024/2018

Total Number of Questions : 100

Time : 75 Minutes

Maximum Marks : 100

INSTRUCTIONS TO CANDIDATES

1. The question paper will be given in the form of a Question Booklet. There will be four versions of question booklets with question booklet alpha code viz. **A, B, C & D**.

2. The Question Booklet Alpha Code will be printed on the top left margin of the facing sheet of the question booklet.

3. The Question Booklet Alpha Code allotted to you will be noted in your seating position in the Examination Hall.

4. If you get a question booklet where the alpha code does not match to the allotted alpha code in the seating position, please draw the attention of the Invigilator IMMEDIATELY.

5. The Question Booklet Serial Number is printed on the top right margin of the facing sheet. If your question booklet is un-numbered, please get it replaced by new question booklet with same alpha code.

6. The question booklet will be sealed at the middle of the right margin. Candidate should not open the question booklet, until the indication is given to start answering.

7. Immediately after the commencement of the examination, the candidate should check that the question booklet supplied to him contains all the 100 questions in serial order. The question booklet does not have unprinted or torn or missing pages and if so he/she should bring it to the notice of the Invigilator and get it replaced by a complete booklet with same alpha code. This is most important.

8. A blank sheet of paper is attached to the question booklet. This may be used for rough work.

9. **Please read carefully all the instructions on the reverse of the Answer Sheet before marking your answers.**

10. Each question is provided with four choices (A), (B), (C) and (D) having one correct answer. Choose the correct answer and darken the bubble corresponding to the question number using Blue or Black Ball Point Pen in the OMR Answer Sheet.

11. **Each correct answer carries 1 mark and for each wrong answer 1/3 mark will be deducted. No negative mark for unattended questions.**

12. No candidate will be allowed to leave the examination hall till the end of the session and without handing over his/her Answer Sheet to the Invigilator. Candidates should ensure that the Invigilator has verified all the entries in the Register Number Coding Sheet and that the Invigilator has affixed his/her signature in the space provided.

13. Strict compliance of instructions is essential. Any malpractice or attempt to commit any kind of malpractice in the Examination will result in the disqualification of the candidate.

1. The Journal 'Sivayogavilasom' was published by :
   - (A) Chattampi Swamikal
   - (B) Vagabhadananda
   - (C) Pandit Karuppan
   - (D) Vakkom Maulavi

2. The Birth place of C. Kesavan :
   - (A) Mayyanad
   - (B) Meenad
   - (C) Mylakkad
   - (D) Meeyannoor

3. The FIFA World Cup 2022 will be held in :
   - (A) Russia
   - (B) Germany
   - (C) Qatar
   - (D) USA

4. United States President, Donald Trump, made his first foreign trip to :
   - (A) India
   - (B) Israel
   - (C) Bahrain
   - (D) Saudi Arabia

5. The Pass Located at the Southern end of the Nilgiri Hills in South India is called :
   - (A) The Bolan Pass
   - (B) The Thalghat pass
   - (C) The Palghat pass
   - (D) The Bhorghat pass

6. Which Union Territory has the least population as per the 2011 census ?
   - (A) Andaman
   - (B) Lakshadweep
   - (C) Daman and Diu
   - (D) Maldives

7. Which was the first state to recognise tourism as an Industry ?
   - (A) Goa
   - (B) Kashmir
   - (C) Karnataka
   - (D) Kerala

8. Which Indian State has the longest Coast line ?
   - (A) Gujarat
   - (B) Kerala
   - (C) Tamil Nadu
   - (D) Andhra Pradesh

9. Who led 'Ooruttambalam Agitation' ?
   - (A) Narayana Guru
   - (B) Vakkom Maulavi
   - (C) Dr. Palpu
   - (D) Ayyankali

