

SET III
M.Sc. Electronics Entrance Key -2025

1	B) The total capacitance decreases.
2	B) To oppose the flow of current.
3	C) Linear circuits with two or more independent sources
4	B) The type of semiconductor material used and its doping.
5	B) Maintain a constant output voltage despite variations in input voltage or load current.
6	A) 2D
7	C) The inputs are different.
8	A) A
9	B) 2 select lines.
10	C) Routes a single input signal to one of several output lines.
11	B) Electrons
12	C) Forward, Reverse
13	B) Maximize power transfer
14	C) Oscillations
15	B) Low-frequency sinusoidal waveforms.
16	c) 10
17	c) JK Flip-Flop
18	a) The reference voltage and resistor values
19	b) Resolution
20	b) Successive Approximation ADC
21	A. 100000
22	B. Weber/Ampere
23	A. 2
24	B. Magnetic Ink Character Recognition
25	B. silicon
26	B) Synchronous Dynamic Random Access Memory
27	C) 12
28	B) 5
29	B) Immediate
30	B) 20H to 2FH
31	B) On different frequency bands
32	B) Aliasing
33	C) Base Transceiver Station
34	B) Converting analog values to a finite number of levels
35	C) 4
36	A) A constant value that is used directly in the instruction
37	A) Data Transfer
38	C) controller's crystal frequency /12
39	b) change a bit of the PCON register
40	c) 0x80
41	C) Displacement
42	b) Prevent the radiation or reception of electromagnetic interference
43	B) Mutual inductance
44	C) Change in resistance due to strain
45	C) Blocks a specific band of frequencies
46	c) Integrated signal processing capabilities
47	c) Magnetic field strength, position, and current
48	d) Integrated circuit temperature sensor
49	b) Mutual inductance
50	A. trans-impedance amplifier

51	d) All of the mentioned
52	c. Current density
53	a. Phase
54	a. Sinusoidal
55	c. Radiated
56	a. D-region
57	b) 0003H
58	c) RI and TI
59	d) INT0 and INT1
60	b) Port 1
61	b) The resolution and sampling rate of the ADC.
62	c) To detect and recover from software malfunctions or hardware glitches that cause the microcontroller to hang.
63	a) Inter-Integrated Circuit
64	a) Master Out Slave In
65	a) One
66	b) Smooths output current
67	a) Output voltage magnitude
68	b) To provide a path for inductive load current
69	c) ON/OFF control of AC power
70	b) SMPS
71	b) Eddy current generation in conductive materials
72	b) To align voltage and current phases
73	c) Electric drive
74	b) Servo control
75	b) Improved precision and efficiency
76	c) A robot must maximize profits
77	b) Higher efficiency and longer lifespan
78	b) Cam
79	a) Voltage-controlled oscillator
80	d) SVC
81	a) Large core diameter & large numerical aperture
82	c) 2.6 to 50 dB km ⁻¹ at wavelength 0.85μm
83	a) 100 to 300 μm
84	b) Higher purity than multimode step index fibers.
85	a) Better than multimode step index fibers
86	a) 62.5 μm/125 μm
87	c) SRAM
88	c) MOVSW
89	d) Performs an unconditional jump to a specified address.
90	c) To enable or disable individual peripheral interrupt sources.
91	c) Both SPI and I ² C modes.
92	a) Timer0
93	b) The ADC clock frequency and the total conversion time per sample.
94	b) no
95	c) Both the input and the output signals.
96	c) Higher accuracy and robustness to disturbances.
97	b) Sensors and switches that provide signals.
98	c) Greater flexibility in modifying control logic.
99	b) A horizontal line representing a logical control circuit.
100	c) Providing time delays in control sequences.