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KATHMANDU UNIVERSITY
End Semester Examination
August/September, 2017

AUG 2 7 2017

Level : B. E./B. Sc.
Year : III
Course : COMP 302
Semester : II
Exam Roll No. :
Time: 30 min
F. M. : 10
Registration No.:
Date :

SECTION "A"
[20 Q × 0.5 = 10 marks]

Tick [√] the most appropriate answer from the given choice.

1. Data store in a DFD represents_____
[ ] a sequential file
[ ] a repository of data
[ ] a disk store
[ ] a random access memory

2. ..... system consists of programs, data files and documentation.
[ ] Conceptual
[ ] Physical
[ ] Logical
[ ] None of the above

3. ..... can be defined as data that has been processed into a form that is meaningful to the recipient and is of real or perceived value in current or prospective decisions.
[ ] Information
[ ] Internal data
[ ] Data collection
[ ] Sample data

4. The main ingredient of the report documenting the ..... is the cost benefit analysis.
[ ] system analysis
[ ] system analyst
[ ] feasibility study
[ ] system design

5. The make-or-buy decision is associated with the _____ step in the SDLC.
[ ] problem/Opportunity Identification
[ ] analysis
[ ] design
[ ] development and Documentation

6. The _____ determines whether the project should go forward.
[ ] feasibility assessment
[ ] system evaluation
[ ] opportunity identification
[ ] program specification

7. The primary tool used in structure design is a _____.
[ ] structure chart
[ ] program flowchart
[ ] data-flow diagram
[ ] module

8. The step-by-step instructions that solve a problem are called _____.
[ ] an algorithm
[ ] a plan
[ ] a list
[ ] a sequential structure

9. Which of the following Information systems are aimed at improving the routine business activities on which all organizations depend?
[ ] Management Information systems [ ] Decision support systems
[ ] Transaction processing systems [ ] Management support

10. The problem statement includes the _____, which lists specific input numbers a program would typically expect the user to enter and precise output values that a perfect program would return for those input values.
[ ] testing plan [ ] error handler
[ ] IPO cycle [ ] input-output specification

11. A system analyst design a new design by ?
[ ] Identifying sub system and interfaces between sub system.
[ ] Adopting a developed system to the present environment.
[ ] Developing a system as a large, single unit.
[ ] Propose alternatives to the current system

12. In data flow diagram, an originator or receiver of data is usually designated by ?
[ ] A circle [ ] An arrow [ ] A square box [ ] Rectangle

13. A feasible document should contain :
[ ] Project name [ ] Problem description
[ ] Feasible alternative [ ] Data flow diagram

14. Which of the following is not a product matrix ?
[ ] Size [ ] Reliability [ ] Productivity [ ] Functionality

15. Management of software development is dependent upon:
[ ] People [ ] Process [ ] Product [ ] Project

16. Black box testing sometimes called _____.
[ ] data fow testing. [ ] loop testing
[ ] behavioral Testing [ ] graph based testing

17. In object oriented design of software , objects have _____
[ ] attributes and names only [ ] operations and names only
[ ] attributes, name and operations [ ] None

18 The _____ makes bridge between System engineering and software design.
[ ] software requirement analysis [ ] system modeling
[ ] product engineering [ ] business engineering

19. Product engineering is a system engineering approach that begins with_____
[ ] system analysis [ ] system specification
[ ] information strategy planning [ ] requirement specification

20. The mechanism of understanding what customer wants, analyzing needs, assessing feasibility are provided by_____
[ ] analyzing process [ ] requirement engineering
[ ] system modeling [ ] system analyzing

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SECTION "B"

[6Q × 5 = 30 marks]

Attempt *ANY SIX* questions.

1. What is System? Explain the components of Information System.
2. Why we need Structure Methodology? Explain.
3. What are various steps of System Development Life Cycle? What is the outcome of each step?
4. What are the activities of Development Process?
5. Explain abot the types of Information System.
6. What is Software Inspections? Explain the stages of Software Inspections.
7. What are the major differences between Analysis and Design?
8. Why do we do Software Measurement?

SECTION "C"

[1Q × 10 = 10 marks]

9. A University maintains data about the following entities with attributres:
   (i) Course : number, title, credits, syllabus and prereuuisites.
   (ii) Course Offered : course number, year, semester, instructor, timings and Classroom.
   (iii) Student : student-ID, name and degree program
   (iv) Instructor : identification number, name, department and title.

   The enrollment of students in courses and grades awards to students in each course must be appropriately recorded.

   Do the following:

   1. Construct a Use Case Diagram for the University Course Offered System.
   2. Construct an E-R Diagram for the above given entities and attributes of University Course Offered System usinng standard notation.
   3. Develop a DFD of University Course Offered System.