

Sr. No

[SET-V]
Ph.D. Programme (Odd Semester)
ELECTRONICS & COMMUNICATION ENGINEERING

Marks: 100

Time: 2 hours

Roll No.: _____	Date: _____
Time: _____	Centre Name: _____

INSTRUCTIONS FOR THE CANDIDATES	
1.	Please do not open (Break the seal) of the question booklet before time
2.	An OMR answer sheet is being provided separately along with this question booklet. Please fill up all relevant entries like Roll number, Centre code, Paper Number etc. in the spaces provided on the OMR answer sheet and put your signature in the box provided for this purpose.
3.	There are 100 questions in this booklet. Against each question four alternative choices (A), (B), (C) and (D) are given, out of which only one is correct. Indicate your choice of answer by Darkening the suitable circle with Black/Blue Ball Pen in the OMR answer sheet supplied to you separately.
4.	Each question carries one mark. There will be 1/4th negative marking.
5.	Read and follow the instructions given on the backside of the OMR answer sheet carefully.
6.	Do not write your name/Roll number or give any identification mark at any place on the OMR sheet.
7.	Keep all your belongings outside the examination hall. Do not retain any paper except the ADMIT CARD.
8.	Do not talk to each other. Do not borrow anything from other candidates.
9.	Use of CALCULATOR (except programmable calculator) is allowed.
10.	Any body found involved in malpractices, will be disqualified from appearing in the entrance test.
11.	At the start of the examination, please ensure that all pages of your booklet are properly printed; your question booklet is not damaged in any manner and contains 100 questions. In case of any discrepancy, report to the invigilator immediately. No claim in this regard will be entertained at the later stage.

L
E
F
T

For Rough Work

B
L
A
N
K

[SET-V]

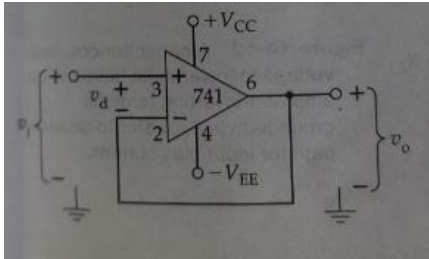
ELECTRONICS & COMMUNICATION ENGINEERING

Marks: 100

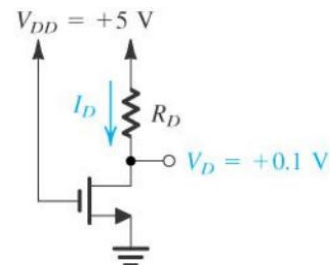
Time: 2 hours

NOTE:

- (i) Attempt all questions. Each question carries one mark. There will be $1/4^{\text{th}}$ negative marking.
- (ii) **There are 100 questions in this booklet.** Against each question four alternative choices (A), (B), (C) and (D) are given, out of which only one is correct. Indicate your choice of answer by Darkening the suitable circle with **Black/Blue Ball Pen** in the OMR answer sheet supplied to you separately.

- The fermi level of n-type material is expressed as: (N_c : effective Density of States in conduction band, N_v : effective Density of States in valence band, N_D : Donor atoms concentration)**
 - $E_c - KT \ln(N_c/N_D)$
 - $E_c + KT \ln(N_v/N_D)$
 - $E_c - KT \ln(N_v/N_D)$
 - $E_c + KT \ln(N_c/N_D)$
- Schottky diode turns OFF,**
 - Faster than p-n junction diode
 - Slower than p-n junction diode
 - At same speed than p-n junction diode
 - None of the above
- The reading of DC voltmeter across load in a Full wave rectifier with ac input on both sides of winding equal to $100\pi \sin \omega t$**
 - $100/\pi$
 - $200/\pi$
 - 200V
 - 100V
- The threshold voltage can be lowered by:**
 - Increasing gate oxide thickness
 - Reducing the substrate concentration
 - Increasing substrate concentration
 - Using dielectric of lower constant
- In an enhancement mode nMOS the device parameters are $V_{GS}=3V$, $V_{DS}=5V$, $V_{th}=1V$, $\mu_n C_{ox}=25\mu A/V^2$, $I_D=0.25mA$. Calculate the aspect ratio of the device:**
 - 2.5
 - 1.25
 - 5
 - 25
- The emitter bypass capacitor across emitter resistor:**
 - Increases emitter current
 - Increases output signal
 - Improves stability factor
 - Decrease base current
- The upper 3dB frequency of a single stage is 1MHz, how many stages will result in approximately 510kHz upper 3dB in a multistage amplifier:**
 - 2
 - 4
 - 3
 - 10
- Solar cell is a**
 - Photo conductive device
 - Photo emissive device
 - Photo voltaic device
 - Electromotive device
- From the datasheet, the open loop voltage gain of op-amp is 200000, $r_i=2M\Omega$, $r_o=75\Omega$. For input voltage 1V, calculate V_d , Z_i and Z_o :**

