

711 Minor 2 10 OCT 2016 Max marks 20 Max Time 1 hour

Answer all questions. Be to the point and draw neat diagrams and waveforms where asked

- Q1 Explain with help of block diagram working of synchronous detector. Explain (a) function of each module / block used, (b) waveforms at input and output of each module and the whole detector (c) reasons giving suitable example of waveforms, why it has robust noise rejection (2+2+2+2)
- Q2 Explain (a) working of half wave ~~synchronous detector~~ <sup>precision rectifier</sup> with help of (b) using circuit diagrams for positive and negative inputs, (c) waveforms at input and output in each case (d) Reason why it has ~~good~~ poor noise rejection capability compared to synchronous detector (2+2+2+2)
- Q3. Explain why resonance based detection sensors can have higher dynamic range than amplitude based sensors (2+2)