars or marking the answers on answer sheet, you should blacken the circle corresponding to the choice in full and no part of the circle should be left unfilled.
6. You have to mark all your responses **ONLY** on the **ANSWER SHEET** separately given according to 'INSTRUCTIONS FOR CANDIDATES' already supplied to you. *Responses marked on the Test Booklet or in any paper other than the answer sheet shall not be examined.*
7. All items carry equal marks. Attempt all items. Your total marks will depend only on the number of correct responses marked by you in the Answer Sheet. There will be no negative marking.
8. Before you proceed to mark responses in the Answer Sheet fill in the particulars in the front portion of the Answer Sheet as per the instructions sent to you.
9. After you have completed the test, hand over the Answer Sheet, to the Invigilator.

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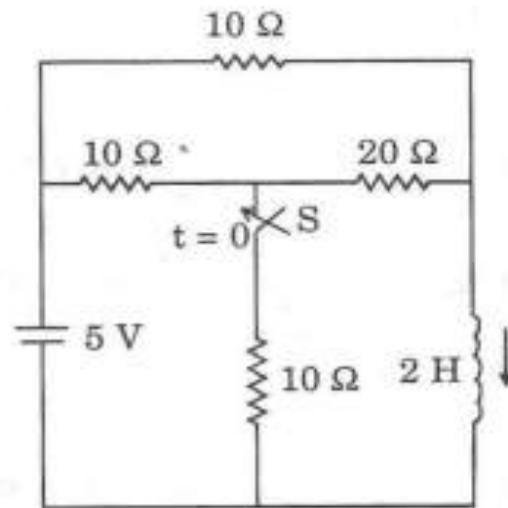
1. In the figure Z_L consists of a pure resistance. If $V = 50 \angle 0^\circ \text{ V}$, $Z_1 = Z_2 = 10 + j24 \Omega$, the value of Z_L for maximum power transfer is :



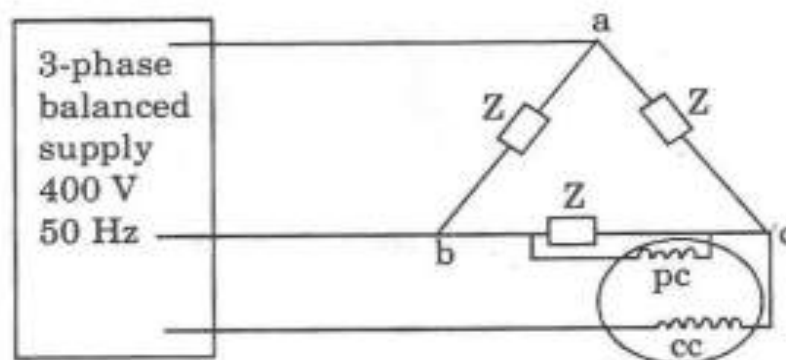
- (A) 5Ω (B) $5 - j12\Omega$
(C) $5 + j12\Omega$ (D) 13Ω
2. Power factor of a general industrial load can be improved by connection of :
- (A) Inductance in series to the circuit
(B) Capacitance in series to the circuit
(C) Capacitance in shunt to the circuit
(D) Inductance in shunt to the circuit

3. The period of the signal $x(t) = 8 \sin\left(0.8\pi t + \frac{\pi}{4}\right)$ is :
- (A) $0.4 \pi s$ (B) $0.8 \pi s$
- (C) $1.25 s$ (D) $2.5 s$
4. The average power at the terminals of a network if $v = 100 \cos(\omega t + 15^\circ)V$ and $i = 4 \sin(\omega t - 15^\circ) A$ is :
- (A) $-100 W$ (B) $100 W$
- (C) $-173.2 W$ (D) $173.2 W$
5. A circuit consists of a resistance of 2Ω and reactance of 1Ω in series. Conductance of the circuit is :
- (A) $\frac{2}{3} \text{ mho}$ (B) $\frac{2}{5} \text{ mho}$
- (C) $\frac{1}{2} \text{ mho}$ (D) $\frac{1}{3} \text{ mho}$
6. The peak factor of a half wave rectified sine wave is :
- (A) $\frac{2}{\pi}$ (B) $\frac{\pi}{2\sqrt{2}}$
- (C) 0.5 (D) 2

