Total No of Questions: 4 **SEAT No**

[Total no. of Pages :2]

SEPT-2022/UNIT TEST

B.E. (Computer Engineering)

ELECTIVE-III

OBJECT ORIENTED MODELING AND DESIGN

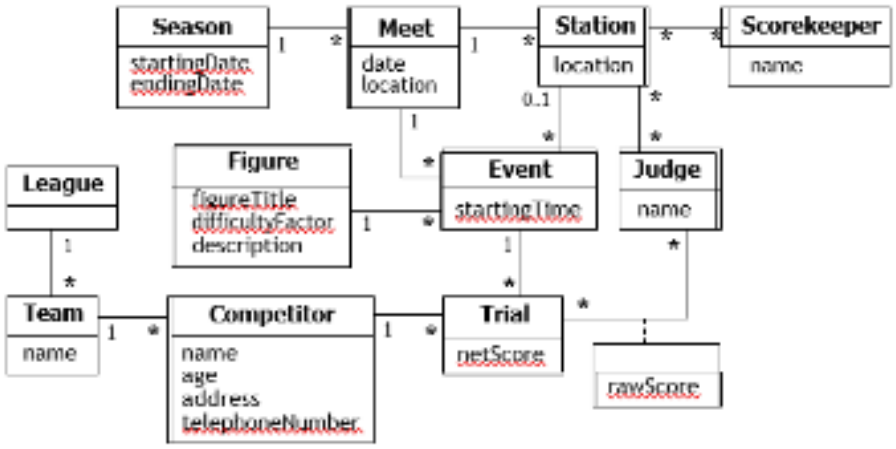
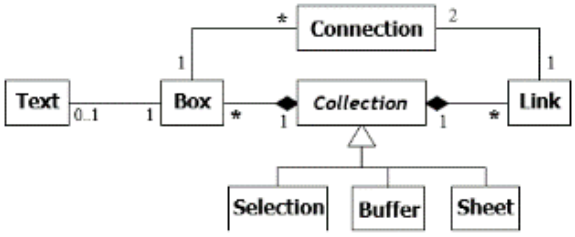
(2019 Pattern) (Semester - I) (410244(D) **Date:07.11.2022**

Time : 2.5 Hour ***Max. Marks: 70***

Instructions to the candidates:

1. ***Q1 ,Q2,Q3,Q4 are Compulsory.***
2. ***Figures to the right indicate full marks.***
3. ***Assume suitable data wherever necessary.***
4. ***Draw Neat diagrams wherever necessary.***

Q1.	a) Give the activity diagram for computation of percentage of marks and report card generation in an assessment system. State you assumptions.	**[8]** Apply
	b) Draw a state diagram for a fax machine and show entry, exit and do behavior. Initially, the machine is in the idle state. It displays the date and time in this state. When the user dials a fax number, the machine remains in the idle state till the number dialing is complete. After the number is completely dialed, it goes into the faxing state. Being in this state, it prints the fax on the page, it pulls the page out, it paginates, puts a date, time and owner stamp at the end of the fax message which it prints. After the fax printing is complete, it goes back to idle state.	**[7]** Evaluate
	c) Give the usecase diagram for sports event management system with descriptions of usecase and actors identified	**[10]** Apply
Q2.	a) Write Steps for constructing an application interaction model for ATM System System	**[4]** Create
	b)Write a note on Making a Reuse Plan from the context of system design.	**[4]** Understand
Q3.	a) Prepare pseudocode for the following operations to classes in Figure E12.4. You will need to add a many-to-many association Registered For between a set of Events and an ordered list of Competitors to track who is	**[10]** Analyse

	registered for which Events. Use the registration order in scheduling trials. a. (3) Find the event for a figure and meet. b. (3) Register a competitor for an event. c. (3) Register a competitor for all events at a meet. d. (5) Select and schedule events for a meet. e. (3) Schedule meets in a season. f. (4) Assign judges and scorekeepers to stations.  **Figure E12.4 Partially completed class diagram for a scoring system**	
	b)With the help of Example explain fine tuning of Generalization.	**[4]** Understand
	c)Implement each association in Figure E12.3. Use one-way pointers wherever possible. Should any of the association ends be ordered? Explain your answers.  **Figure E12.3 Alternative partially completed class diagram for a diagram editor**	**[10]** Apply
Q4.	a) Discuss Forwarder – Receiver design pattern structure with the help of suitable diagram.	**[6]** Understand
	b) Enlist components of Publisher-Subscriber design Pattern with suitable diagram	**[7]** Remember