 - $5\mu V$, $400000M\Omega$, $0.375 \times 10^{-3}\Omega$
 - $50mV$, $4M\Omega$, $375 \times 10^{-3}\Omega$
 - $50mV$, $400000M\Omega$, $3.75 \times 10^{-3}\Omega$
 - $5\mu V$, $400000M\Omega$, $0.375 \times 10^{-3}\Omega$

10. Determine the maximum peak output voltage obtained from op-amp with 100kHz, Supply voltages= $\pm 12V$, the slew rate is $0.5V/\mu s$.
 (A) 0.79 V
 (B) 7.9 V
 (C) 1 V
 (D) 12 V
11. When a logic gate is driving another logic gate, the condition which must be satisfied for proper operation is:
 (A) $V_{OH} > V_{IH}$, $V_{OL} > V_{IL}$
 (B) $V_{OH} < V_{IH}$, $V_{OL} > V_{IL}$
 (C) $V_{OH} < V_{IH}$, $V_{OL} < V_{IL}$
 (D) $V_{OH} > V_{IH}$, $V_{OL} < V_{IL}$
12. In ECL family the negative supply voltage is used to
 (A) Reduce noise at the output
 (B) Save power
 (C) Increase speed
 (D) All of the above
13. PLA is a device.
 (A) SSI
 (B) MSI
 (C) LSI
 (D) VLSI
14. The percentage resolution of 10bit DAC with step size 10mV is
 (A) 1%
 (B) 0.01%
 (C) 0.1%
 (D) 10%
15. Determine the minimum conversion interval of ADC using eight stage counter with a clock frequency of 2MHz
 (A) $128\mu s$
 (B) $0.5\mu s$
 (C) $4\mu s$
 (D) $5\mu s$
16. What will be the content of accumulator after execution of program?
 MVI A, 55H
 MVI C, 25H
 ADD C
 DAA
 (A) 7AH
 (B) B. 80H
 (C) C. 50H
 (D) D. 22H
17. How much execution time is required for MVI M, 35H?
 (A) 7T-states
 (B) 8T-states
 (C) 9T-states
 (D) 10T-states
18. Which registers are not available for user in a microprocessor?
 (A) W
 (B) Z
 (C) B
 (D) Both (A) and (B)
19. The difference between analog voltage represented by two adjacent digital codes or the analog step size is the
 (A) Quantization
 (B) Resolution
 (C) Accuracy
 (D) Monotonicity
20. Number of address and data lines required to interface memory of $2k \times 8$
 (A) 10, 8
 (B) 11, 8
 (C) 12, 16
 (D) 12, 12
21. To establish drain voltage of 0.1V. What effective resistance between drain and source is required? Use SICE Level 1 MOSFET model, $V_{th}=1V$, $K_n'(W/L)=1mA/V^2$.

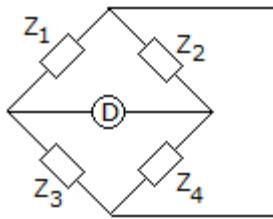


- (A) 39.5mA, 1.24k Ω
 (B) 39.5mA, 12.4k Ω
 (C) 0.395mA, 1.24k Ω
 (D) 0.395mA, 12.4k Ω

22 For a MOS capacitor fabricated on a P-type semiconductor, strong inversion occurs when

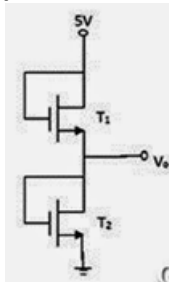
- (A) Surface potential is equal to Fermi level
- (B) Surface potential is zero
- (C) Surface potential is negative is negative and equal to Fermi potential in magnitude
- (D) Surface potential is positive and equal to twice the Fermi potential