7. For the circuit shown in figure the switch 'S' is opened for a long time and it is closed at $t = 0$. The time constant of the circuit for $0 \leq t \leq \infty$ is :



- (A) 0.14 sec (B) 0.28 sec
(C) 0.35 sec (D) 0.42 sec
8. Figure shows a wattmeter measuring power in a 3-phase load of $Z = (\sqrt{50} + j\sqrt{50})\Omega$. CC is the current coil. PC is the pressure coil. The coil polarities are suitably selected to ensure a positive deflection. The reading of the wattmeter is :



- (A) 26769 W (B) 17931.5 W
(C) 48989.7 W (D) 66921.3 W

9. Two wattmeter method is used for measuring average power of a 3-phase balanced star connected load. First wattmeter reads half of the reading of second wattmeter. Then the per phase load is :

(A) $\sqrt{3} + j1\Omega$

(B) $3 + j1\Omega$

(C) $\sqrt{3} + j2\Omega$

(D) $2 + j\sqrt{3}\Omega$

10. A single-phase RLC series circuit has a resistance of 5 ohms, inductance of 0.5 Henry and a capacitance of 8 microfarad. The circuit will have a quality factor of :

(A) 5000

(B) 2500

(C) 50

(D) 25

11. The defining equations of two systems are :

(1) $y \frac{dy}{dt} + y = 3$, where $y = y(t)$

(2) $\left(\frac{dx}{dt}\right)^3 + x = 0$, where $x = x(t)$

Select the *correct* statement from the following :

(A) system (1) is linear and system (2) is non-linear

(B) system (2) is linear and system (1) is non-linear

(C) both systems are linear

(D) both systems are non-linear

12. The final value of the function $f(t)$ with Laplace transform

$$F(s) = \frac{8(s+1)}{(s+4)(s^2+4)}$$

is :

- (A) 0.5 (B) 0
(C) ∞ (D) undefined
13. A capacitor is made with a polymeric dielectric having an ϵ_r of 2.26 and a dielectric breakdown strength of 50 kV/cm. The permittivity of free space is 8.85 pF/m. If the rectangular plates of the capacitor has a width of 20 cm and a length of 40 cm, then the maximum electric charge in the capacitor is :
- (A) 2 μ C (B) 4 μ C
(C) 8 μ C (D) 10 μ C
14. The drift current in semiconductors depends upon :
- (A) Only the electric field
(B) Only the carrier concentration gradient
(C) Both the carrier concentration and electric field
(D) Both the carrier concentration gradient and electric field

15. A charge Q_0 origin in free space produces a field for which $E = 1kV/m$ at point $P(-2, 2, -1)$. The charge Q_0 is :
- (A) $2\mu C$ (B) $-3\mu C$
(C) $3\mu C$ (D) $-2\mu C$
16. For a two port symmetrical bilateral network, if transmission parameters $A = 3$ and $B = 1$, then the value of parameter C is :
- (A) 3 (B) 8
(C) 6 (D) 2
17. A battery has a short-circuit current of 30 A and an open circuit voltage of 24 V. If the battery is connected to an electric bulb of resistance 2Ω , the power dissipated by the bulb is :
- (A) 80 W (B) 1800 W
(C) 112.5 W (D) 228 W
18. The transmission capacity of a line at 50 Hz frequency as compared to that at 60 Hz frequency is :
- (A) higher (B) lower
(C) the same (D) none of these

19. The per unit impedance of a line, to a 20 MVA, 33 kV base is 0.9. The per unit impedance to the base of 20 MVA, 11 kV will be :
- (A) 0.9 (B) 2.7
(C) 0.3 (D) 8.1
20. For a 220 kV line, the number of discs in an insulator string is around :
- (A) 5 (B) 12
(C) 10 (D) 20
21. A 25 km long overhead line has a surge impedance of 400 ohms. For 100 km length, the surge impedance will be :
- (A) 100 ohms (B) 400 ohms
(C) 1600 ohms (D) 200 ohms
22. The corona loss in a 50 Hz system is 0.2 kW/phase/km. At a frequency of 60 Hz, the corona loss would be :
- (A) 0.17 kW/phase/km (B) 0.24 kW/phase/km
(C) 0.22 kW/phase/km (D) 0.09 kW/phase/km

