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526 (SE)

[20-HBGPOW–D5S(O)21A]

BCA 5th Semester (Old) Exam., 2020 (W)

SOFTWARE ENGINEERING

[BCA 16]

Full Marks : 80

Time : 3 hours

The figures in the margin indicate full marks for the questions

1. Answer the following as directed : 1×8=8

(a) Write the importance of Software Requirement Specification (SRS).

(b) Success of a system fully depends on system analyst.

(State True or False)

(c) Define Data Flow Diagram (DFD).

(d) Mention the main components of Entity Relationship Diagram (ERD).

(e) Write one advantage of tightly coupled systems.

(f) What do you mean by white box testing?

(g) Differentiate between the terms 'analysis' and 'specification'.

(h) _____ is considered as the weakest coupling.

(Fill in the blank)

2. Answer the following questions : 2×8=16

(a) Define software engineering in brief.

(b) What are three factors which drive the quality of software products?

(c) What is design specification? What tools are used to represent a system?

(d) Write the importance of a software life cycle model.

(e) State the different sections in a decision table.

(f) Differentiate between cohesion and coupling.

(g) Mention few characteristics of a good software design.

(h) Define decision table with an example.

3. Answer any *five* from the following : 4×5=20

(a) Discuss the different phases of system development life cycle.

(b) Draw an Entity Relationship Diagram (ERD) for payroll management system.

(c) What are the modules handled at the time of unit testing?

(d) Explain in brief the different symbols used in designing structure chart.

(e) Discuss integration testing in brief.

(f) Define module. Write down the specifications of a module.

4. Answer any *two* from the following questions : 8×2=16

(a) Write the phases of prototyping model. Mention also two advantages of prototyping model.

(b) What is data dictionary? How many data dictionaries can be formed for a system? Mention the different data definition operators of data dictionary with their functions.

(c) Define cohesion. Describe briefly the types of cohesion.

5. Answer any *two* from the following questions : 10×2=20

(a) How do you define a system analyst? Describe the different roles of a system analyst.

(b) Give the main difference between a flow chart and a DFD. Mention the symbols which are widely used to draw a DFD. Draw the context diagram of student enrollment system in a college.

(c) Describe briefly the different stages of spiral model. Also write the advantages and disadvantages of spiral model.

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