23 In figure, $Z_1 = 200\angle 60^\circ\Omega$, $Z_2 = 400\angle -90^\circ\Omega$, $Z_3 = 300\angle 0^\circ$. Then Z_4 for bridge to be balanced is



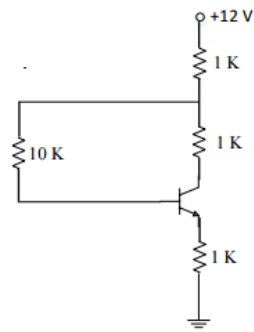
- (A) $150\angle 30^\circ\Omega$
- (B) $400\angle -90^\circ\Omega$
- (C) $300\angle 90^\circ\Omega$
- (D) $600\angle -150^\circ\Omega$

24 Both transistors T1 and T2 in figure have a threshold voltage of 1 volt. The device parameters K_1 and K_2 of T1 and T2 are $36 \mu A/V^2$ and $9 \mu A/V^2$. Determine V_o :



- (A) 1V
- (B) 2V
- (C) 3V
- (D) 4V

25 A transistor having $\alpha = 0.99$ and $V_{BE} = 0.7V$, is used in the circuit of the figure is the value of the collector current will be



- (A) 5.33mA
- (B) 0.533mA
- (C) 10.66mA
- (D) 1.066mA

26 If S_n is the power associated with each frequency component and $S(f)$ is sum of all these powers, normalized power density is:

- (A) $\frac{dS(f)}{df}$
- (B) $\frac{dS(f)^2}{df}$
- (C) $\frac{d\sqrt{S(f)}}{dx}$
- (D) None of the above

27 Auto correlation is

- (A) Even function of τ
- (B) Odd function of τ
- (C) May be Even or Odd function of τ
- (D) Neither Even nor Odd function of τ

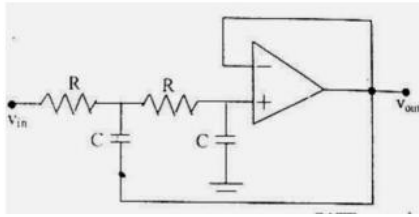
The following (Q28 to Q32) questions have two statements Assertion (a) and Reason (r). Examine them and answer as per following code:

- (A) Both (a) and (r) are correct, (r) is correct explanation of (a)
- (B) Both (a) and (r) are correct but (r) is not a correct explanation of (a)
- (C) (a) is True, (r) is False
- (D) (a) is False, (r) is True

28 (a). $L[e^{-at} f(t)] = F(s+a)$
 (r). In use of Laplace transform, initial condition may be neglected