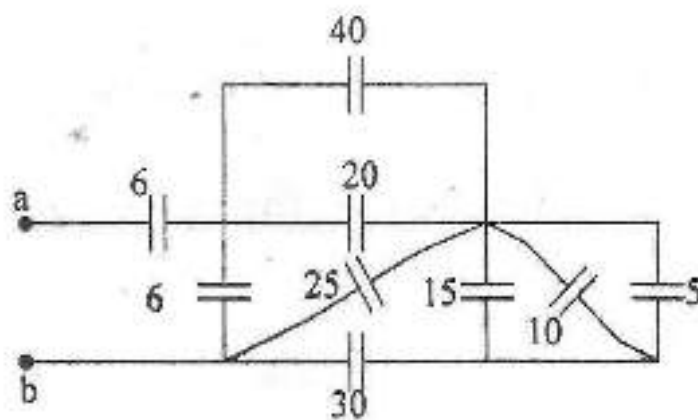
23. The d.c. resistance of a conductor is R . The resistance at 50 Hz frequency is likely to be :
- (A) R (B) $2.2 R$
(C) $1.2 R$ (D) $1.04 R$
24. For a good voltage profile under load conditions, a long transmission line needs :
- (A) shunt capacitors at receiving end
(B) shunt reactors at receiving end
(C) shunt resistance at receiving end
(D) all of the above
25. In case of a underground cable, if the insulation material of dielectric constant $\epsilon_r = 4$ is replaced by material of dielectric constant $\epsilon_r = 6$, the maximum stress in the cable insulation will :
- (A) remain same
(B) increase
(C) decrease
(D) be decided by dielectric strength of material

26. The value of diversity factor (DF) and load factor (LF) of the typical load curve are always positive, and :
- (A) $DF \leq 1$ and $LF < 1$ (B) $DF \geq 1$ and $LF \leq 1$
- (C) $DF \leq 1$ and $LF \geq 1$ (D) $DF \geq 1$ and $LF \geq 1$
27. A three-phase, 220 kV, 50 Hz transmission line supplies a power of 100 MW at a power factor of 0.8 lagging. If the sending end reactive power is 57.75 MVAR at power factor of 0.88 lead. The reactive power absorbed by the line is :
- (A) 132.75 MVAR (B) -132.75 MVAR
- (C) 17.25 MVAR (D) -17.25 MVAR
28. With increase in diversity factor :
- (A) Load factor will increase
- (B) Load factor will decrease
- (C) Load factor will be unaffected
- (D) Load factor may increase or decrease depending on load

29. Equal area criteria is used to test the :

- (A) Steady state stability (B) Transient stability
(C) Dynamic stability (D) Both (A) and (B)

30. Find the equivalent capacitance between the terminals a and b . All capacitance in μF :



- (A) $15 \mu\text{F}$ (B) $10 \mu\text{F}$
(C) $5 \mu\text{F}$ (D) $25 \mu\text{F}$

31. The surge impedance of 50 km long underground cable is 50 ohms. For 100 km long cable it will be :

- (A) 50 ohms (B) 100 ohms
(C) 200 ohms (D) 400 ohms

32. A 400 V, three-phase, four-wire supply is feeding a balanced load of 100 W lamp in each phase. If the lamp in one of the phases goes off, what will be the reading of ammeter connecting neutrals of the supply and load ?
- (A) 0.43 A (B) 0.86 A
(C) 4.61 A (D) 2.31 A
33. The sinusoidally distributed stator and rotor mmfs in the uniform air gap of a machine have fixed magnitude. The torque will be maximum when the angle between them is :
- (A) 0° (B) 30°
(C) 45° (D) 90°
34. The wave form of the armature mmf in d.c. machine is.....in shape.
- (A) Square (B) Rectangular
(C) Triangular (D) Sinusoidal