10. Which State has been declared the first Smoke free state in the country ?

    (A) Himachal Pradesh   (B) Andhra Pradesh

    (C) Uttar Pradesh   (D) Madhya Pradesh

11. Goa was liberated in the year :

    (A) 1960   (B) 1961   (C) 1962   (D) 1963

12. Who is known as the lion of Punjab ?

    (A) Lala Lajpat Rai   (B) Bhagat Singh

    (C) Bipin Chandra Pal   (D) Chandrashekhar Azad

13. Which revolutionist of Freedom Struggle was hanged till death at the age of 14 ?

    (A) Sukh Dev   (B) Batukeshwar Dutt

    (C) Bhagat Singh   (D) Khudiram Bose

14. The World Humanitarian Day (WHD) is observed every year in which date ?

    (A) August 17   (B) August 20   (C) August 19   (D) August 18

15. In which city have digitised schools been started ?

    (A) Delhi   (B) Bengaluru   (C) Mumbai   (D) Chennai

16. Who has been named Skipper of ICC Women's cricket world cup XI ?

    (A) Tamsin Beaumont   (B) Ellyse Perry

    (C) Laura Wolvaardt   (D) Mithali Raj

17. Vayalvaram Veedu is related to :

    (A) Vallathol Narayana Menon   (B) Kumaran Asan

    (C) Sree Narayana Guru   (D) Ayyankali

18. In which year Gandhiji made a visit to Kerala, that was described by him 'pilgrimage' ?

    (A) 1937   (B) 1938   (C) 1936   (D) 1939

SEAL

19. Who was the first Vice President of SNDP Yogam ?

    (A) Kumaran Asan   (B) Dr. Palpu

    (C) Sree Narayana Guru   (D) Sahodaran Ayyappan

20. The effective border between India and the People's Republic of China :

    (A) LOC   (B) LAC   (C) LOG   (D) LAN

21. Inverter converts :

    (A) AC to DC   (B) AC to AC   (C) DC to AC   (D) DC to DC

22. PIV in diode stands for :

    (A) Peak Invertor Voltage   (B) Peak Ideal Voltage

    (C) Peak Inverse Voltage   (D) Peak Individual Voltage

23. Barrier Potential of Germanium diode is :

    (A) 0.5V   (B) 0.3V   (C) 0.7V   (D) 0.6V

24. The resonance frequency occurs when :

    (A) $C = L$ (B) $X_L = X_C$

    (C) $R = L$ (D) None of the above

25. The common collector configuration is also known as :

    (A) Collector follower   (B) Base follower

    (C) Gate follower   (D) Emitter follower

26. The terminals of a FET are :

    (A) Drain, Source, Gate   (B) Gate, Cathode, Anode

    (C) Base 1, Base 2, Emitter   (D) Cathode, Anode, Source

27. The package of digital IC 7400 series is :

    (A) DTL   (B) CMOS

    (C) TTL   (D) None of the above

28. The Aspect ratio of Indian TV system is :
(A) 4 : 3
(B) 4 : 9
(C) 5 : 5
(D) 16 : 5

29. One nibble contain :
(A) Two bits
(B) Four bits
(C) Eight bit
(D) 16 bit

30. Capacity of DVD :
(A) 700 MB
(B) 1 GB
(C) 40 GB
(D) 4.7 GB

31. The feedback used in amplifier is :
(A) Positive
(B) Negative
(C) Both
(D) All of the above

32. The value of capacitor 103 is :
(A) 0.01 mF
(B) 0.001 mF
(C) 1 mF
(D) 0.0001 mF

33. In the following 3-pin IC, which gives negative regulated voltage 15V ?
(A) 7815
(B) 7805
(C) 7905
(D) 7915

34. Which speaker is used for Mid-range frequency response ?
(A) Squawker
(B) Woofer
(C) Tweeter
(D) Wide range

35. The Oscillator generating high frequency oscillation in the range of 1MHz to 500MHz :
(A) Phase shift
(B) Hartley
(C) Wein Bridge
(D) All of the above

36. Velocity of Electromagnetic wave was :
(A) 3×10^8 m/s
(B) 3×10^{12} cm/s
(C) 4×10^4 miles/s
(D) 3×10^2 m/s

37. The primary colors in CTV system is :
(A) RGB
(B) RYC
(C) RBO
(D) RMC

38. In an Oscillator circuit _____ is very important.

(A) Tank circuit   (B) Feedback   (C) Amplifier   (D) All of the above

39. The system used in India for color TV transmission is :

(A) NTSC   (B) SECAM   (C) PAL   (D) None of these

40. The separation of sound and picture carrier in Indian TV system :

(A) 1 MHz   (B) 4.5 MHz   (C) 7 MHz   (D) 5.5 MHz

41. Length of dipole in yagi antenna is _____.

(A) 143/f   (B) 152/f   (C) 137/f   (D) 163/f

42. The purpose of saw filters in TV receivers is _____.

(A) To produce sawtooth signal   (B) To replace wave trap circuit

(C) To produce horizontal deflection (D) To produce vertical deflection

43. Ripple factor of half wave rectifier is _____.

(A) 1.21   (B) 0.48   (C) 40.6   (D) 81.2

44. Input Impedance of emitter follower is _____.

(A) Low   (B) Zero   (C) High   (D) Unity

45. _____ shows negative resistance characteristics.

