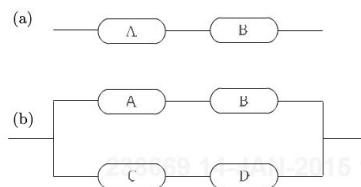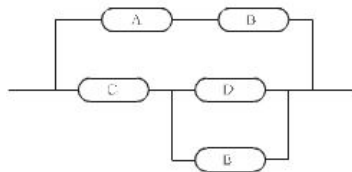1,A computer program is tested by 3 independent tests. When there is an error, these tests will discover it with probabilities 0.2, 0.3, and 0.5, respectively. Suppose that the program contains an error. What is the probability that it will be found by at least one test?

2. A new computer virus can enter the system through e-mail or through the internet. There is a 30% chance of receiving this virus through e-mail. There is a 40% chance of receiving it through the internet. Also, the virus enters the system simultaneously through e-mail and the internet with probability 0.15. What is the probability that the virus does not enter the system at all?

3.Compute system reliability for each a) and b) if each section fail with probability .2

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4. Find reliability of above diagram if each component work with probability p.

5.Three highways connect city A with city B. Two highways connect city B with city C. During a rush hour, each highway is blocked by a trac accident with probability 0.2, independently of other highways. (a) Compute the probability that there is at least one open route from A to C. (b) How will a new highway, also blocked with probability 0.2 independently of other highways, change the probability in (a) if it is built

6.A computer maker receives parts from three suppliers, S1, S2, and S3. Fifty percent come from S1, twenty percent from S2, and thirty percent from S3. Among all the parts supplied by S1, 5% are defective. For S2 and S3, the portion of defective parts is 3% and 6%, respectively. (a) What portion of all the parts is defective? (b) A customer complains that a certain part in her recently purchased computer is de- fective. What is the probability that it was supplied by S1?

7.A computer maker receives parts from three suppliers, S1, S2, and S3. Fifty percent come from S1, twenty percent from S2, and thirty percent from S3. Among all the parts supplied by S1, 5% are defective. For S2 and S3, the portion of defective parts is 3% and 6%, respectively. (a) What portion of all the parts is defective? (b) A customer complains that a certain part in her recently purchased computer is de- fective. What is the probability that it was supplied by S1?