35. A d.c. machine is provided with both interpole winding (IPW) and compensating winding (CPW). With respect to the armature :
- (A) Both IPW and CPW are in parallel
 - (B) Both IPW and CPW are in series
 - (C) IPW is in series and CPW is in parallel
 - (D) IPW is in parallel and CPW is in series
36. The efficiency of a d.c. machine is maximum when the variable losses equal to :
- (A) the constant losses
 - (B) the square of the constant losses
 - (C) the square root of the constant losses
 - (D) zero
37. Buchholz relay is a :
- (A) voltage sensitive device
 - (B) current sensitive device
 - (C) frequency sensitive device
 - (D) gas actuated device

38. If P_i be the iron loss and P_{cu} be the copper loss at full load, the following condition has to be satisfied to obtain the maximum efficiency at $\frac{3}{4}$ full load :

(A) $P_{cu} = \frac{3}{4} P_i$

(B) $P_{cu} = \frac{4}{3} P_i$

(C) $P_{cu} = \frac{9}{16} P_i$

(D) $P_{cu} = \frac{16}{9} P_i$

39. The utilization factor for transformers connected in open delta is :

(A) 0.5

(B) 0.667

(C) 0.75

(D) 0.866

40. A 3-phase alternator of frequency 50.2 Hz is to be synchronized with an infinite bus of frequency 50 Hz by means of three dark lamp method. The lamp flicker per minute will be :

(A) 6

(B) 12

(C) 25

(D) 30.6

41. The relative speed between rotor and stator fluxes is equal to :

(A) zero r.p.m.

(B) $(n_s - n_r)$ r.p.m.

(C) $(n_s + n_r)$ r.p.m.

(D) n_s r.p.m.

42. The resistance R_0 of exciting branch of the equivalent circuit of a 3-phase induction motor represents :
- (A) Stator copper loss
 - (B) Rotor copper loss
 - (C) Stator core loss only
 - (D) Friction and windage losses only
43. In double cage rotor induction motor :
- (A) Both the cages have high resistances
 - (B) The outer cage has low resistance and inner cage has high resistance
 - (C) Both the cages have low resistances
 - (D) The outer cage has high resistance and inner cage has low resistance
44. Induction generators deliver power at.....power factor.
- (A) Lagging
 - (B) Leading
 - (C) Unity
 - (D) Zero

45. The ratio of starting torque in auto transformer starting with $x\%$ tapping to that in direct on line starting is equal to :
- (A) x (B) $1/x$
(C) \sqrt{x} (D) x^2
46. A 4-pole 3-phase slip ring induction machine is connected to 3-phase, 50 Hz supply. The machine is made to run at 1470 rpm in the direction opposite to the direction of rotating magnetic field with the help of a prime mover. The frequency of voltage induced in the rotor winding will be :
- (A) 50.0 Hz (B) 1.0 Hz
(C) 49.0 Hz (D) 99.0 Hz
47. A squirrel cage induction motor is running at no load with rated voltage applied to stator. If the voltage applied is reduced to 80% of rated value keeping the frequency same, then speed of the motor :
- (A) remains nearly at no load speed
(B) reduces from rated speed to 80% rated speed
(C) reduces from near synchronous speed to 80% rated speed
(D) remains nearly at rated speed

48. The armature winding of a turbo alternator is normally placed deeper in slots.

This is done to :

- (A) increase the leakage reactance of the winding
- (B) increase the mechanical strength of the winding
- (C) provide the required insulation level
- (D) improve the cooling of the winding

49. A 3-phase synchronous generator connected to infinite bus is operating at full load at lagging power factor. Suddenly, the prime mover fails, the machine will :

- (A) continue to operate as generator without delivering any power
- (B) continue to operate as generator with increased armature current
- (C) operate as motor at leading power factor
- (D) operate as motor at lagging power factor

50. For a system with process transfer function $G(s) = \frac{K}{Ts + 1}$, for a unit step input, the steady-state error for the closed-loop system will be zero when :
- (A) $K = \infty$ (B) $K = 0$
(C) $K > 1$ (D) $K < 1$

51. If there are repeated roots of the characteristic equation on the $j\omega$ axis, the system is :
- (A) Conditionally stable (B) Oscillatory
(C) Stable (D) Unstable

52. A state variable formulation of a system is given by the equations :

$$\begin{bmatrix} \dot{x}_1 \\ \dot{x}_2 \end{bmatrix} = \begin{bmatrix} -1 & 0 \\ 0 & -3 \end{bmatrix} \begin{bmatrix} x_1 \\ x_2 \end{bmatrix} + \begin{bmatrix} 1 \\ 1 \end{bmatrix} u, y = [1 \ 0] \begin{bmatrix} x_1 \\ x_2 \end{bmatrix}$$