- 29 (a). Fourier series can also be written in exponential form
(r). $\sin(n\omega t)$ and $\cos(n\omega t)$ can be expressed as sum or difference of exponentials.
- 30 (a). Laplace transform can be used to evaluate integrals
(r). Laplace transform can be used to solve differential equations
- 31 (a). Impulse function is an important function in network analysis.
(r). Convolution integral enables us to find network response to an arbitrary input in terms of impulse response
- 32 (a). Transient periods are of short duration, but can result in dangerously high voltages and currents.
(r). Circuit equation in transient analysis are integral differential equations
- 33 If $L[f(t)] = \frac{w}{s^2 + w^2}$, the value of $Lt_{t \rightarrow \infty} f(t)$
(A) Cannot be determined
(B) 0
(C) 1
(D) ∞
- 34 Final Value theorem is used to find
(A) Steady state value of system output
(B) Initial value of output
(C) Transient value of output
(D) All of the above
- 35 The eigen value of matrix $\begin{bmatrix} 0 & 1 \\ 1 & 0 \end{bmatrix}$ are
(A) 1, 1
(B) -1, -1
(C) j, -j
(D) 1, -1
- 36 Among Z-transform, Laplace Transform and Fourier Transform
(A) All three are used in continuous time domain
(B) All three are used in both continuous and discrete time domain
(C) Z-transform is used in continuous time domain while Laplace Transform and Fourier Transform are used in discrete time domain
(D) Z-transform is used in discrete time domain while Laplace Transform and Fourier Transform are used continuous in time domain
37. Z-transform of $f(k) = \cosh \alpha k; k \geq 0$ is
(A) $\frac{z \sinh \alpha}{z^2 - 2z \cosh \alpha + 1}; |z| > \max\{|e^\alpha|, |e^{-\alpha}|\}$
(B) $\frac{z \cosh \alpha}{z^2 - 2z \cosh \alpha + 1}; |z| > \max\{|e^\alpha|, |e^{-\alpha}|\}$
(C) $\frac{z(z - \cosh \alpha)}{z^2 - 2z \cosh \alpha + 1}; |z| > \max\{|e^\alpha|, |e^{-\alpha}|\}$
(D) $\frac{z(z - \sinh \alpha)}{z^2 - 2z \cosh \alpha + 1}; |z| > \max\{|e^\alpha|, |e^{-\alpha}|\}$
- 38 Determine the convolution sum of two sequences $x(n) = \{3, 2, 1, 2\}$ and $h(n) = \{1, 2, 1, 2\}$
(A) $y(n) = \{3, 8, 8, 12, 9, 4, 4\}$
(B) $y(n) = \{3, 8, 3, 12, 9, 4, 4\}$
(C) $y(n) = \{3, 8, 8, 12, 9, 1, 4\}$
(D) $y(n) = \{3, 8, 8, 1, 9, 4, 4\}$
- 39 A DC voltmeter has sensitivity of $1000 \Omega / V$. When it measure half full scale in 100 V range. The current through the voltmeter will be
(A) 0.5 mA.
(B) 1 mA.
(C) 50 mA.
(D) 100 mA.
- 40 Early effect in BJT refers to
(A) avalanche breakdown.
(B) thermal breakdown.
(C) base narrowing.
(D) zener breakdown
- 41 An electromagnetic field exists only when there is
(A) current
(B) voltage
(C) an increasing current
(D) Both current and voltage
- 42 The induced voltage across a coil with 250 turns that is located in a magnetic field that is changing at a rate of 8 Wb/s is
(A) 1,000 V
(B) 2,000 V
(C) 31.25 V
(D) 3,125 V

43 The circuit in the figure is a



- (A) Low pass filter
- (B) High pass filter
- (C) Band pass filter
- (D) Band reject filter

44 In FM modulation, when the modulation index increases, transmitted power is

- (A) constant
- (B) increased
- (C) decreased
- (D) none of these

45 The failure density function, $f(t)$ is used to give the probability of failure during an interval of time. It is known as _____.

- (A) Probability density distribution
- (B) Cumulative probability distribution
- (C) Cumulative density distribution
- (D) Failure probability distribution

46 The sequence of the binary digits representing the outcomes of parity checks in Hamming codes is known as _____.

- (A) look-up entry
- (B) hamming distance
- (C) radix
- (D) syndrome

47 Telnet, FTP, SMTP, DNS, HTTP are examples of protocols that are used in _____.

- (A) application layer of OSI reference model
- (B) presentation layer of OSI reference model
- (C) session layer of OSI reference model
- (D) data link layer of OSI reference model

48 Suppose that the modulating signal is $x_m(t) = 2 \cos(2\pi f_m t)$ and the carrier signal is $x_c(t) = A_c \cos(2\pi f_c t)$. Which one of the following is a conventional AM signal without over-modulation?

- (A) $x(t) = A_c m(t) \cos(2\pi f_c t)$
- (B) $x(t) = A_c [1 + m(t)] \cos(2\pi f_c t)$
- (C) $x(t) = A_c \cos(2\pi f_c t) + A_c/4 m(t) \cos(2\pi f_c t)$
- (D) $x(t) = A_c \cos(2\pi f_m t) \cos(2\pi f_c t) + A_c \sin(2\pi f_m t) \sin(2\pi f_c t)$

49 A 1MHz sinusoidal carrier is amplitude modulated by a symmetrical square wave of period 100 μ sec. Which of the following frequencies will not be present in the modulated signal?