(A) Zener Diode   (B) Power Diode   (C) LED   (D) Tunnel Diode

46. Unit of magneto motive force is _____.

(A) Ampere hour   (B) Ampere Turns   (C) Weber   (D) Gauss

47. RMS value of AC is _____.

(A) 230 V   (B) 0.707 Vm   (C) 1.41 Vm   (D) 0.637 Vm

48. The inductive reactance value _____ with the increase in frequency of applied voltage.
    (A) Does not change
    (B) Increase
    (C) Decreases
    (D) Become Zero

49. IC _____ is a 8 line multiplexer.
    (A) 74138
    (B) 7408
    (C) 74151
    (D) 7486

50. The peak inverse voltage for Bridge rectifier is _____.
    (A) Vm
    (B) 2Vm
    (C) 4Vm
    (D) Zero

51. Etching solution for PCB is made by _____.
    (A) Sodium Chloride
    (B) Isopropyl Alchohol
    (C) Ferric Chloride
    (D) None of the above

52. _____ feedback is used in amplifiers.
    (A) Positive
    (B) Negative
    (C) Both (A) and (B)
    (D) None of the above

53. LM 317 is _____.
    (A) an operational amplifier
    (B) a timer IC
    (C) a digital IC
    (D) a regulator IC

54. The current rating of lead acid battery is expressed in _____.
    (A) Ampere turns
    (B) Ampere Ohms
    (C) Ampere hour
    (D) HP

55. Bandwidth of an ideal OP-Amps is _____.
    (A) Infinity
    (B) Zero
    (C) Unity
    (D) None of the above

56. _____ microphones requires a DC voltage for its operation.
    (A) Crystal
    (B) Moving coil
    (C) Ribbon
    (D) Carbon

57. The cut off frequency of RC lowpass filter is _____.

(A) RC   (B) $1/2\pi LC$ (C) $1/2\pi RC$ (D) $1/RC$

58. In 8085 microprocessor stack pointer is a _____ bit register.

(A) One   (B) Four   (C) Eight   (D) 16

59. The thickness of LC layer in LCD is expressed in _____.

(A) Millimeter   (B) Centimeter   (C) Micrones   (D) Inch

60. Convert $(5A)_{16}$ into octal number :

(A) $(132)_8$ (B) $(123)_8$ (C) $(321)_8$ (D) $(312)_8$

61. Three resistance of 40, 30, 10 Ohms are connected in parallel, their combined resistance will be _____.

(A) greater than 40 Ohm   (B) between 40 Ohm to 30 Ohm

(C) between 30 Ohm to 10 Ohm   (D) less than 10 Ohm

62. In electrical wiring, the light point allowed in one sub circuit is _____.

(A) 15   (B) 10   (C) 8   (D) 2

63. Temperature limit for class 'E' insulation is _____.

(A) 60°C   (B) 120°C   (C) 180°C   (D) 360°C

64. Wheatstone bridge is used to measure _____.

(A) Current   (B) Capacitance   (C) Resistance   (D) Power

65. An electric lamp is marked 100 Watt, 240 Volt, the resistance of filament will be _____.

(A) 576 Ω (B) 57 Ω (C) 5760 Ω (D) 240 Ω

66. A network which contains no source of EMF in it, is called _____.

(A) Active network   (B) Constant network

(C) Passive network   (D) Resistive network

67. In B−H curve, 'B' represents _____.

    (A) Magnetic flux density   (B) Magnetic field intensity

    (C) Reluctance   (D) Magnetic flux

68. Power factor of a pure resistive load is _____.

    (A) unity   (B) 0.8   (C) 0.5   (D) zero

69. In an AC circuit, an ammeter measures _____ value of current.

    (A) Average value   (B) Peak value

    (C) RMS value   (D) Minimum value

70. To convert a moving coil galvanometer in to an ammeter, it must connect _____.

    (A) high resistance in series   (B) low resistance in series

    (C) high resistance in parallel   (D) low resistance in parallel

71. The speed of a shunt motor has to be controlled through the 'flux control method', the suitable starter will be _____.

    (A) Direct On Line starter   (B) 2-point starter

    (C) 3-point starter   (D) 4-point starter

72. The wattmeter reading of a transformer on open circuit test is 600 Watt and on short circuit test at full load current is 1200 watt. What will be the copper loss at half load?

