Network Signals & System
Quiz 2
Spring 2023

Read questions carefully.

- Write your Roll Number neatly on top right of your each answer sheet. Put page numbers.
- State clearly any assumptions (if you are making one) and its reason in the answer.
- Plagiarism/cheating, **use of electronic devices and/or communication apps/devices is prohibited.** You can use only Moodle announcements for communication during the exam hour.
- Answer to the point.
- You have 50 minutes to complete the exam.
- List any assumptions clearly.
- Show all your work

1. In the figure 1 given below, I_L is a load current (current drawn by the load). What will be the value of load current I_L for which power absorbed by load is maximum. [20]

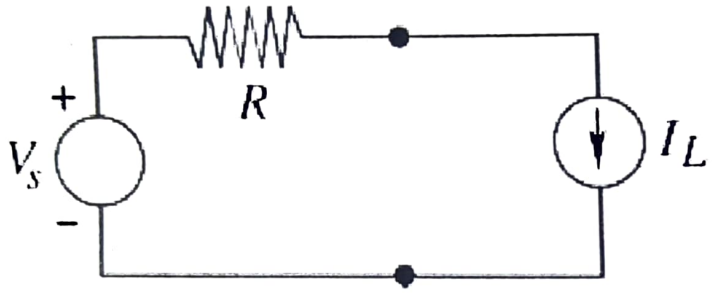

Figure 1

2. For (Figure 2)

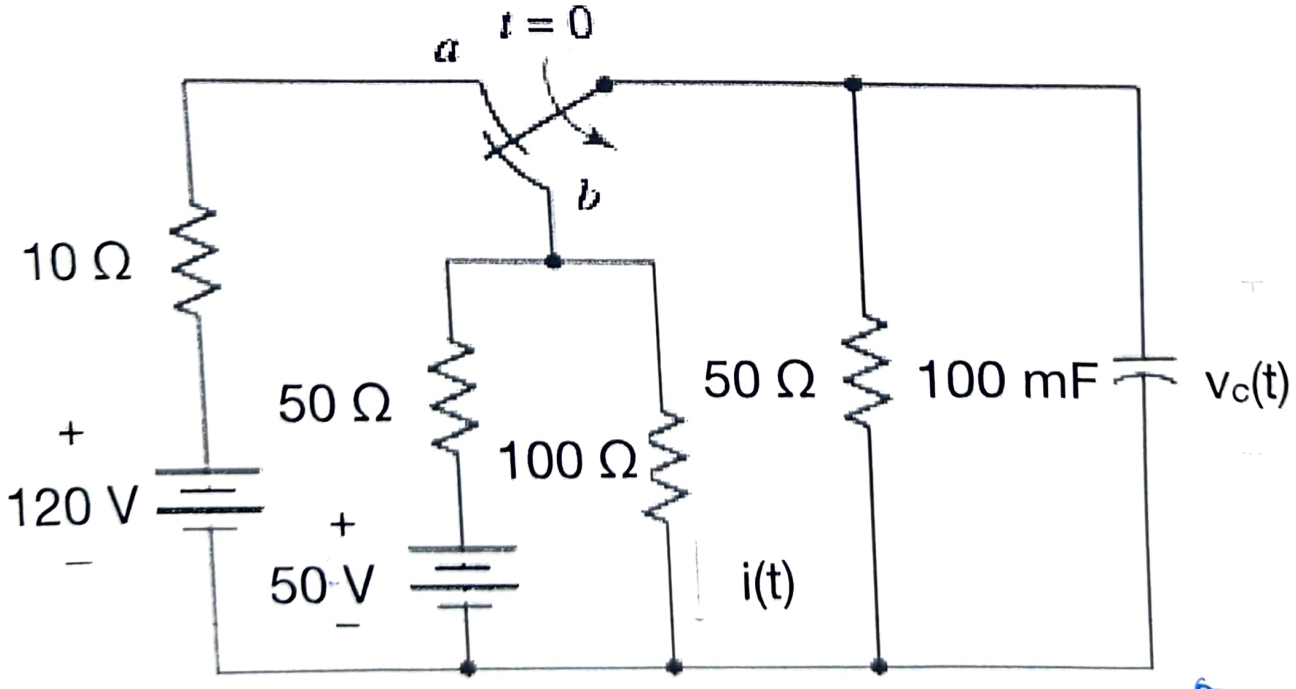

Figure 2

20×1/20

2. For figure 2, find the
(a) time constant of the circuit given; [10]
(b) find i(t) (current through 100 Ω); Identify the natural & forced response. [25]

3. For circuit in figure 3,
Find α (alpha) [5], ω_0 [5], I(t) [25]

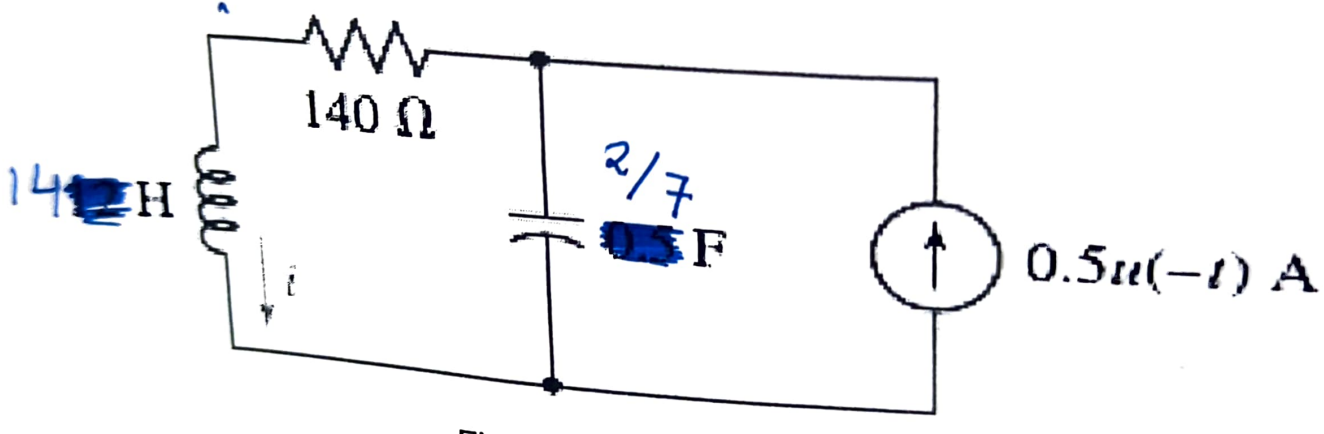

Figure 3