[22 HKPD3SN-23F]

M.Sc IT 3rd Semester (New) Exam. 2022 (W)

MSCIT

[PGScIT S3-04]

(*System Analysis and Design*)

Full Marks : 70/80

Time : 3 hours

The figures in the right-hand margin indicate marks.

[Learners admitted in and after 2020 need to answer only Q.No. 1 to Q.No. 4 (total 70 marks)]

1. Answer any *five* of the following questions : $2 \times 5 = 10$

(*a*) Differentiate between cohesion and coupling.

(*b*) Mention the purpose of alpha testing.

(*c*) What is the purpose of feasibility study ?

(*d*) Define functional decomposition.

(*e*) Mention four non-functional requirement.

(*f*) What is the difference between Gantt and Pert charts ?

2. Answer any *four* of the following questions : $3 \times 4 = 12$

(*a*) Define the terms- table, record, field and query in terms of a database.

(*b*) What is output design ? Write the basic objectives of output design ?

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(c) What are two types of system design ? Define each of them.

(d) What are the different phases of SDLC ?

(e) What is modularization ? Mention its advantages.

3. Answer any *four* of the following questions : $6 \times 4 = 24$

(a) What is system ? Discuss different components of system with a suitable diagram.

(b) What are the different types of interviews ?

(c) Draw context diagram and 1st level data flow diagram of Online shopping system.

(d) What is decision tree ? Give the flow structure of decision tree. Discuss with an example.

(e) Write the role and responsibilities of a system analyst.

4. Answer any *three* of the following questions : $8 \times 3 = 24$

(a) Define the term normalization. Explain different normal forms used for normalizing a database.

(b) Write the need of system testing. Discuss various types of system testing in brief.

(c) Describe the three considerations on feasibility study.

(d) What cost elements are measured in cost/benefit analysis ? Discuss the procedure for cost/benefit determination.

(*Continued*)

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(Q. No. 5 is only for learners admitted before 2020)

5. Answer any *one* from the following questions : $10 \times 1 = 10$

(*a*) Explain in detail the structure of a software requirement specification.

(*b*) Discuss the various types of database in detail.

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