- (A) 990 kHz
- (B) 1010 kHz
- (C) 1020 kHz
- (D) 1030 kHz

50 The diagonal clipping in Amplitude Demodulation (using envelopedetector) can be avoided if RC time-constant of the envelope detectorsatisfies the following condition, (here W is message bandwidth and ω is carrier frequency both in rad/sec)

- (A) $RC < 1/W$
- (B) $RC > 1/W$
- (C) $RC < 1/\omega$
- (D) $RC > 1/\omega$

51 The image channel selectivity of superheterodyne receiver depends upon

- (A) IF amplifiers only
- (B) RF and IF amplifiers only
- (C) Pre selector, RF and IF amplifiers
- (D) Pre selector and RF amplifiers

52 A bandlimited signal is sampled at the Nyquist rate. The signal can be recovered by passing the samples through

- (A) an RC filter
- (B) an envelope detector
- (C) a PLL
- (D) an ideal low-pass filter with the appropriate bandwidth

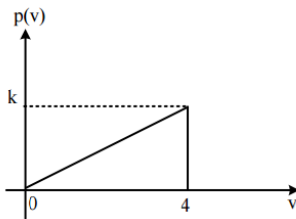
53 The peak to peak input to an 8 bit PCM coder is 2 volts. The signal power to quantization noise power ratio (in dB) for an input of $0.5 \cos \omega_m t$ is

- (A) 47.8
- (B) 43.8
- (C) 95.6
- (D) 99.6

54 In delta modulation, the slope overload distortion can be reduced by

- (A) decreasing the step size
- (B) decreasing the granular noise
- (C) decreasing the sampling noise
- (D) increasing the step size

55 An output of a communication channel is a random variable v with the probability density function as shown in the figure. The mean square value of v is



- (A) 4
- (B) 6
- (C) 8
- (D) 9

56 A zero-mean white Gaussian noise is passed through an ideal lowpass filter of bandwidth 10 KHz. The output is then uniformly sampled with sampling period $t_s=0.03$ msec. The samples so obtained would be

- (A) correlated
- (B) statistically independent
- (C) uncorrelated
- (D) orthogonal

57 Which of the following statements is correct for a system with gain margin close to unity or a phase margin close to zero?

- (A) The system is relatively stable
- (B) The system is highly stable
- (C) The system is highly oscillatory
- (D) None of the above

58 The type 0 system has _____ at the origin.

- (A) no pole
- (B) net pole
- (C) simple pole
- (D) two poles

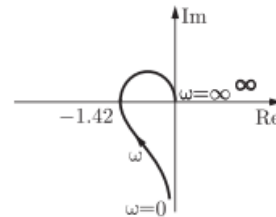
59 Which of the following is the best method for determining the stability and transient response?

- (A) Root locus
- (B) Bode plot
- (C) Nyquist plot
- (D) None of the above

60 A differentiator is usually not a part of a control system because it

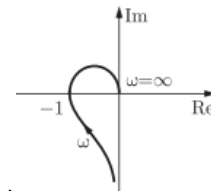
- (A) reduces damping
- (B) reduces the gain margin
- (C) increases input noise
- (D) increases error

61 The polar plot of an open loop stable system is shown below. The closed loop system is

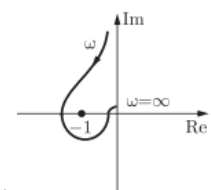


- (A) always stable
- (B) marginally stable
- (C) un-stable with one pole on the RH s - plane
- (D) un-stable with two poles on the RH s - plane

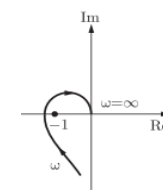
62 Consider the following Nyquist plots of loop transfer functions over $\omega=0$ to $\omega=3$. Which of these plots represent a stable closed loop system?



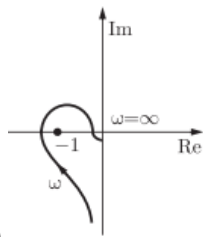
(A)



(B)



(C)



(D)

