Test Paper : **II**

Test Subject : **ELECTRONIC SCIENCE**

Test Subject Code : **K-3115**

Test Booklet Serial No. : _____

OMR Sheet No. : _____

Roll No. | | | | | | | | |

(Figures as per admission card)

Name & Signature of Invigilator/s

Signature : _____

Name : _____

Paper : II

Subject : ELECTRONIC SCIENCE

Time : 1 Hour 15 Minutes | Maximum Marks : 100

Number of Pages in this Booklet : **8** | Number of Questions in this Booklet : **50**

ಅಭ್ಯರ್ಥಿಗಳಿಗೆ ಸೂಚನೆಗಳು

1. ಈ ಪುಟದ ಮೇಲ್ತುದಿಯಲ್ಲಿ ಒದಗಿಸಿದ ಸ್ಥಳದಲ್ಲಿ ನಿಮ್ಮ ರೋಲ್ ನಂಬರನ್ನು ಬರೆಯಿರಿ.
2. ಈ ಪತ್ರಿಕೆಯು ಬಹು ಆಯ್ಕೆ ವಿಧದ ಐವತ್ತು ಪ್ರಶ್ನೆಗಳನ್ನು ಒಳಗೊಂಡಿದೆ.
3. ಪರೀಕ್ಷೆಯ ಪ್ರಾರಂಭದಲ್ಲಿ, ಪ್ರಶ್ನೆಪುಸ್ತಿಕೆಯನ್ನು ನಿಮಗೆ ನೀಡಲಾಗುವುದು. ಮೊದಲ 5 ನಿಮಿಷಗಳಲ್ಲಿ ನೀವು ಪುಸ್ತಿಕೆಯನ್ನು ತೆರೆಯಲು ಮತ್ತು ಕೆಳಗಿನಂತೆ ಕಡ್ಡಾಯವಾಗಿ ಪರೀಕ್ಷಿಸಲು ಕೋರಲಾಗಿದೆ.
   (i) ಪ್ರಶ್ನೆ ಪುಸ್ತಿಕೆಗೆ ಪ್ರವೇಶಾವಕಾಶ ಪಡೆಯಲು, ಈ ಹೊದಿಕೆ ಪುಟದ ಅಂಚಿನ ಮೇಲಿರುವ ಪೇಪರ್ ಸೀಲನ್ನು ಹರಿಯಿರಿ. ಸ್ಟಿಕ್ಕರ್ ಸೀಲ್ ಇಲ್ಲದ ಅಥವಾ ತೆರೆದ ಪುಸ್ತಿಕೆಯನ್ನು ಸ್ವೀಕರಿಸಬೇಡಿ.
   (ii) **ಪುಸ್ತಿಕೆಯಲ್ಲಿನ ಪ್ರಶ್ನೆಗಳ ಸಂಖ್ಯೆ ಮತ್ತು ಪುಟಗಳ ಸಂಖ್ಯೆಯನ್ನು ಮುಖಪುಟದ ಮೇಲೆ ಮುದ್ರಿಸಿದ ಮಾಹಿತಿಯೊಂದಿಗೆ ತಾಳೆ ನೋಡಿರಿ. ಪುಟಗಳು/ಪ್ರಶ್ನೆಗಳು ಕಾಣೆಯಾದ, ಅಥವಾ ದ್ವಿಪ್ರತಿ ಅಥವಾ ಅನುಕ್ರಮವಾಗಿಲ್ಲದ ಅಥವಾ ಇತರ ಯಾವುದೇ ವ್ಯತ್ಯಾಸದ ದೋಷಪೂರಿತ ಪುಸ್ತಿಕೆಯನ್ನು ಕೂಡಲೆ 5 ನಿಮಿಷದ ಅವಧಿ ಒಳಗೆ, ಸಂವೀಕ್ಷಕರಿಂದ ಸರಿ ಇರುವ ಪುಸ್ತಿಕೆಗೆ ಬದಲಾಯಿಸಿಕೊಳ್ಳಬೇಕು. ಆ ಬಳಿಕ ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆಯನ್ನು ಬದಲಾಯಿಸಲಾಗುವುದಿಲ್ಲ, ಯಾವುದೇ ಹೆಚ್ಚು ಸಮಯವನ್ನೂ ಕೊಡಲಾಗುವುದಿಲ್ಲ.**
4. ಪ್ರತಿಯೊಂದು ಪ್ರಶ್ನೆಗೂ (A), (B), (C) ಮತ್ತು (D) ಎಂದು ಗುರುತಿಸಿದ ನಾಲ್ಕು ಪರ್ಯಾಯ ಉತ್ತರಗಳಿವೆ. ನೀವು ಪ್ರಶ್ನೆಯ ಎದುರು ಸರಿಯಾದ ಉತ್ತರದ ಮೇಲೆ, ಕೆಳಗೆ ಕಾಣಿಸಿದಂತೆ ಅಂಡಾಕೃತಿಯನ್ನು ಕಪ್ಪಾಗಿಸಬೇಕು.
