

**United International University (UIU)**

**Dept. of Computer Science & Engineering (CSE)**

Mid Term Exam Trimester: Spring 2016 Marks: 30 Time: 1 hr 40 mins

Course Code: CSI 311 Course Title: System Analysis & Design

Answer the following questions:

1. Consider the following scenario:

“The purpose is to buy a selected Food items through online. Initially a registered customer needs to select order the desired foods as par choice. One can select the foods according to its price range and different category or name of the restaurant. Therefore he/she needs to entry the selected product/s into the shopping cart. The shopping cart will calculate the total cost including shipping costs. Therefore one needs to pay the amount through his/her credit/debit card or any online payment method. The payment will be handled by the API (Application Protocol Interface) supplied from the visa card/ master card/ pay-pal/ SSL commerz authority. After completing the payment a thanks-giving screen will be displayed to greet the buyer. All the transaction detail (both technical specification in inventory and financial) will be stored in database for future references. If the customer is not registered then he/she needs to sign up in the system providing email, phone number, and residential address and those are stored in the database otherwise login to enter in the process”

i. Draw the activity diagram for the above scenario. 2

ii. Write down the major rules of DFD? Draw DFD for the above scenario, showing major processes, external entities and tentative files for the scenario. 2+3

iii. Draw the use case diagram write down their descriptive forms (maximum two use cases.) 1+4g

iv. Draw Context Diagram of it. 2

2. a) What is system. Mention the major objectives when you do a system study. 2

b) Write down the major guidelines to conduct an effective interview. 2

c) Shortly brief on the major types of feasibility? Suppose you want to do IT outsourcing in the global market, analyze your own SWOT analysis. 2+2

3. a) Show and briefly describe on prototyping SDLC. Mention two benefits of questionnaire approach in collecting information about a system. 2+1

b) Mention two major features of each Expert System and SCM softwares. 2

c) Mention the major steps for determining the best candidate system, consider the scenario for developing a ERP software for any garments industry. 3

2. a) Write down the golden rules of UI design with short briefings. 3

b) Suppose to develop a software firm you need to invest $3000, $5000, and $6000 at present, after 2 years, and after 3 years respectively. In return, you will get return $1000, $4000, $5000 and $10000 after 1, 2, 3, and 6 years respectively. (consider bank interest = 15% per year).

i) Determine whether it is a profitable or loss project using Net Present Value method. 3

ii) Show the cash flow of this project also. 2

Answer the following questions:

1. Consider the following scenario for “MyEventPlanning.com” site:

“The purpose is to buy some paid or free tickets for different events. One can not only buy tickets but also can do self-schedule in it. The scheduler can inform him/her before the events as per someone’s setting. To do this a person needs to do sign-up first providing name, mobile number and address. Other than signup one can only allowed to visit the site but cannot do above mentioned activities. The event selection is possible as per date, time, type or price ranges. After selecting the event one needs to pay or book in free. If any payment error happens, it needs to restart the session again. Therefore he/she receives the e-ticket or e-reservation slip. Thus the event enters into one’s scheduler. For each event one can setup his alarm/acknowledge setting as per one’s wishes. The initial sign-up information is stored *in Members\_list* file and the detail info about events including alarms are stored in the *EventDetail\_list* file”.

1. Draw context diagram and Level 0 DFD for the above scenario. Write down the major rules of DFD? 3+2
2. Define include and extend in Use Case diagram. Draw Use case diagram and write down the use case descriptive forms (for major two use cases). 1+4
3. a) Define system? Show two examples of system organograms. 2

b) Write down the major guidelines to conduct an effective interview. 2

c) Draw and mention the key feature of Prototyping SDLC approach. 2

d) Shortly brief on the major types of feasibility? Suppose you want to do IT outsourcing in the global market, analyze your own SWOT analysis. 2+2

1. a) Mention the major types of information about a system. Show the different level of skills required in the different steps of SDLC. 1+2

b) Mention two major features of each DSS and CRM softwares. 2

c) Mention the major heads usually enclosed in a feasibility report. Write down the oral representation guidelines of a feasibility report. 2+3