The transfer function of the system is :

- (A) $\frac{1}{(s+1)(s+3)}$ (B) $\frac{1}{(s+1)}$
(C) $\frac{1}{(s+3)}$ (D) $\frac{s}{(s+1)(s+3)}$

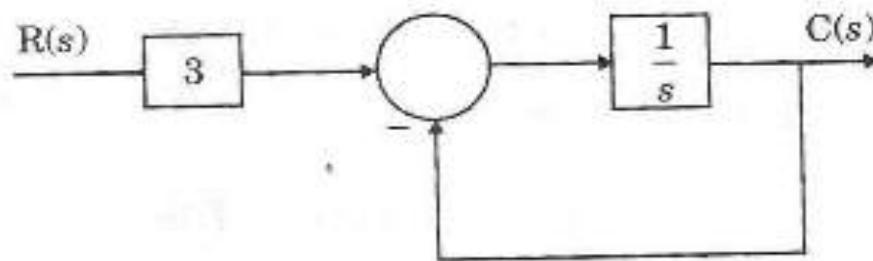
53. Addition of a zero to the open loop transfer function has the effect of :
- (A) Shifting the root locus to the right thereby increasing stability and decreasing settling time
 - (B) Shifting the root locus to the right thereby increasing both stability and settling time
 - (C) Shifting the root locus to the left thereby increasing both stability and settling time
 - (D) Shifting the root locus to the left thereby increasing stability and decreasing settling time

54. The open loop transfer function of a system is $G(s)H(s) = \frac{K}{(1+s)(1+2s)(1+3s)}$.

The phase cross over frequency is :

- (A) $\sqrt{2}$
 - (B) 1
 - (C) 0
 - (D) $\sqrt{3}$
55. A system with transfer function $G(s) = \frac{s}{1+s}$ is subjected to an input $u(t) = \sin \omega t$. In steady state the phase angle of the output relative to input at $\omega = 0$ and $\omega = \infty$ will be respectively :
- (A) 0° and -90°
 - (B) 90° and 0°
 - (C) 0° and 0°
 - (D) 90° and -90°

56. The system matrix A of the following system shown in block diagram is :



(A) $[-1]$

(B) $=[-3]$

(C) $\begin{bmatrix} 0 & 1 \\ 0 & -1 \end{bmatrix}$

(D) $\begin{bmatrix} -1 & 0 \\ 0 & -1 \end{bmatrix}$

57. A second order system has a multiple pole at $s = -1.2$. The system is :

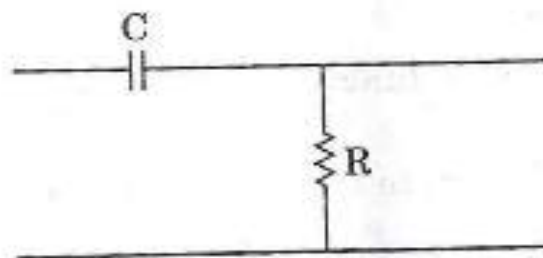
(A) undamped

(B) unstable

(C) overdamped

(D) critically damped

58. In circuit shown in figure, $R = 2 \Omega$, $C = 1 \text{ F}$. At $\omega = 1 \text{ rad/sec}$, the circuit has a phase of :



(A) 14° leading

(B) 14° lagging

(C) 26.6° leading

(D) 26.6° lagging

59. The above circuit at $\omega = 2$ rad/sec has a gain of :
- (A) 0.8944 dB (B) -0.969 dB
- (C) 0.97 dB (D) -0.2637 dB
60. A system described by the equation $\dot{x}_1 = -x_1 - x_2$ and $\dot{x}_2 = x_1$ has damping factor ζ and natural frequency ω_n respectively :
- (A) 1 and 1 (B) 0.5 and 1
- (C) 0.707 and 2 (D) 1 and 2
61. A third order system is represented by the transfer function $G(s) = \frac{30}{(s + 50)(s^2 + 4s + 20)}$. Which of the following systems is equivalent to the given system ?
- (A) $\frac{0.6}{(s^2 + 4s + 20)}$ (B) $\frac{30}{(s^2 + 4s + 20)}$
- (C) $\frac{30}{(s + 50)}$ (D) $\frac{1.5}{(s + 50)}$
62. The bridge method commonly used for measuring mutual inductance is :
- (A) Heaviside Campbell bridge (B) Schering bridge
- (C) De Sauty bridge (D) Wien bridge