   ಉದಾಹರಣೆ: (A) (B) ● (D)
   (C) ಸರಿಯಾದ ಉತ್ತರವಾಗಿದ್ದಾಗ.
5. ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆ I ರಲ್ಲಿ ಕೊಟ್ಟಿರುವ OMR ಉತ್ತರ ಹಾಳೆಯಲ್ಲಿ, **ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆ I ಮತ್ತು ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆ II ರಲ್ಲಿ ಇರುವ ಪ್ರಶ್ನೆಗಳಿಗೆ ನಿಮ್ಮ ಉತ್ತರಗಳನ್ನು ಸೂಚಿಸತಕ್ಕದ್ದು.** OMR ಉತ್ತರ ಹಾಳೆಯಲ್ಲಿ ಅಂಡಾಕೃತಿಯಲ್ಲದೆ ಬೇರೆ ಯಾವುದೇ ಸ್ಥಳದಲ್ಲಿ ಉತ್ತರವನ್ನು ಗುರುತಿಸಿದರೆ, ಅದರ ಮೌಲ್ಯಮಾಪನ ಮಾಡಲಾಗುವುದಿಲ್ಲ.
6. OMR ಉತ್ತರ ಹಾಳೆಯಲ್ಲಿ ಕೊಟ್ಟ ಸೂಚನೆಗಳನ್ನು ಜಾಗರೂಕತೆಯಿಂದ ಓದಿರಿ.
7. ಎಲ್ಲಾ ಕರಡು ಕೆಲಸವನ್ನು ಪುಸ್ತಿಕೆಯ ಕೊನೆಯಲ್ಲಿ ಮಾಡತಕ್ಕದ್ದು.
8. ನಿಮ್ಮ ಗುರುತನ್ನು ಬಹಿರಂಗಪಡಿಸಬಹುದಾದ ನಿಮ್ಮ ಹೆಸರು ಅಥವಾ ಯಾವುದೇ ಚಿಹ್ನೆಯನ್ನು ಸಂಗತವಾದ ಸ್ಥಳ ಹೊರತು ಪಡಿಸಿ, OMR ಉತ್ತರ ಹಾಳೆಯ ಯಾವುದೇ ಭಾಗದಲ್ಲಿ ಬರೆದರೆ, ನೀವು ಅನರ್ಹತೆಗೆ ಬಾಧ್ಯರಾಗಿರುತ್ತೀರಿ.
9. ಪರೀಕ್ಷೆಯು ಮುಗಿದನಂತರ, ಕಡ್ಡಾಯವಾಗಿ OMR ಉತ್ತರ ಹಾಳೆಯನ್ನು ಸಂವೀಕ್ಷಕರಿಗೆ ನೀವು ಹಿಂತಿರುಗಿಸಬೇಕು ಮತ್ತು ಪರೀಕ್ಷಾ ಕೊಠಡಿಯ ಹೊರಗೆ OMR ನ್ನು ನಿಮ್ಮೊಂದಿಗೆ ಕೊಂಡೊಯ್ಯಕೂಡದು.
10. ಪರೀಕ್ಷೆಯ ನಂತರ, ಪರೀಕ್ಷಾ ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆಯನ್ನು ಮತ್ತು ನಕಲು OMR ಉತ್ತರ ಹಾಳೆಯನ್ನು ನಿಮ್ಮೊಂದಿಗೆ ತೆಗೆದುಕೊಂಡು ಹೋಗಬಹುದು.
11. **ನೀಲಿ/ಕಪ್ಪು ಬಾಲ್‌ಪಾಯಿಂಟ್ ಪೆನ್ ಮಾತ್ರವೇ ಉಪಯೋಗಿಸಿರಿ.**
12. **ಕ್ಯಾಲ್ಕುಲೇಟರ್ ಅಥವಾ ಲಾಗ್ ಟೇಬಲ್ ಇತ್ಯಾದಿಯ ಉಪಯೋಗವನ್ನು ನಿಷೇಧಿಸಲಾಗಿದೆ.**
13. **ಸರಿ ಅಲ್ಲದ ಉತ್ತರಗಳಿಗೆ ಋಣ ಅಂಕ ಇರುವುದಿಲ್ಲ.**
14. **ಕನ್ನಡ ಮತ್ತು ಇಂಗ್ಲೀಷ್ ಆವೃತ್ತಿಗಳ ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆಗಳಲ್ಲಿ ಯಾವುದೇ ರೀತಿಯ ವ್ಯತ್ಯಾಸಗಳು ಕಂಡುಬಂದಲ್ಲಿ, ಇಂಗ್ಲೀಷ್ ಆವೃತ್ತಿಗಳಲ್ಲಿರುವುದೇ ಅಂತಿಮವೆಂದು ಪರಿಗಣಿಸಬೇಕು.**

