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MCS-219

MASTER OF COMPUTER APPLICATIONS (MCA) (NEW)

Term-End Examination

June, 2023

MCS-219 : OBJECT ORIENTED ANALYSIS AND DESIGN

Time : 3 Hours *Maximum Marks : 100*

Note : *(i) Question* ***No. 1*** *is compulsory and carries 40 marks.*

(ii) Attempt any ***three*** *questions from the rest.*

1. (a) An online admission system of a University provides facility to its prospective learner to apply for various UG and PG courses. During the application process applicants need to provide their basic details such as name, date of birth, mobile number, email-id and address. Also they need to upload

their certificates for which system provides proper instructions and interfaces. Subsequent upon processing the applications received, university displays the list of selected candidates and also send them email regarding their selection. Applicants pay the fee online and their id cards are generated. Draw the following diagrams for this system. (You can make necessary assumptions, if required) :

(i) Use case diagram 5

(ii) Class diagram 5

(iii) Sequence diagram 5

(iv) State diagram 5

(b) What is DFD ? Draw upto level 1 DFD for the system described in Q1(a) above. 10

(c) What is generalization ? Explain how generalization is different from aggregation with the help of class diagram for 'Computer System'. 10

2. (a) Explain the concepts of links and association with the help of example. Also, discuss how associations are implemented. 10

   (b) What is activity diagram ? Draw activity diagram for online shopping of mobile charger. 10

3. (a) What is deployment diagram ? What are components of deployment diagram ? Draw deployment diagram for "Online Admission System of a University". 10

   (b) What is object diagram ? Draw and explain object diagram for Saving Accounts in a Bank. 10

4. (a) What is concurrency control ? Explain need of concurrency control in a system with the help of an example. 10

   (b) Explain need of inheritance adjustment in designing of a system with the help of an example. 10

5. Write short notes on the following : 4×5=20

   (a) Use of object ID

   (b) Design Documentation

   (c) Meta Data and Keys

   (d) Basic philosophy of object orientation