    (A) 1200 Watt   (B) 800 Watt   (C) 300 Watt   (D) 600 Watt

73. The eddy current loss in the transformer occur in _____.

    (A) primary winding   (B) core

    (C) secondary winding   (D) supply side

74. The fixed coil in dynamometer type wattmeter is the _____.

    (A) Current coil   (B) Pressure coil

    (C) Power coil   (D) None of the above

75. A wave winding is made in a machine for _____.

   (A)   more voltage, more current   (B)   less voltage, less current

   (C)   more voltage, less current   (D)   less voltage, more current

76. The direction of induced EMF in a coil is found by _____.

   (A)   Faradays law   (B)   Flemings left hand rule

   (C)   Kirchoff's law   (D)   Lenz's law

77. The shunt type ohmmeter will have zero reading at the _____.

   (A)   center of the scale   (B)   left hand end of the scale

   (C)   right hand end of the scale   (D)   point specified by the manufacture

78. The unit of luminous flux is _____.

   (A)   Lux   (B)   Candela   (C)   Weber   (D)   Lumen

79. Load factor is defined as the ratio of _____.

   (A)   Average load to Maximum Demand

   (B)   Maximum demand to Average load

   (C)   Average load to Connected load

   (D)   Connected load to Maximum Demand

80. The rotating magnetic field in a three phase, 6 pole, 50 Hz slip ring induction motor will rotate at _____ speed.

   (A)   300 RPM   (B)   1000 RPM   (C)   1200 RPM   (D)   1500 RPM

81. Which of the following devices can be used to directly image printed text ?

   (A)   OCR   (B)   OMR   (C)   MICR   (D)   All of the above

82. Who designed the first electronics computer ENIAC ?

   (A)   Van-Neumann   (B)   J. Presper Eckert and John W Mauchly

   (C)   Joseph M. Jacquard   (D)   Charles Babbage

83. BCC stands for _____ .

   (A) Basic carbon copy   (B) Blind computer copy

   (C) Blind combined copy   (D) Blind carbon copy

84. CPU retrieves its data and instructions from _____ .

   (A) Secondary Memory   (B) Auxiliary Memory

   (C) Main Memory   (D) All of the above

85. A Web page can contain :

   (A) Text   (B) Image   (C) Video   (D) All of the above

86. The default alignment option of text in MS Word is _____ .

   (A) Left   (B) Right   (C) Center   (D) Justify

87. Background color or effects applied on a document is not visible in :

   (A) Web layout view   (B) Print Layout view

   (C) Reading View   (D) Print Preview

88. In a database table, the category of information is called _____ .

   (A) Tuple   (B) Field   (C) Record   (D) All of above

89. Protocol used in E-mail is _____ .

   (A) SMTF   (B) SMTP   (C) FTP   (D) WWW

90. In Linux everything stored as a :

   (A) File   (B) Directory   (C) Executables   (D) None of these

91. _____ can be used as communication medium in a LAN.

(A) Coaxial cable   (B) Twisted pair cable

(C) Fiber-optic cable   (D) All of the above

92. _____ function translates a numeric value to a variable.

(A) Message   (B) Build in   (C) Val   (D) Mod

93. A _____ is a device that forwards packets between networks by processing the routing information included in the packet.

(A) Bridge   (B) Firewall

(C) Router   (D) All of the mentioned

94. Communication between a computer and a keyboard involves _____ transmission.

(A) Automatic   (B) Half-duplex   (C) Full-duplex   (D) Simplex

95. Memory size of Boolean :

(A) 1 byte   (B) 2 byte   (C) 3 byte   (D) 4 byte

96. Which is an example of Visual basic objects ?

(A) Control objects   (B) ASP.Net

(C) 3 ADO.Net   (D) All of the above

97. Which of the following dialogue boxes is used to give a warning message ?

(A) Alert box   (B) Input box

(C) Message box   (D) None of the above

98. A sequence of activities being carried out to solve a program is known as :

(A) Output   (B) Input

(C) Process   (D) None of the above

99. Execution of two or more programs by a single CPU is known as :

   (A) Multiprocessing   (B) Time sharing

   (C) Multiprogramming   (D) None of the above

100. Which of the following are the concepts of Information security ?

   (A) Access control   (B) Integrity

   (C) Confidentiality   (D) All of the above

- o O o -