Instructions for the Candidates

1. Write your roll number in the space provided on the top of this page.
2. This paper consists of fifty multiple-choice type of questions.
3. At the commencement of examination, the question booklet will be given to you. In the first 5 minutes, you are requested to open the booklet and compulsorily examine it as below :
   (i) To have access to the Question Booklet, tear off the paper seal on the edge of the cover page. Do not accept a booklet without sticker seal or open booklet.
   (ii) **Tally the number of pages and number of questions in the booklet with the information printed on the cover page. Faulty booklets due to pages/questions missing or duplicate or not in serial order or any other discrepancy should be got replaced immediately by a correct booklet from the invigilator within the period of 5 minutes. Afterwards, neither the Question Booklet will be replaced nor any extra time will be given.**
4. Each item has four alternative responses marked (A), (B), (C) and (D). You have to darken the oval as indicated below on the correct response against each item.
   Example : (A) (B) ● (D)
   where (C) is the correct response.
5. Your responses to the questions are to be indicated in the **OMR Sheet kept inside the Paper I Booklet only**. If you mark at any place other than in the ovals in the Answer Sheet, it will not be evaluated.
6. Read the instructions given in OMR carefully.
7. Rough Work is to be done in the end of this booklet.
8. If you write your name or put any mark on any part of the OMR Answer Sheet, except for the space allotted for the relevant entries, which may disclose your identity, you will render yourself liable to disqualification.
9. You have to return the test OMR Answer Sheet to the invigilators at the end of the examination compulsorily and must NOT carry it with you outside the Examination Hall.
10. You can take away question booklet and carbon copy of OMR Answer Sheet soon after the examination.
11. **Use only Blue/Black Ball point pen.**
12. **Use of any calculator or log table etc., is prohibited.**
13. **There is no negative marks for incorrect answers.**
14. **In case of any discrepancy found in the Kannada translation of a question booklet the question in English version shall be taken as final.**

ELECTRONIC SCIENCE
Paper – II

Note : This paper contains **fifty (50)** objective type questions. **Each** question carries **two (2)** marks. **All** questions are **compulsory**.

