



**School of Computer Science and Engineering**  
**Fall Semester, CAT II Exam -2018**

|              |                                  |            |                |
|--------------|----------------------------------|------------|----------------|
| Course       | : B.Tech (Common to all batches) | Slot       | : C1+TC1       |
| Subject      | : Human Computer Interaction     | Year       | : II, III & IV |
| Subject Code | : CSE4015                        |            |                |
| Duration     | : 90 Minutes                     | Max. Marks | : 50           |

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**Answer All the Questions**

1. Consider a scenario of deleting a file and its interactions in word processor.
  - a. Suggest any two different methods of accomplishing the same. [2 Marks]
  - b. For each method, provide the action sequence, operator sequence and total time of execution. [7 Marks]
  - c. Determine the efficient method based on the calculator execution time. [1 Mark]

Operator Details are :

- K- Press a key or button---- 0.28s
- P- Point with mouse--- 1.10s
- B- Mouse button--- 0.20s
- H- Home hands to keyboard or peripheral device--- 0.4s
- D- Draw line segments---  $0.9 \times \# \text{ of segments} + 0.16 \text{ total length in cm}$
- M- Mental preparation--- 1.35s
- R- System response--- Depends on the system

2.
  - a. Create a GOMS description for the Scenario given in Q.No.1 [5 Marks]
  - b. Explore any 2 limitations of KLM addressed in GOMS. [2 Marks]
  - c. Construct a NGOMSL for any one of the proposed solution in Q.No.1. [3 Marks]
3. Consider the login process of the student email. If the credentials are valid, the user will be able to access the account. But if the user forgets the password, he /she can click the forget password option which will lead to the following sequence of events. User is asked to enter ID or email address on clicking next user is asked to enter bar code on his/her Id card. On clicking next, the text message will be sent to the user which contains the password reset code. The user has to enter the password reset code received, new password and confirm new password by reentering. On clicking it, it goes to the login page for a new login.
  - a. Model the scenario using State Transition Network [6 Marks]
  - b. Create a Petrinet model for the given scenario. [6 Marks]

7. Steeve enters the shortcut digit for his friend.
8. The digit appears on the phone display
9. Steeve presses 'YES'
10. The phone display says 'calling'

a. Draw a JSD for the below specification:

Link: <https://vtopbeta.vit.ac.in/vtop/>

- If the credentials are valid, the user will be able to access the account
- But if the user forgets the password he/she can click "forgot" which will lead to the following chain of events( Ignore other options on the page)
- User is asked to enter id number or email address. On clicking next,
- User is asked to enter OTP /barcode on his/her id card.
- On clicking next, a text message will be sent to user, which contains the password reset code. User has to enter the password reset code received, new password and confirm new password by re-entering it.
- On clicking next, it goes to login page for new login

[5 Marks]

b. Design the Petri net model for q.no. 3.

[5 Marks]

Assume that you are a part of editing a Movie from a remote place. The crew members are present in different parts of the world. As an editor, the process has to be carried out in the presence of all the crew members. Suggest a suitable mechanism for having the discussion to carry out the process smoothly with the help of a computer mediated communication system. (hint: Highlight the features you would incorporate to handle the entire process effectively).

[10 Marks]

\*\*\*\* All the best \*\*\*\*