

2. दहाईतुन नमूने जेव्हा येवढा :-

16

- (+) AND GATE च्या Logical Expression चे Truth Table द्यावे.
- (२) Ohm's Law च्या एकूट सूत्र = $V = IR$ यावरून $R = \frac{V}{I}$ या सूत्राचा उपयोग करावा.
- (३) डेटा स्टोरेज (1) Hard Disc. (2) Floppy Disc.
- (४) डेटा ट्रान्समिशन (1) Modulation (2) Demodulation चे एकूट सूत्र द्यावे.

3. दहाईतुन नमूने जेव्हा येवढा :-

16

- (+) LED व LCD यांचा उपयोग करून एकूट सूत्र द्यावे.
- (२) Mobile मध्ये लागणाऱ्या वेगवेगळ्या Battery च्या एकूट सूत्र, त्यांचे Properties द्यावे.
- (३) Silicon च्या Atomic Structure यावरून त्याचे एकूट सूत्र द्यावे.
- (४) Transformer च्या एकूट सूत्र ? त्याचे एकूट सूत्र द्यावे ? त्याचे एकूट सूत्र द्यावे.

4. दहाईतुन नमूने जेव्हा येवढा :-

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- (+) एकूट सूत्र द्यावे :-
(1) Conductor (2) Insulator
(3) Semi-conductor (4) Magnetic Material.
- (२) L.E.D. च्या एकूट सूत्र द्यावे.
- (३) PNP Transistor च्या एकूट सूत्र द्यावे.
- (४) Soldering व Desoldering च्या वेळी आवश्यक लागणाऱ्या सामानाची यादी द्यावे.

5. दहाईतुन नमूने जेव्हा येवढा :-

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- (+) Land Line Phone व Mobile Phone यांचा उपयोग करून एकूट सूत्र द्यावे.
- (२) Fiber Optic Cable च्या एकूट सूत्र द्यावे.
- (३) μ च्या एकूट सूत्र द्यावे.
- (४) ROM च्या एकूट सूत्र द्यावे.
- (५) Fix Resistor च्या एकूट सूत्र द्यावे.

6. दहाईतुन नमूने जेव्हा येवढा :-

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- (+) EPBA च्या एकूट सूत्र द्यावे.
- (२) CDMA व GSM यांचा उपयोग करून एकूट सूत्र द्यावे.
- (३) Mobile मध्ये एकूट सूत्र द्यावे.

(ENGLISH)

[TIME ALLOWED — 3 HOURS]

(MARKS — 100)

FUNDAMENTAL OF ELECTRONICS AND MOBILE PHONE TECHNOLOGY (THEORY-I)*Instructions.—*(1) All question are *compulsory*(2) Illustrate your answers with neat sketches, wherever *necessary*.**Marks**1. (A) Fill in the blanks (any *five*) :—

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(i) The base of Octal No. is

(a) 0.2

(b) 0.8

(c) 10

(d) 16

(ii) Tungsten is used

(a) As Insulator

(b) As Conductive

(c) As Resistive

(d) None of these.

(iii) Diode is a device which connect

(a) A.C. to D.C.

(b) D.C. to A.C.

(c) Both

(d) Amplifier.

(iv) G.P.R.S. technique are used in mobile for

(a) Internet

(b) Video Conference

(c) Both

(d) Bluetooth.

(v) Electrolytic Capacitor used in filter cable for

(a) Filtration

(b) Rectification

(c) Amplification

(d) None of these.

(vi) S.M.S. technology are used

(a) For short distance

(b) Long distance

(c) Both

(d) None of these.

(B) State whether *true* or *false* (any *five*) :—

5

(i) Transformer work on the principle of Mutual Induction.

(ii) IC-8085 is used in Sound Section.

(iii) The unit of resistance is

(iv) In AND GATE a input logic is one and o/p. logic will be one.

(v) The base (Redix) of Binary Number is sixteen.

(vi) D.V.D. is also called Digital Versatile Disk.

(C) State long forms:—

5

(i) L.E.D. (ii) R.A.M. (iii) A.L.U.

(iv) C.D.M.A. (v) F.M. (vi) S.T.D.

[Turn over

(D) Match the following pairs :—

5

“ A ” Column

“ B ” Column

(i) W.A.P.

(a) Insulator

(ii) Bluetooth

(b) Used for short distance

(iii) Transformer

(c) Used for Internet

(iv) Resistance

(d) Decrease the Current

(v) Mica

(e) Decrease the Voltage.

2. Attempt the following questions (any *two*) :—

16

(a) Draw the logical symbol, truth table of AND gate.

(b) Explain the Ohm's Law, with help of a suitable example.

(c) Write a note on Hard disk and Floppy disk.

(d) Write a note on modulation and de-modulation with their waveform.

3. Attempt the following questions (any *two*) :—

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(a) Differentiate between the LED and LCD Display.

(b) Types of batteries used in Mobile and explain the Lithium Ion properties.

(c) Construct-atomic structure of Silicon and explain it.

(d) What is the transformer, types of transformer and explain anyone of them.

4. Attempt the following questions (any *two*) :—

16

(a) Write a short notes on,——

(i) Conductor

(ii) Insulator

(iii) Semi-conductor.

(b) Draw the Construction of LED and explain.

(c) Explain the working of P.N.P. transistor and sign of P.N.P. Transistor.

(d) What are the essential materials and equipment is required for soldering and de-soldering. Make the list.

5. Attempt the following questions (any *four*) :—

16

(a) Difference between the Landline Phone and Mobile Phone.

(b) Write down the application (use) of Fiber Optic Cable.

(c) Write a short note on bluetooth and S.M.S.

(d) Write a short note on Read only memory.

(e) What are fixed resistors ? Name the different types of fixed resistor.

6. Attempt the following questions (any *two*) :—

16

(a) What are the advantages and dis-advantages of EPBA ?

(b) Difference between the CDMA and GSM.

(c) What are the precautions is to be taken before repairing of mobile ?

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