- 63 If the loop gain K of a negative feed-back system having a loop transfer function $K(s+3)/(s+8)^2$ is to be adjusted to induce a sustained oscillation then
- The frequency of this oscillation must be $4\sqrt{3}$ rad/s
 - The frequency of this oscillation must be 4 or $4\sqrt{3}$ rad/s
 - The frequency of this oscillation must be 4 rad/s
 - Such a K does not exist
- 64 Three capacitors each of the capacity C are given. The resultant capacity $(2/3)C$ can be obtained by using them
- all in series
 - all in parallel
 - two in parallel and third in series with this combination
 - two in series and third in parallel across this combination
- 65 Transverse electric wave traveling in z -direction satisfies
- $E_z = 0; H_z = 0$
 - $E_z = 0; H_z \neq 0$
 - $E_z \neq 0; H_z = 0$
 - $E_z \neq 0; H_z \neq 0$.
- 66 For a rectangular wave guide, 2.5cm x 1.2 cm, dominant cut off wavelength is
- 5 cm
 - 2.5 cm
 - 2.4 cm
 - 3.7 cm
- 67 Consider a transmission line of characteristic impedance 50 ohms and the line is terminated at one end by $+j50$ ohms, the VSWR produced in the transmission line will be
- +1
 - Zero
 - infinity
 - 1
- 68 The characteristic impedance of a transmission line depends upon
- shape of the conductor
 - surface treatment of the conductors
 - conductivity of the material
 - geometrical configuration of the conductors
- 69 A hollow rectangular waveguide acts as a
- High pass filter
 - Low pass filter
 - Band pass filter
 - Low frequency radiator
- 70 The radio wave is incident on layer of ionosphere at an angle of 30° with the vertical. If the critical frequency is 1.2 MHz, the maximum usable frequency (MUF) is
- 1.2 MHz
 - 2.4 MHz
 - 0.6 MHz
 - 1.386 MHz
- 71 An instrumentation amplifier should have high:
- Input impedance
 - Power Gain
 - CMRR
 - Supply Voltage
- 72 In the differential voltage gain and the common mode voltage gain of a differential amplifier are 48dB and 2dB respectively, then its common mode rejection ratio is
- 23dB
 - 25dB
 - 46dB
 - 50dB
- 73 If a cellular operator is allocated 12.5 MHz for each simple's band and if bandwidth is 12.5MHz guard-band is 10 kHz & $B_c = 10$ kHz find the number of channel available in an FDMA system.
- 208
 - 416
 - 842
 - 200

74 4G LTE is ____ times faster than 3G?

- (A) 5
- (B) 10
- (C) 15
- (D) 20

75 Why are cell sizes likely to be smaller in 4G?

- (A) Higher frequency bands are utilized for data transmission
- (B) At higher data rates the signal must be received at a higher SNR threshold.
- (C) A and B
- (D) Data is transmitted at lower power

76 Multilevel Amplitude Shift Keying (MASK) is not implemented with pure Amplitude Shift Keying (ASK), it is implemented with

- (A) QAM
- (B) PSK
- (C) FSK
- (D) Binary ASK

77 Which method is suitable for the measurement of resistivity of good conductors of electricity?

- (A) Loss of charge method.
- (B) Kelvin's double bridge method.
- (C) Schering's bridge method.
- (D) Any of the above.

78 Phase noises are due to

- (A) Modulation of signal with carrier
- (B) Noise from other signal
- (C) Noise due to change of phase during reflection
- (D) Noise due to change of phase during transmission in different medium

79 Identify the wrong statement

- (A) Power in band is measure of total power within specified frequency range
- (B) Occupied bandwidth measures bandwidth that contains total power of the signal
- (C) Adjacent channel power measures the way a particular channel and two adjacent channel distribute power
- (D) Resolution bandwidth measures the smallest frequency that can be resolved

80 Triangular Wave can be generated by

- (A) Integrating a square wave
- (B) Differentiating a square wave
- (C) Integrating a sine wave
- (D) Differentiating a sine wave

81. There are 10 lamps in a hall. Each one of them can be switched on independently. The number of ways in which hall can be illuminated is

- (A) 10^2
- (B) 1023
- (C) 2^{10}
- (D) 10!

82. What is (?) in the following table?

8	54	27
9	71	?
10	90	45

- (A) 39
- (B) 37
- (C) 35.5
- (D) 34.5

83. If 'THIS MAN IS GOOD' is coded as 153. What will be the code for 'THAT MAN IS NOT GOOD'?

- (A) 200
- (B) 195
- (C) 190
- (D) 180

84. A earned Rs 84000. One third of it went to taxes. The rest was invested and appreciated by one half. Two third of that went into business. Additional tax was paid equal to $\frac{2}{3}$ of the remaining amount. How much money was left with A?

