

QP Code : 28881

(3 Hours)

[Total Marks : 100

- N. B. : (1) Question No.1 is compulsory.
 (2) Attempt any **four** questions out of remaining **six** questions.
 (3) **Figure to right** indicate **full** marks.
 (4) Assume **suitable** data whenever **required**.

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|----|--|----|
| 1. | (a) Explain inverting Schmitt trigger. | 5 |
| | (b) Explain antilog amplifier. | 5 |
| | (c) Explain FPGA. | 5 |
| | (d) Differentiate between Moore and Melay circuit. | 5 |
| 2. | (a) With neat diagram explain 'two techniques of A to D conversion. | 10 |
| | (b) Draw and explain the block diagram of IC 810 audio power amplifier in detail. | 10 |
| 3. | (a) What is Instrumentation amplifier, explain it with three opamp, and write down advantages and disadvantages of it. | 10 |
| | (b) Explain opamp as voltage to current converter and mention the application of V-I converter. | 10 |
| 4. | (a) Explain Monostable multivibrator using IC 555 with the internal circuit diagram of IC 555, draw the wave form. Calculate the value of R and C for pulse width of 20 ms | 10 |
| | (b) What are the performance parameters of DAC. Explain anyone technique of DAC. | 10 |
| 5. | (a) Draw the internal block diagram IC XR 2206 and explain it. | 10 |
| | (b) Draw the ckt of basic integrator using op-amp. Find expression for output voltage. Explain disadvantage of basic integrator. | 10 |
| 6. | (a) Obtain the transfer function for KRC low pass filter and draw the circuit. Calculate the component value if $f_0 = 2 \text{ kHz}$. and $Q = 4$. | 10 |
| | (b) Explain VCO IC 566 and its features. | 10 |
| 7. | Write short notes on (any three) :- | 20 |
| | (a) Explain current amplifier with grounded load. | |
| | (b) Explain the following term in relation to PLL: | |
| | (i) Lock range (ii) Capture range | |
| | (c) Compare active filter and passive filter. | |

Course: S.E. (SEM. IV) (REV. - 2007) (E&TC ENGG.) (Prog-T1414)

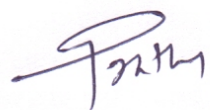
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question no 07 ...

instead of any three it is any two

Date and Time 19/05/2016 04:51 PM

NO student of EXTCC(Old)



(P.P. Gawade)

S. Supervisor.

19/05/2016, 5:10 pm