1. If the barrier width and carrier velocity of PN junction diode is 'W' and 'V' respectively, then the classic transit time of diode is given by

(A) $W \times V$ (B) $\frac{V}{W}$ (C) $\frac{W}{V}$ (D) $W + V$

2. In the thermal oxidation process, wafers are placed in fused quartz cassettes that are pushed in to the pre-heated furnace tube at a temperature in the range of
(A) 90°C to 120°C
(B) 160°C to 240°C
(C) 500°C to 800°C
(D) 900°C to 1200°C

3. If Z is the input impedance of a given source, for which of the following load impedance Z_L the power would be maximum.
(A) Z_L (B) Z^* (C) Z (D) Z_L^*

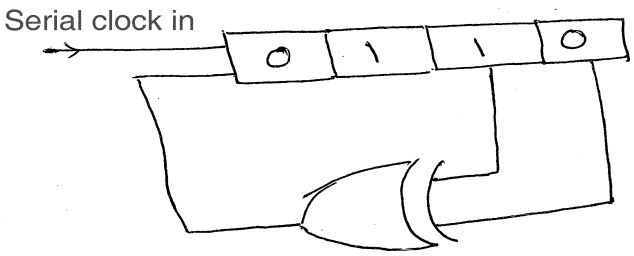
4. The function is said to have simple poles and zeros only if
(A) The poles are repeated
(B) The zeros are repeated
(C) Multiple poles exist at the origin
(D) Both poles and zeros are not repeated

5. R.C. phase shift oscillator will not work until and unless the voltage gain of its amplifier
(A) Slightly greater than 3
(B) Slightly greater than 15
(C) Slightly less than 15
(D) Slightly greater than 29

6. Schmitt trigger is
(A) Amplifier
(B) Buffer
(C) Comparator
(D) Free running oscillator

7. The Boolean expression $\overline{X}Y\overline{Z} + \overline{X}\,\overline{Y}Z + X\overline{Y}Z + XYZ + XY\overline{Z}$ can be simplified to
(A) $XY + \overline{Y}Z + Y\overline{Z}$ (B) $\overline{X}Y + Y\overline{Z} + YZ$
(C) $XZ + \overline{Y}\,\overline{Z} + YZ$ (D) $XY + XZ + YZ$

8. The initial content of 4-bit serial in parallel out right shift register is shown below is 0110. After 3 clock pulses content of shift register will be



(A) 0000 (B) 0101
(C) 1010 (D) 1111

9. The following programme is run on an 8085 microprocessor.

Memory address in Hex	Instruction
2000	L × 1 SP, 1000
2003	PUSH H
2004	PUSH D
2005	CALL 2050
2008	POP B
2009	HLT

After execution of the first instructions of sub-program, the program counter of the 8085 contains _____ and the stack pointer contains _____
(A) 2251, OFFC (B) 2051, OFFC
(C) 1025, OCCF (D) 1025, OFFC

10. The flag register in 8051 is called
(A) Program Counter
(B) Program Status Word
(C) Stack Pointer
(D) Data Pointer

11. In C, executable program is created by
(A) Compiler only
(B) Linker only
(C) Compiler and linker
(D) Editor

12. What is the output of the following program segment ?

```
main ( )
{
   long i = 65536 ;
   print f("%d\n", i)
}
```

(A) 0 (B) 65536
(C) –1 (D) 536

13. Power in the negative resistance device is said to be
(A) Absorbed (B) Constant
(C) Halved (D) Generated

14. Cavity magnetron uses strapping for
(A) Prevent mode jumping
(B) Prevent cathode back heating
(C) Ensure bunching
(D) Improves the phase focussing effect

15. Which type of noise is of great importance at high frequencies ?
(A) Transit time noise
(B) Short noise
(C) Random noise
(D) Impulse noise

16. How many levels of synchronisation is there in TDM ?
(A) One (B) Two (C) Three (D) Zero

17. In 3-phase semiconverter feeding RLE load, for a firing angle delay of 0°, the output voltage of semiconductor would be
(A) Symmetrical four pulse per cycle
(B) Symmetrical 3 pulse per cycle
(C) Symmetrical five pulse per cycle
(D) Symmetrical six pulse per cycle

18. Fibre optics communication offers largest bandwidth in the range of
(A) 10^{10} Hz (B) 10^{13} Hz
(C) 10^{16} Hz (D) 10^{19} Hz

19. pH meter is used for measuring
(A) Humidity
(B) Neutrality of solution
(C) Pollution
(D) Water impurities

