

Maulana Azad National Urdu University

Master of Computer Application

IV Semester Examination May - 2015

CS241 : Software Engineering

Total Marks : 70

Time : 3 hours

نوٹ : کوئی پانچ سوالات کے جوابات لکھیے۔ تمام سوالات کے نشانات مساوی ہیں۔ سوال نمبر 1 لازمی ہے۔

Note : Attempt any five questions. Each question carries equal marks. Question No. 1 is compulsory

14X5=70

1. a) Define software engineering process. What are its similarities and differences from conventional engineering process? (7 Marks)

b) Write short notes on the following: (7 Marks)

i) Waterfall model.

ii) Spiral model

2. a) Define requirements engineering process. What are its tasks. Explain each in brief. (7 Marks)

b) Define the followings: (7 Marks)

i) Verification and validation.

ii) ISO 9000 models.

iii) SEI-CMM model.

3. a) Explain software design in brief. What are different design strategies? Define any two. (7 mark)

b) Explain the followings: (7 marks)

i) Halstead's software science.

ii) Functional point based metrics

3. a) Explain software design in brief. What are different design strategies? Define any two. (7 mark)

b) Explain the followings: (7 marks)

i) Halstead's software science.

ii) Functional point based metrics

Adverse Effect کے Faulty Software؟ کیا ہیں Sources of Problems -- کی تشریح کیجیے۔ (a) .4
بتائیں۔

نیچے دیے گئے Terms کے بارے میں سمجھائیے۔ (b)

- Unit testing. (i)
- Integration testing. (ii)
- Acceptance testing. (iii)
- Regression testing. iv

4. a) Define software testing. What are sources of problems? What are the adverse effects of faulty software? (7 Marks)
- b) Define the following in details: (7 Marks)
- i) Unit testing.
 - ii) Integration testing.
 - iii) Acceptance testing.
 - iv) Regression testing.

Software Maintenance کے بارے میں سمجھائیے۔ Maintenance کی کیا ضرورت ہے؟ Maintenance کی اقسام کو بیان کریں۔ (a) .5
Unified Modelling Language (UML) کیا ہے؟ UML Diagram کی تشریح کیجیے۔ (b)

5. a) Explain software maintenance. What is the need of maintenance? Also write the various categories of maintenance. (7 Marks)
- b) What is unified modelling language (UML). Define the UML diagrams. (7 Marks)

Software Crisis کی تشریح کیجیے؟ ایک اچھے Software کی کیا خصوصیات ہوتی ہیں۔ (a) .6

SRS Document کو بیان کرو۔ SRS Document کا IEEE Standard کیا ہے؟ (b)

6. a) Define software crisis. What are the characteristics of good software? (7 Marks)
- b) Define SRS document. What is IEEE standard for SRS. (7 Marks)

if (k < 2) (i) (a) .7
{
if (k > 3)
x = x*k;
}

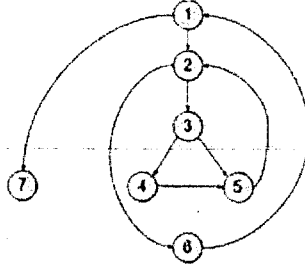
دیے گئے پروگرام کی لمبائی Vocabulary اور پروگرام کی لمبائی کا اندازہ معلوم کریں۔

(ii) نیچے دیے ہوئے Diagram سے Cyclomate Complexity کو نکالیں اور اس کے Basis Sets لکھیں۔

7. a) (i) if (k < 2) (7 Marks)
{
if (k > 3)
x = x*k;
}

Find Program length, program vocabulary and estimated length of the above program.

(ii) For the figure given below, find the cyclomatic complexity and write the basis sets.



Testing Strategies Bottom-up اور Top-down کو خاکہ کے ذریعہ سمجھائیے۔ (b .7

7. b) Explain Top-Down and Bottom-Up testing strategies with the help of diagrams

(7 Marks)

☆☆☆