- (A) 8790
- (B) 8777
- (C) 9000
- (D) 9333

85. If Aneesh is paternal first cousin of Rahul, how is their father's mother is related to them?

- (A) Mother
- (B) Grandmother
- (C) Paternal aunt
- (D) Maternal aunt

86. I got my first job on May 22, 1983. Which day of the week it was?
 (A) Monday
 (B) Tuesday
 (C) Friday
 (D) Sunday
87. A petrol dealer adds 20% kerosene oil to petrol. If purchase price of petrol is Rs. 60 per litre and that of kerosene is Rs. 20 per litre, and sale price of the petrol is Rs. 61 per litre, what is his percentage profit?
 (A) 14.25
 (B) 14.37
 (C) 14.50
 (D) 14.70
88. Anant parked his motorcycle at 9th place from the left and 28th from the right. How many motorcycles are parked in the row?
 (A) 37
 (B) 36
 (C) 35
 (D) 34
89. In an imaginary language digits 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9 are substituted by t, d, j, o, r, m, u, x, b and z. 10 is written as dt and so on. Use the above information and find the value of expression given below:

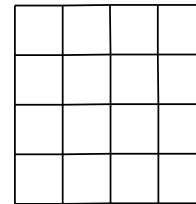
$$\{(or - dj) \times u\} \div dj$$

 (A) 9
 (B) 10
 (C) 11
 (D) 12
90. Seven friends meet at their college reunion, shake hand with each other once. How many hand shake will be there altogether?
 (A) 21
 (B) 42
 (C) 27
 (D) 49
91. Ms Anandita starts at left and moves 8 Kms. She then turns right and moves 4 Kms. Then she turns right again for 8 Kms. How far is she from the initial position?
 (A) 20 Kms
 (B) 10 Kms
 (C) 08 Kms
 (D) 04 Kms

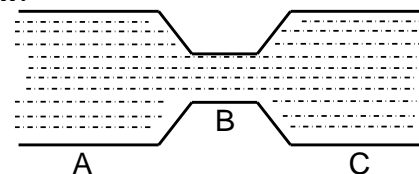
92. Lunch-dinner pattern of a person for 'm' days is given below. He has a choice of VEG or NON-VEG meal for his lunch/dinner.
 (i) If he takes a NON-VEG lunch, he will have only VEG dinner
 (ii) He takes NON-VEG dinner for 9 days
 (iii) He takes VEG lunch for 11 days
 (iv) He takes a total of 14 NON-VEG meals

What is 'm'?

- (A) 18
 (B) 20
 (C) 24
 (D) 38
93. 20% students of a particular course get jobs within one year of passing. 20% of the remaining students get jobs by end of the second year of passing. If 16 students are still jobless, how many students had passed the course?
 (A) 25
 (B) 50
 (C) 62
 (D) 84
94. How many rectangles (which are not squares) in the following figure?



- (A) 56
 (B) 70
 (C) 80
 (D) 96
95. Water is flowing through a tube as shown below:



- The cross-sectional area of A and C are equal and greater than the cross-sectional area of B. If the flow of water is steady, than the pressure on the walls at B is
 (A) less than that at A and that at C
 (B) more than that at A and that at C
 (C) same as that at A and that at C
 (D) more than that at A but less than that at C

- 96 Processor IC chip was developed by?**
(A) AMD
(B) Intel
(C) DIX
(D) Both (A) and (B)
- 97 If $5472 = 9$, $6342 = 6$, $7584 = 6$. What is 9236?**
(A) 2
(B) 3
(C) 4
(D) 5
- 98 Chipko movement was started by?**
(A) Arundhati Roy
(B) Medha Patkar
(C) Ila Bhatt
(D) Sunder lal Bahuguna
- 99 What is the following is not a natural hazard?**
(A) Earthquake
(B) Tsunami
(C) Flash floods
(D) Nuclear accident
- 100 Which of the following team won the 9th IPL cricket T-20 tournament?**
(A) Kolkata Knight Riders
(B) Sun Risers Hyderabad
(C) Mumbai Indians
(D) Royal Challengers Bangalore