

MAHARASHTRA STATE BOARD OF VOCATIONAL EXAMINATIONS, MUMBAI

Examination, July 2014

CERTIFICATE COURSE IN REPAIRING AND SERVICING OF RADIO
AND LCD / LED T.V.

[ἑῶν—3 ἰεῖοῖ]

(BEÜÉ NÜÉ—100)

[illegible]
$${}^{\circ}\text{E}^{\circ}\text{E}^{\circ}\text{E}^{\circ} - {}^{\circ}\text{E}^{\circ}\text{E}^{\circ} \mid \text{E}^{\circ}\text{E}^{\circ} \text{ } {}^{\circ}\text{E}^{\circ}\text{E}^{\circ}\text{E}^{\circ}\text{E}^{\circ} + \text{E}^{\circ}\text{E}^{\circ}\text{E}^{\circ}\text{E}^{\circ}$$
NĪĒ

1. (+) $\hat{E}^{\otimes \frac{n}{2}} E^{n-\frac{n}{2}}$ VÉLEMÉNY $E^{\otimes \frac{n}{2}} (E^{\otimes \frac{n}{2}})^{\frac{n-1}{2}}$ nŕt :—

10

- [illegible]

[illegible]

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- (1) $B \pm f. \circ f_0. b \hat{\theta}$
- (2) $B_j \hat{\theta}. B \ddot{f}$
- (3) $\circ f_0. \circ f_0.] \hat{\theta}. \frac{1}{2} \hat{\theta}$
- (4) $B \pm f. < \zeta b \hat{\theta}$
- (5) $\{ f_0. B. B \pm f.$
- (6) $B \circ f. < \zeta \circ f_0. B. B \ddot{f}$
- (7) $b \hat{\theta}.] \hat{\theta}. B S f.$
- (8) $B \pm f. B x f. \ddot{f}_0$
- (9) $B \circ f. B \circ f. \ddot{f}_0$
- (10) $] \hat{\theta}. \frac{1}{2} \hat{\theta}. + \hat{f}^{\otimes} u + \hat{f} a$
- (11) $B. V f_0. \circ f_0$

2. JEE+EO+EE(EEO EOEIEE) nME JEXE OEEbEE :- 16
- (+) OEEu 1/2 bE<EE Eb+Ea EOE 1/2 SEE EEEO bEOEE E EOE E EESa EEE EO.
- (E) EEB=EEEXEO +E EOEEOIE E+V.
- (EO) {EO.B. EOE} OEE EEEO bEOEE E EOE E EESa EEE EO.
3. JEE+EO+EE JEXEEO =KEE E+V (EOEIEE) nME :- 16
- (+) Eb+Ea Ea 1/2 JEE(EEXESa JEEEO EEE EO.
- (E) +I{+E} bE: EEB=EEEXE +EE EEO EaEO EEB=EEEXE EEO+E ; OEO E+V.
- (EO) EOEu J. 1/2 SEE EEEO bEOEE E EOE.
4. IEEEOEEI =KEE E+V (EOEIEE) nME :- 16
- (+) EEOE EO EOEEXESa ; aEna +EE EEO E+V.
- (E) {EEZE E J. 1/2. EEXE} OEE EOE E+V.
- (EO) OE{+EOE +EE C EX} EOEEXE E+OEE EEE EEE EO.
5. IEEEOEEI EJE E+V (EOEIEE) SEE :- 16
- (+) B+E. OEO. bE. J. 1/2.
- (E) bE. J. O. SEE. EOE EOE
- (EO) 1/2 bE; OEEEXE J. 1/2.
- (b) +K EEE
- (<) EOEu J. 1/2. Ea 1/2 Eb+Ea OEEEXE
6. EOEIEE nME JEXE OEEbEE :- 16
- (+) JJE E EEO 1/2 EEE EOE ? EES E 1/2 -j aEbaEOJ (Hi-Fi) EE>EO{EOEO EOE EOE EOE =EE EEE EEE.
- (E) B+E.<EbE. J. 1/2. E B+E. OEO. bE. J. 1/2. EEO+E ; OEO OE EJE EO.
- (EO) {EO.B. EOE} OEE EEEO bEOEE E EOE E OE EEO.

(ENGLISH)

[TIME ALLOWED — 3 HOURS]

(MARKS — 100)

**REPAIRING AND MAINTENANCE OF RADIO
AND LCD / LED TV (THEORY-II)**

Instruction.— All questions are compulsory.

- | | Marks |
|--|-----------------|
| 1. (a) Fill in the blanks (any <i>ten</i>) :— | 10 |
| (i) The line frequency of T.V. system in India is Hz. | |
| (ii) The standard aspect ratio of T.V. raster is | |
| (iii) The standard IF of AM radio receiver is | |
| (iv) The unit of loudness is | |
| (v) In FM. frequency deviation is proportion to of modulating signals. | |
| (vi) In superhetrodyne receiver the IF signal is rectified by circuit. | |
| (vii) Frequencies in the UHF range propagate by means of waves. | |
| (viii) PAM is the example of communication. | |
| (ix) Antenna converts electric signals into waves. | |
| (x) In colour T.V. frequency of chrominance signal is MHz. | |
| (xi), and are primary colours in colour T.V. | |
| (b) Give long form of following (any <i>ten</i>) :— | 10 |
| (i) L.C.D. | (ii) F.M. |
| (iii) C.C.T.V. | (iv) L.E.D. |
| (v) P.A.L. | (vi) S.E.C.A.M. |
| (vii) D.T.H. | (viii) L.N.B. |
| (ix) S.S.B. | (x) T.V.R.O. |
| (xi) A.G.C. | |
| 2. Attempt any <i>two</i> of the following :— | 16 |
| (a) Draw the block diagram of super heterodyne radio receiver and explain its working. | |
| (b) Explain necessity of modulation. | |
| (c) Explain the working PA system with block diagram. | |

[Turn over]

3. Answer the following (any *two*) :— 16
- (a) Explain types of radio wave propagation.
 - (b) Differentiate between Amplitude Modulation and Frequency Modulation.
 - (c) Draw the block diagram of Colour T.V. receiver.
4. Answer in brief (any *two*) :— 16
- (a) List advantages and dis-advantages of Digital communication.
 - (b) Explain the working of Plasma T.V. monitor.
 - (c) Explain sampling and quantization theory.
5. Write short notes (any *four*) :— 16
- (a) L.C.D. T.V.
 - (b) D.T.H. system.
 - (c) Hi-definition T.V.
 - (d) Antenna.
 - (e) Video section of colour T.V.
6. Attempt any *two* of the following :— 16
- (a) What is woofer and tweeter ? Explain there use in Hi-fidelity loud speaker system.
 - (b) Differentiate between L.E.D. T.V. and L.C.D. T.V.
 - (c) Draw and Explain black diagram of a P.A. system.
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