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P. Pages : 2

Time : Three Hours

**NRJ/KW/17/4636**

Max. Marks : 80

- Notes :
1. All questions carry marks as indicated.
  2. Solve Question 1 OR Questions No. 2.
  3. Solve Question 3 OR Questions No. 4.
  4. Solve Question 5 OR Questions No. 6.
  5. Solve Question 7 OR Questions No. 8.
  6. Solve Question 9 OR Questions No. 10.
  7. Solve Question 11 OR Questions No. 12.
  8. Assume suitable data whenever necessary.

1. a) Explain the basic architecture of IBM Mainframe system. 7
- b) Explain the concept of coupling facility with a neat sketch. 6

**OR**

2. a) Explain Operating systems on mainframes and differentiate between Batch processing and Online processing. 7
- b) Explain the concept of Buffer management. 6
3. a) Write short notes on following :- 8
  - i) Paging.
  - ii) Swapping.
  - iii) Virtual storage.
- b) Explain the typical mainframe workloads. 6

**OR**

4. a) List five jobs or responsibilities that are related to mainframe computing. 7
- b) What is z-operating system, give its features in detail. 7
5. a) Explain the role of CICS in online transaction processing. 7
- b) State the advantages & disadvantages of VSAM. 6

**OR**

6. a) Explain the following statements of Job Control language. 6
  - i) Job statement.
  - ii) EXEC statement.
- b) Explain the VSAM data sets with example. 7

7. a) What is the use of PPS. Explain in detail. 7  
b) What is generation data group. 7

**OR**

8. a) Explain the evolution of COBOL language. 7  
b) What are the different file processing techniques in COBOL. State each in detail. 7
9. a) What is DB<sub>2</sub>? Explain in detail. 7  
b) Explain the relation between a cobol file handling program and JCL. 6

**OR**

10. a) Explain all the file handling verbs of cobol programming? 7  
i) OPEN ii) READ  
iii) WRITE iv) CLOSE
- b) Explain the COBOL language fundamentals including divisions, sections & paragraphs. 6
11. a) Explain subroutines in cobol with example. 7  
b) Write a short note on application development overview in DB<sub>2</sub>. 6

**OR**

12. a) State the concepts of physical/logical records, file, file organization and access modes in cobol programming. 7  
b) Explain the program execution methods of Mainframe Application Development guidelines. 6

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**The secret of getting ahead is getting started.**

**~ Mark Twain**

