பாட்டற் முன்னணி / Model Question Paper 2019-20

கல்வி நிறுவனத்திற்கு / Model Question Paper 2019-20

தீர்வுக்குள்ளூர் / Model Question Paper 2019-20

Vocational Education / Vocational Education

அட்சுருக்கக் குழு / Basic Electronics Engineering

மைய் மருந்து அறிவியல் அக்கால் / Tamil & English version

தேர்வு காலம் : 15 நிமிடங்கள் + 2.30 மணி

Time Allowed : 15 minutes + 2.30 hrs

செயலான விளக்கம் : 1) அக்காலக் குறிப்பிட்டதற்கு கீழ் புவியான் ஒருங்கிணைப்பொருளை அளவுற்றதால்

செயலான விளக்கம் : 2) குறிப்பிட்டதற்கு கீழ் புவியான் ஒருங்கிணைப்பொருளை அளவுற்றதால்

Instructions : 1) Check the question paper for fairness of printing. If there is any lack of fairness, inform the hall supervisor immediately.

2) Only blue or black ink must be used to write and underline. Pencil can be used to draw the diagrams.

பகுதி -1 / PART -1

தேர்வு : 1. அக்காலக் குறிப்பிட்டதற்கு கீழ் புவியான் ஒருங்கிணைப்பொருளை அளவுற்றதால்

(15 x 1=15)

2. குறிப்பிட்டதற்கு கீழ் புவியான் ஒருங்கிணைப்பொருளை அளவுற்றதால்

Note: 1. Answer all the questions.

2. Choose the most appropriate answer from the given alternative and write the answer with the corresponding option code
1. The flip-flop mostly used to construct an IC is ______
   a) RS flip-flop  b) JK flip-flop  c) D flip-flop  d) SR flip-flop

2. Which is not suitable to Boolean theorem?
   a) A . A = A  b) A . 1 = A  c) A + A = A  d) A + 1 = A

3. In TV remote control which type of modulation is used?
   a) Amplitude modulation  b) Frequency modulation  c) Pulse modulation  d) Angular modulation

4. Which is sub colour among the following?
   a) Red  b) Yellow  c) Blue  d) Green

5. In television, time taken for single tracing is ______
   a) 64µs  b) 12µs  c) 54µs  d) 32µs

6. Best example for FDMA type is
   a) Cable TV  b) CCTV  c) LED TV  d) LCD TV
7.  Which is commonly used in Wi-Fi transmission?
   a) UHF band   b) VHF Band   c) SHF & UHF band   d) HF band

8.  The solar cells used in satellites are made up of ______ elements.
   a) Silicon   b) Germanium   c) Copper   d) Aluminium

9.  The expansion of DPI is ______
   a) Dot Per Image   b) Dot Per Inches   c) Dot Per Intensity   d) Diameter Per Inches

10. The frequency range above 20 KHz is called ______.
    a) Ultra cool   b) Ultra sound   c) Low sound   d) Sound

11. The unit of Noise is ______
    a) dBA   b) dB   c) A   d) ohms

12. The aim of connecting a MOSFET at the output of Microcomputer is
    a) To de-activate center tapped transformer
    b) To activate high current devices
    c) To activate low voltage devices
    d) To activate low current devices
13. The supply voltage for the Arduino board is 3.3 V, 5 V, 9 V, or 12 V. At the operating signal, connecting pins in the Arduino board, ______ is received.
   a) 3.3 V  b) 5 V  c) 9 V  d) 12 V

14. MRI belongs to ______ technology.
   a) Ionization  b) Non-ionic  c) Nucleus  d) Radiation

15. Which wave is generated during deep sleep or due to acute brain disease?
   a) Alpha  b) Beta  c) Theta  d) Delta

PART II

Answer any ten questions within 5 sentences (10x3 = 30)

16. How is JK flip-flop better than RS flip-flop?

17. Write down the advantages and disadvantages of yagi antenna

18. What is meant by resolving power in camera tube?

19. What is the purpose of scanning?

20. What is the major difference between GPS and GPRS?
21. Why is hexagonal technology used in cell phone transmission?

22. Write down the applications of Earth observing satellite.

23. What type of sensors are used in smartphones? Why?

24. What is the purpose of audio interface? Explain.

25. What is the purpose of using UPS?

26. Write down a few applications of SMPS.

27. CMOS battery - Explain.

28. Write the applications of Ultra sound scanner.

 PART –III

Answer any five questions not exceeding 1 page each

Question no. 35 is compulsory

29. Why are NAND and NOR gates called universal gates? Explain with example.

30. Explain the Frequency Modulation with neat diagram.
31. Explain Wi-Fi and Hotspot.

32. List out the importance of satellite communication.

33. Write short notes on pixel.

34. How the DC to AC inverter works? Explain.

35. Explain about any two types of printer.

PART IV

Answer both questions in two pages

36. a) Explain the working of JK- flip flop with a neat diagram.

b) Explain the working of LCD TV.

37. a) Explain the technology employed in Theatre Audio System.

b) Explain the four basic working of Computed Tomography.