

1. Choose the correct option in terms of Issues related to professional responsibility

a) Confidentiality

b) Intellectual property rights

c) Both a & b

d) Managing Client Relationships

2. "Software engineers should not use their technical skills to misuse other people's computers." Here the term misuse refers to:

a) Unauthorized access to computer material

b) Unauthorized modification of computer material

c) Dissemination of viruses or other malware

d) All of the mentioned

3. Explain what is meant by PRODUCT with reference to one of the eight principles as per the ACM/IEEE Code of Ethics ?

a) The product should be easy to use.

b) Software engineers shall ensure that their products and related modifications meet the highest professional standards possible.

c) Software engineers shall ensure that their products and related modifications satisfy the client.

d) It means that the product designed /created should be easily available.

4. Identify an ethical dilemma from the situations mentioned below:

a) Your employer releases a safety-critical system without finishing the testing of the system.

b) Refusing to undertake a project.

c) Agreement in principle with the policies of senior management.

d). None of the above

5. Identify the correct statement: "Software engineers shall

a) act in a manner that is in the best interests of his expertise and favour."

b) act consistently with the public interest."

c) ensure that their products only meet the SRS."

d) none

6. Select the incorrect statement: "Software engineers should

a) not knowingly accept work that is outside your competence."

b) not use your technical skills to misuse other people's computers."

c) be dependent on their colleagues."

d) maintain integrity and independence in their professional judgment."

7. Efficiency in a software product does not include _____

a) responsiveness

b) licensing

c) memory utilization

d) processing time

8. As per an IBM report, "31% of the project get cancelled before they are completed, 53% overrun their cost estimates by an average of 189% and for every 100 projects, there are 94 restarts". What is the reason for these statistics ?

a) Lack of adequate training in software engineering

b) Lack of software ethics and understanding

c) Management issues in the company

d). None of the above

9. The reason for software bugs and failures is due to

a) Software companies

b) Software Developers

c) Both a and b

d) software vendors

10. Company has latest computers and state-of-the-art software tools, so we shouldn't worry about the quality of the product.

a) True

b) False

11. Which of these are not among the eight principles followed by Software Engineering Code of Ethics and Professional Practice ?

- a) PUBLIC
- b) PROFESSION
- c) PRODUCT
- d) ENVIRONMENT**

12. What is a Software ?

- a) Software is set of programs.
- b) Software is documentation and configuration of data.

c) Both a and b

- d) None of the mentioned

13. Which of these does not account for software failure ?

- a) Increasing Demand
- b) Low expectation

c) Increasing Supply

- d) Less reliable and expensive.

14. What are attributes of good software ?

- a) Software maintainability.
- b) Software functionality.
- c) Software development.

d) a and b.

15. Which of these software engineering activities are not a part of software processes ?

a) Software dependence.

- b) Software development.
- c) Software validation.
- d) Software specification.

16. Which of these is incorrect ?

- a) Software engineering belongs to Computer science.
- b) Software engineering is a part of more general form of System Engineering.
- c) Computer science belongs to Software engineering.**
- d) Software engineering is concerned with the practicalities of developing and delivering useful software.

17. Which of these is true ?

- a) Generic products and customized products are types of software products.
- b) Generic products are produced by organization and sold to open market.
- c) Customized products are commissioned by particular customer.
- d) All of the above.**

18. Which of these does not affect different types of software as a whole?

- a) Heterogeneity
- b) Flexibility**
- c) Business and social change
- d) Security

19. The fundamental notions of software engineering does not account for ?

- a) Software processes
- b) Software Security
- c) Software reuse
- d) Software Validation**

20. Which of these is not true ?

- a) Web has led to availability of software services and possibility of developing highly distributed service based systems.
- b) Web based systems have led to degradation of programming languages.**
- c) Web brings concept of software as service.
- d) Web based system should be developed and delivered incrementally.

List the activities during project Initiation.

Ans. Important activities during project initiation phase:

- Management team building.
- Enables the team members to understand one another.
- Minimize the impact of cultural and language barriers.
- Scope and high level work division agreements.
- Management reporting and escalating procedures.
- Involvement of infra structure / support groups.
- Team formation.
- Project kick off meeting is attended by formally all concerned so that everyone has a common understanding of what is expected.

Q.18 What is work breakdown structure?

Ans. Work breakdown structure is the decomposition of the project into smaller and more manageable parts with each part satisfying the following criteria-

- Each WBS unit has a clear outcome.
- The outcome has a direct relationship to achieve the overall project goal.
- Each point has single point of accountability.

What are the Generic Framework Activities?

Ans. Generic Framework Activities are:

- Communication.
- Planning.
- Modeling.
- Construction.
- Deployment.
- What is Software Quality Control?

- **Ans.** Software Quality Control involves series of inspections, reviews and tests which are used throughout software process to ensure each work product meets requirements placed upon it.

What are the factors of Software Quality?

Ans. Factors of Software Quality are:

- Portability
- Usability
- Reusability
- Correctness
- Maintainability

Define Data Objects.

Ans. Data Objects are:

- External entity, occurrence or event, role, organizational unit, place or structure
- • Encapsulates Data only.
 - **What is meant by software reusability?**
 - **Ans.** A software component should be designed and implemented so that it can be reused in many different programs.

What is the difference between basic objects and aggregate objects used software configuration.

Ans. Basic Objects: It represents unit of text. e.g., Section of requirement specifications, Source listing for a component.

Aggregate Objects: Collection of basic: objects. And other aggregate objects e.g Full design specification is.

Q.250. What is software reuse? Explain the various aspects of software reuse.

Ans. Software reuse means a software component should be designed and implement so that it can be reused in many different programs.

The various aspects of software reuse:

- Software development with reuse
 - Software development for reuse Generator based reuse
- Application system reuse

1. Using the **UML** graphical notation for object classes, design the following object classes, identifying attributes and operations. Use your own experience to decide on the attributes and operations that should be associated with these objects.

i. A Telephone,

ii. A Printer for a personal computer,

iii. A Personal stereo system,

iv. a bank account v. a library catalogue

Telephone	Library catalogue	Personal stereo
status (on hook, off hook) number dialed last call directory ring tone display	Publication records Transactions Date created Date updated Permissions keyword index	song store playlists volume now playing recently played display battery level
setup-call () clear-call () dial () redial () search () change-ring-tone () edit directory () change volume () change ring volume ()	new entry () edit entry () delete entry () search () create index () edit permissions () record transaction ()	play () stop () select playlist () select song () search () random play () repeat () change volume () display status ()

Printer	Bank Account
document toner level paper status error status display	account number account type date opened date closed balance transaction list overdraft limit
setup-printer () print () cancel print job () self test () startup () shutdown ()	open () close () credit () debit () show balance () edit overdraft limit () add transaction () list transactions ()