

[This question paper contains 2 printed pages.]

4703

Your Roll No.

B.Sc./III/NS

AS

COMPUTER SCIENCE – Paper VI

(Multimedia System and Application Operating System)

(Admissions of 1999 and onwards)

Time : 3 Hours

Maximum Marks : 38

(Write your Roll No. on the top immediately
on receipt of this question paper.)

All questions are compulsory.

1. (a) Why is Software Engineering called a layered technology? (3)
- (b) Explain CMM metrics. (2)
- (c) What will roughly be the storage requirement for a 15 seconds telephone quality audio clip. (1)
- (d) Explain the concept of Pipes in Unix with a suitable example. (2)
2. (a) Testing often consumes more resources than any other phase in software development. List the major factors that make testing expensive. (3)
- (b) Differentiate between "generative Graphics" & "cognitiveGraphics". (3)
- (c) Write a perl script that takes a file name as a command line argument and reports whether it is a directory, file or neither. (2)

P.T.O.

3. (a) Explain the key advantages of an iterative-evolutionary approach to software projects as compared to a linear approach. What might be the possible disadvantages? (5)
- (b) Explain how an analog audio signal is transformed into a digital signal. Explain the role of sampling rate and quantization on the quality of the digital signal produced by this process. (3)
- (c) What is "inode" number of a file? (1)
- (d) Give UNIX command to start printing file 'F1' at line 12. (1)
4. (a) Discuss three characteristics of an SRS. (3)
- (b) What are the limitations of the cost estimation models? (2)
- (c) Define 'Refresh rate' of a VDU. (1)
- (d) What is a "Composite Video Signal"? (1)
- (e) If $x = 11$, $y = 6$ then find the exit status of the expression:
[$\$x -gt 9 -a \$y -ne 3$] (1)
- (f) What will be the output of:
(i) echo 'date' (ii) echo "date" (1)
- (g) Give UNIX command to list files in reverse order. (1)
- (h) Explain the importance of "Structured Programming". (2)