

**PURBANCHAL UNIVERSITY**

**2020**

M. Sc. in Information System Engineering /First Semester/*Final*

Time: 03:00 hrs.

Full Marks: 60 /Pass Marks: 30

**MIE111: Software Engineering** (*New Course*)

*Candidates are required to give their answers in their own words as far as practicable.*

*All questions carry equal marks.*

**Answer FIVE questions.**

**5×12=60**

- 1(a) Discuss different software life cycle model. Compare waterfall model and spiral model software development. 7+5
- 2(a) Explain why, for large systems development it is recommended that prototypes should be throw-away prototypes. 6
- (b) Explain why it is useful to draw a distinction between a requirements definition and a requirements specification. 6
- 3(a) Explain why an object oriented approach to software development may not be suitable for real-time systems. 6
- (b) Discuss the differences between verification and validation and explain why validation is a particularly difficult process. 3+3
4. Explain the three-tiered client/server architecture. What are the advantages of using this architecture in the organization? Explain with example. 6+6
- 5(a) Explain the series in tasks in a software configuration management process. 6
- (b) Cost estimates are inherently risky irrespective of the estimation technique used. Suggest four ways in which the risk in a cost estimate can be reduced. 6
6. Write short notes on any FOUR: 4×3=12
  - (a) V-shape model
  - (b) software quality assurance
  - (c) Defect testing
  - (d) Software reuse
  - (e) Embedded software



**PURBANCHAL UNIVERSITY**

**2020**

M. Sc. in Information System Engineering /First Semester/*Final*

Time: 03:00 hrs.

Full Marks: 60 /Pass Marks: 30

**MIE111: Software Engineering** (*New Course*)

*Candidates are required to give their answers in their own words as far as practicable.*

*All questions carry equal marks.*

**Answer FIVE questions.**

**5×12=60**

- 1(a) Discuss different software life cycle model. Compare waterfall model and spiral model software development. 7+5
- 2(a) Explain why, for large systems development it is recommended that prototypes should be throw-away prototypes. 6
- (b) Explain why it is useful to draw a distinction between a requirements definition and a requirements specification. 6
- 3(a) Explain why an object oriented approach to software development may not be suitable for real-time systems. 6
- (b) Discuss the differences between verification and validation and explain why validation is a particularly difficult process. 3+3
4. Explain the three-tiered client/server architecture. What are the advantages of using this architecture in the organization? Explain with example. 6+6
- 5(a) Explain the series in tasks in a software configuration management process. 6
- (b) Cost estimates are inherently risky irrespective of the estimation technique used. Suggest four ways in which the risk in a cost estimate can be reduced. 6
6. Write short notes on any FOUR: 4×3=12
  - (a) V-shape model
  - (b) software quality assurance
  - (c) Defect testing
  - (d) Software reuse
  - (e) Embedded software