63. An analogue voltmeter uses external multiplier setting. With a multiplier setting of $20\text{ k}\Omega$, it reads 440 V and with a multiplier setting of $80\text{ k}\Omega$, it reads 352 V . For a multiplier setting of $40\text{ k}\Omega$, the voltmeter reads :
- (A) 371 V (B) 383 V
(C) 394 V (D) 406 V
64. In two wattmeters method of power measurement, if one of the wattmeters reads zero, then what will be the power factor ?
- (A) Zero (B) Unity
(C) 0.5 (D) 0.866
65. The gauge factor is defined as :
- (A) $1 + 2\Delta\rho/\rho$ (B) $1 + 2\Delta R/R$
(C) $1 + 2\Delta v$ (D) $1 + 2\Delta D/D$
66. A $0\text{--}300\text{ V}$ voltmeter has an error of $\pm 2\%$ of full scale deflection. What would be the range of readings if true voltage is 30 V ?
- (A) $24\text{ V} - 36\text{ V}$ (B) $29.4\text{ V} - 30.6\text{ V}$
(C) $25\text{ V} - 35\text{ V}$ (D) $28\text{ V} - 32\text{ V}$

67. In a single-phase fully-controlled bridge rectifier, the firing angle for zero output voltage is :
- (A) 0° (B) 45°
(C) 90° (D) 180°
68. The lowest order input current harmonic in p -pulse rectifier is :
- (A) $p + 2$ (B) $p + 1$
(C) $p - 1$ (D) $p - 2$
69. In a three-phase fully controlled bridge rectifier each thyristor conducts for :
- (A) 60° (B) 90°
(C) 120° (D) 180°
70. A lossless single-phase rectifier supplies a D.C. load of 2 kW. If the rms value of input current drawn from 230 V AC supply is 10 A, the power factor is :
- (A) 0.5 (B) 0.87
(C) 0.9 (D) 1.0

71. The dead band is introduced in the inverter gate pulses :

- (A) to improve the quality of output voltage
- (B) to increase the magnitude of output voltage
- (C) to avoid the short circuit of DC source
- (D) to reduce the voltage stress on the devices

72. In Sine Pulse Width Modulation technique, the carrier waveform is :

- (A) Sinusoidal
- (B) Triangular
- (C) Rectangular
- (D) Trapezoidal

73. The value of x in the expression $(101)_x + (110)_7 = (102)_8 + (28)_{16}$:

- (A) 2
- (B) 7
- (C) 8
- (D) 10

74. A 12-bit DAC with BCD inputs has a full scale output of 9.99 V. What are the DAC's resolution and step size ?

- (A) 0.024% and 0.8325 V
- (B) 0.1% and 0.01 V
- (C) 0.1% and 0.8325 V
- (D) 0.024% and 2.44 mV

75. If $X \cdot Y = 0$, then $X \oplus Y$ is equal to :
- (A) 0 (B) $X + Y$
(C) $X \cdot Y = \bar{X} \cdot \bar{Y}$ (D) 1
76. Power is drawn by a CMOS circuit only when :
- (A) its output is high (B) its output is low
(C) it switches logic levels (D) it is static
77. A digital to analog converter with full scale output voltage of 3.5 V has a resolution close to 14 mV. Its bit size is :
- (A) 4 (B) 8
(C) 16 (D) 32
78. Graph of a network has 8 nodes and 5 independent loops. The number of branches in the network is :
- (A) 11 (B) 12
(C) 8 (D) 6

79. Twelve $6\ \Omega$ resistors are used as edge to form a cube. The resistance between two diagonally opposite corner of the cube is :