20. Routh's array for a system is given below. Calculate the missing term and state which of the following is correct ?

S^4	1	3	5
S^3	1	2	0
S^2	–	–	
S^1	–		
S^0	–		

(A) Stable
(B) Unstable
(C) Marginally stable
(D) Conditionally stable

Directions :

Q. No.(s) **21** to **30** :

The following items consists of two statements, one labelled the "Assertion (A)" and other Reason (R)". You are to examine these two statements carefully and decide if the Assertion (A) and the Reason (R) an individually true and if so, whether the Reason is a correct explanation of the Assertion. Select your answers to these items using the codes given below and mark your answer accordingly :

Codes :

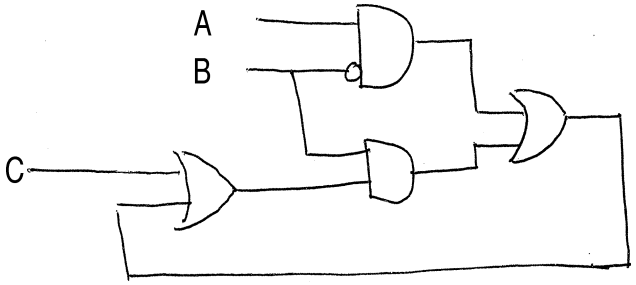
(A) Both (A) and (R) are true and (R) is the correct explanation of (A)
(B) Both (A) and (R) true and (R) is not the correct explanation of (A)
(C) (A) is true but (R) is false
(D) (A) is false but (R) is true

21. **Assertion** (**A**) : Usually covalently bonded materials are used to fabricate solid state devices.
Reason (**R**) : Zener diode works on the principle of breaking covalent bonds.

22. **Assertion** (**A**) : The Kirchhoff's current law states that the sum of currents entering at any node is equal to the sum of currents leaving that node.
Reason (**R**) : The Kirchhoff's current law is based on the law of conservation of charge.

23. **Assertion** (**A**) : Base bias provides the loading of the signal source since, no resistor is employed across base-emitter junction.
Reason (**R**) : Base bias provides poor stabilisation because there is no means to stop a self increase in collector current due to temperature rise.

24. For the circuit for figure below



Assertion (**A**) : The circuit is sequential.
Reason (**R**) : There is a loop in the circuit.

25. **Assertion** (**A**) : After executing DIV CL instructions by 8086, if quotient is greater than FF then 8086 generates divide by zero error.
Reason (**R**) : If divide by zero error occurs 8086 performs type-0 interrupt.

26. **Assertion** (**A**) : OOP Languages gives more emphasis on data rather than procedure as in procedural languages.
Reason (**R**) : Function that are operate on the data of an object are typed together in data structure.

27. **Assertion** (**A**) : The system of propagation in waveguide in accordance to field theory.
Reason (**R**) : The system of propagation in transmission line is in accordance with circuit theory.

28. **Assertion** (**A**) : Indigital carrier modulation scheme, phase-recovery circuit is present in non-coherent techniques.
Reason (**R**) : Phase-recovery circuit ensures faithful recovery of signal/data at the receiver.

29. **Assertion** (**A**) : A number of thyristors operating in parallel can share a common heat sink.
Reason (**R**) : For simultaneous firing of the thyristor, opto isolators may be employed in the gate driving circuit.

30. **Assertion** (**A**) : In the distributed feed back laser diode, a pair of flat, partially reflecting mirrors are directed towards each other.
Reason (**R**) : The purpose of the mirrors is to provide strong optical feedback in longitudinal direction, there by converting the device into an oscillator.

31. Following are the processes involved in voltage controlling.
1) Filtering
2) Protection
3) Rectification
4) Regulation
Arrange these in the correct sequence while controlling voltage.
(A) 3, 1, 4, 2 (B) 3, 1, 2, 4
(C) 3, 2, 1, 4 (D) 1, 3, 4, 2

32. Following are the logic families :
1) TTL
2) ECL
3) NMOS
4) Schottky-TTL
Arrange these logic family in the decreasing order of propagation delay.
(A) 3, 1, 4, 2 (B) 1, 4, 2, 3
(C) 3, 2, 1, 4 (D) 2, 3, 1, 4

33. The interrupts in 8085 processor are :
1) RST 6.5
2) RST 5.5
3) TRAP
4) RSTO
Arrange these interrupts from least priority to highest priority.
(A) 3, 1, 2, 4 (B) 4, 1, 2, 3
(C) 4, 2, 1, 3 (D) 3, 4, 2, 1

34. Following are the EM waves :
1) Red colour light
2) Blue colour light
3) Microwaves
4) X-Rays
Arrange these in the decreasing order of wavelengths.
(A) 2, 4, 3, 1 (B) 1, 3, 2, 4
(C) 3, 1, 4, 2 (D) 3, 1, 2, 4

35. Following are the photodetectors :
1) Photo diode
2) Photo transistor
3) LDR
4) PIN diode
Arrange these in increasing order of photo response.
(A) 1, 2, 3, 4 (B) 2, 3, 1, 4
(C) 3, 2, 1, 4 (D) 4, 3, 1, 2

Directions : Q. No. **36** to **45**

In the following questions, match List – I and List – II and select the correct answer using the codes given below the lists :

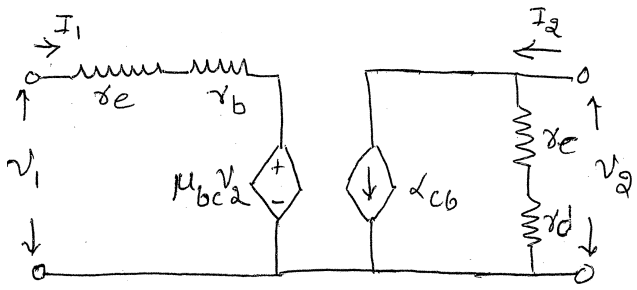
36.

List – I	List – II
a) $V_{BE(cut\ off)}$	i) 0.2
b) V_{BEQ}	ii) 0.6
c) $V_{BE(sat)}$	iii) 0.5
d) $V_{CE(sat)}$	iv) 0.7

Codes :

	a	b	c	d
(A)	iii	iv	ii	i
(B)	i	ii	iii	iv
(C)	iv	ii	iii	i
(D)	iii	ii	iv	i

37. Consider the two port transistor circuit as shown below :



Match List – I (Hybrid parameter) with List – II (Circuit element).

List – I	List – II
a) h_{11}	i) $\frac{1}{r_e + r_d}$
b) h_{12}	ii) $r_b + r_e$
c) h_{21}	iii) μ_{bc}
d) h_{22}	iv) α_{cB}

Codes :

	a	b	c	d
(A)	ii	i	iv	iii
(B)	iv	iii	ii	i
(C)	ii	iii	iv	i
(D)	iv	i	ii	iii

38.

List – I	List – II
a) Voltage series feedback connection	i) Increases input impedance
b) Voltage shunt feedback connection	ii) Decreases the input impedance
c) Current series feedback connection	iii) Increases the output impedance
d) Voltage series feedback connection	iv) Decreases the output impedance

Codes :

	a	b	c	d
(A)	iv	ii	iii	i
(B)	iv	ii	i	iii
(C)	i	iii	iv	ii
(D)	i	ii	iii	iv

39.

List – I (Boolean logic function)	List – II (Inverse of function)
a) ab+bc+ca+abc	i) $\overline{a}(\overline{b}+\overline{c})$
b) $ab+\overline{a}\overline{b}+\overline{c}$	ii) $\overline{a}\overline{b}+\overline{b}\overline{c}+\overline{c}\overline{a}$
c) a+bc	iii) $(a \oplus b)c$
d) $(\overline{a}+\overline{b}+\overline{c})$ $(\overline{a}+\overline{b}+\overline{c})$ $(\overline{a}+\overline{b}+c)$	iv) $abc+\overline{a}bc+ab\overline{c}$

Codes :

	a	b	c	d
(A)	iii	ii	i	iv
(B)	ii	iii	i	iv
(C)	iii	ii	iv	i
(D)	ii	iii	iv	i

40.