(A) $\frac{5}{6}\ \Omega$

(B) $\frac{6}{5}\ \Omega$

(C) $5\ \Omega$

(D) $6\ \Omega$

80. The highest percentage of energy generated in India is from the source of :

(A) Thermal energy

(B) Hydro energy

(C) Nuclear energy

(D) Renewable energy

81. Approximately how much rain does Dharamsala in H.P. get in a year ?

(A) 2000 mm

(B) 2500 mm

(C) 3400 mm

(D) 4300 mm

82. What is the total area of Himachal Pradesh ?

(A) 42575 sq. kms

(B) 48432 sq. kms

(C) 55673 sq. kms

(D) 62895 sq. kms

83. Which ancient sage is said to have built the temple near Dal lake in Kangra dedicated to Lord Druveshwar ?

- | | |
|--------------|-------------|
| (A) Parashar | (B) Agastya |
| (C) Bhrigu | (D) Angiras |

84. Which pass joins Kinnaur and Garhwal ?

- | | |
|------------------|-----------------|
| (A) Charang pass | (B) Animal pass |
| (C) Makori Jot | (D) Mulari Jot |

85. According to custom after marriage during which month of Vikrami Samvat the daughter-in-law does not live with her mother-in-law ?

- | | |
|------------|-----------|
| (A) Asadh | (B) Sawan |
| (C) Bhadon | (D) Asauj |

86. What is the rite that is observed after one year of a person's death ?

- | | |
|--------------|-------------------|
| (A) Chabarkh | (B) Barkhi |
| (C) Shraddh | (D) None of these |

87. Which Muslim ruler invaded Nagarkot (Kangra) in 1361 AD ?
- (A) Mohammad Tughluq (B) Feroz Shah Tughluq
- (C) Mahmud of Ghazni (D) Timur
88. Which Raja of Kutlchar princely state expelled the Sikhs from Kotwalbah fort ?
- (A) Ram Pal (B) Rajender Pal
- (C) Brij Mohan Pal (D) Narain Pal
89. What percentage of total fruit production in H.P. is from apples only ?
- (A) 50 percent (B) 75 percent
- (C) 85 percent (D) 95 percent
90. Which one of the following Development Blocks is *not* included in the first phase of National Rural Livelihood Mission ?
- (A) Mandi Sadar (B) Nurpur
- (C) Basantpur (D) Jhandutta

91. Who is the Director of the movie Rang Rasia ?

(A) Ketan Desai

(B) Harinder Singh Sikka

(C) Yash Chopra

(D) Mahesh Bhatt

92. What is the name of Nepal bus that plies between Kathmandu and New Delhi ?

(A) Birganj Express

(B) Maitri Express

(C) Pashupatinath Express

(D) Nandi Express

93. What is the name of the organisation that has replaced the Planning Commission of India ?

(A) Niti Ayog

(B) Vikas Ayog

(C) Economic Policy Ayog

(D) Social Welfare Ayog

94. Which colony in Bhopal was the scene of sectarian violence in December, 2014 in which several people were hurt ?
- (A) Shanti Colony (B) Milan Colony
- (C) Aman Colony (D) Prem Colony
95. Which village of Haryana has been in news for finding over five thousand years old ruins during excavation by the Archaeological Survey of India ?
- (A) Ramgarh (B) Rakhigarhi
- (C) Kishangarh (D) Bahadurgarh
96. Which terrorist outfit claimed responsibility for large-scale massacre of school children in Peshawar on December 16, 2014 ?
- (A) Tehreek-e-Taliban (B) Tehreek-e-Insaf
- (C) Jamat-ud-Dawa (D) Jaish-e-Mohammad

97. On behalf of which country did Christopher Columbus make his expedition that led to the discovery of Americas ?
- (A) Italy (B) France
(C) Portugal (D) Spain
98. At which place in Canada is Komagata Maru Museum ?
- (A) Toronto (B) Hamilton
(C) Vancouver (D) Halifax
99. Which single swimmer has won nearly as many Olympic medals as India in its whole Olympic history since 1900 AD in Olympic Games held at Paris ?
- (A) Sun Shuwei (B) Mark Spitz
(C) Jingyi Le (D) Matt Biondi
100. Who is Alexis Tsipras ?
- (A) President of France (B) Prime Minister of Greece
(C) President of Uganda (D) Prime Minister of Sweden