List – I	List – II
a) Bidirection with hand shake	i) 8259
b) Interrupt on terminal count	ii) 8255
c) Automatic rotation mode	iii) 8237
d) Burst mode	iv) 8254

Codes :

	a	b	c	d
(A)	iv	i	ii	iii
(B)	iii	iv	i	ii
(C)	ii	iv	i	iii
(D)	ii	i	iv	iii

41.

List – I	List – II
a) Unsigned integer	i) 10 bytes
b) Long	ii) 2 bytes
c) Double	iii) 8 bytes
d) Long double	iv) 4 bytes

Codes :

	a	b	c	d
(A)	ii	iv	iii	i
(B)	ii	iii	iv	i
(C)	iv	iii	i	ii
(D)	iv	i	iii	ii

42.

List – I	List – II
a) Gunn diode	i) Bunching
b) ImPATT	ii) Avalanche Breakdown
c) Klystron	iii) LSA mode
d) Parametric amplifier	iv) Up-converter

Codes :

	a	b	c	d
(A)	iii	ii	iv	i
(B)	iii	ii	i	iv
(C)	ii	iii	iv	i
(D)	ii	iii	i	iv

43.

List – I	List – II
a) Resistance	i) Current noise
b) Diode	ii) Partition noise
c) Triode	iii) Shot noise
d) PN junction	iv) Atmospheric noise
	v) Johnson noise

Codes :

	a	b	c	d
(A)	i	iii	iv	v
(B)	v	iii	ii	iv
(C)	v	iii	ii	i
(D)	i	v	iii	ii

44.

List – I	List – II
a) Hall effect pick up	i) Pressure
b) Piezo electric pick up	ii) Thickness
c) Spirometer	iii) Flow rate
d) Rota meter	iv) Current

Codes :

	a	b	c	d
(A)	iv	i	ii	iii
(B)	i	ii	iv	iii
(C)	iii	ii	iv	i
(D)	i	iv	iii	ii

45.

List – I	List – II
a) Bandwidth	i) Over shoot
b) Phase margin	ii) Stability
c) Response peak	iii) Speed of time response
d) Gain margin	iv) Damping ratio

Codes :

	a	b	c	d
(A)	iii	ii	i	iv
(B)	i	iv	iii	ii
(C)	iii	iv	i	ii
(D)	i	ii	iii	iv

Read the passage below and answer the questions **46** to **50**, that follows based on your understanding of the passage.

Digital Storage Oscilloscopes

There are a number of distinct disadvantages of the storage cathode ray tube. First, there is a finite amount of time that the storage tube can preserve a stored waveform. Eventually, the waveform will be lost. The power to the storage tube must be present as long as the image is to be stored. Second, the trace of a storage tube is, generally, not as fine as a normal cathode ray tube. Thus, the stored trace is not as crisp as a conventional oscilloscope trace. Third, the writing rate of the storage tube is less than a conventional cathode ray tube, which limits the speed of the storage oscilloscope. Fourth, the storage cathode ray tube is considerably more expensive than a conventional tube and requires additional power supplies. Finally, only one image can be stored. If two traces are to be compared, they must be superimposed on the same screen and displayed together.

46. Real time bandwidth in Digital Storage Oscilloscope means
(A) The capability to capture the glitch
(B) The capability to capture repetitive sine wave
(C) To display the minute details of the wave form
(D) To manipulate the signal using DSO math operation

47. The important parameter which decides the performance of DSO is
(A) Number of operations provided on DSO
(B) The speed and A/D converter
(C) The speed of display of DSO
(D) Vertical resolution of DSO

48. Following event is not possible in Analog Scope as compared to DSO.
(A) Pretrigger event
(B) Post trigger event
(C) Resolution increase after the event
(D) Low level signals

49. The best oscilloscope for display of sinusoidal signal from a phase shift oscillator is
(A) DSO
(B) Sampling scope
(C) Screen storage oscilloscope
(D) Analog oscilloscope

50. Which of the following block is not a part of DSO ?
(A) High speed memory
(B) High speed CRT
(C) Attenuator
(D) Sample and Hold Circuit

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Space for Rough Work