MID-TERM EXAMINATION PAPER

FACULTY	**:**	**COMPUTER SCIENCE AND MULTIMEDIA**
COURSE	**:**	**BACHELOR OF INFORMATION TECHNOLOGY (HONS)**
YEAR/ SEMESTER	**:**	**SECOND YEAR / FOURTH SEMESTER**
MODULE TITLE	**:**	**SOFTWARE ENGINEERING**
DATE	**:**	**28th FEBURARY 2022**
TIME ALLOWED	**:**	**3 HOURS**
START	**:**	**6:30 AM – 9:30 AM**
SET	**:**	**A**

Instruction to candidates

1. This question paper has THREE (3) Section
2. Answer **ALL** questions in Section A, MCQ.
3. Answer **5** questions in Section B, MSAQ
4. Answer **2** questions in Section C, MEQ
5. No scripts or answer sheets are to be taken out of the Examination Hall.
6. For Section A, answer in the OMR form provided.

Do not open this question paper until instructed.

(Candidates are required to give their answers in their own words as far as practicable)

SECTION A

Multiple Choice Questions **(30*1=30)**

1. Software engineering is defined as _____.
   a. Instructions
   b. Data structures
   c. Documents
   d. All of above
1. Which of the following models is not suitable for accommodating any changes?
   a. Prototyping Model
   b. RAD model
   c. Waterfall Model
   d. Spiral Model
2. What are attributes of good software?
   a. Software maintainability
   b. Software functionality
   c. Software development
   d. a and b
3. Find out which phase is not available in SDLC?
   a. Coding
   b. Testing
   c. Maintenance
   d. Abstraction
4. What is MTTF?
   a. Maximum time to failure
   b. Mean time to failure
   c. Minimum time to failure
   d. None of the mentioned
5. What are the signs that a software project is in trouble?
   a. The product scope is poorly defined.
   b. Deadlines are unrealistic.
   c. Changes are managed poorly.
   d. All of above
6. You are working as a project manager. Your Company wants to develop a project. You are also involved in planning team. What will be your first step in project planning?
   a. Establish the objectives and scope of the product.
   b. Determine the project constraints.
   c. None of them
   d. Both of tem
7. What does Economic feasibility looks/determine at?
   a. Looks at performance aspects of the system
   b. Looks at acceptances of the system within the organization
   c. Looks at the technical aspects of the system
   d. Determines whether the investment needed to implement the system will be recovered
8. Anti-virus software is an example of
   a. system software
   b. utility software
   c. application software
   d. None
9. In risk management process , identification process is followed by
   a. Categorize
   b. Manage

c. Monitor
d. None of them

10. What is the full form of CMM?
    a. Capability Main Model
    b. Capability Maturity Model
    c. Clear Maturity Model
    d. Capability Major Model
11. CMM consist of
    a. Two level
    b. Three level
    c. Four level
    d. Five level

12. What is the simplest model of software development?
    a. Spiral model
    b. Prototyping model
    c. Agile model
    d. Waterfall model

13. Identify the disadvantage of Spiral Model.
    a. Doesn't work well for smaller projects
    b. High amount of risk analysis
    c. Strong approval and documentation control
    d. Additional Functionality can be added at a later date
14. Agile Software Development is based on
    a. Incremental Development
    b. Linear Development
    c. Both a and b
    d. None of them
15. Selection of a model is based on
    a. Requirements
    b. Development team
    c. Users
    d. All of the mentioned
16. In which model, a prototype of the end product is first developed?
    a. Spiral model
    b. Prototyping model
    c. Agile model
    d. Waterfall model
17. Pair programming is used in
    a. Extreme Model
    b. Object Oriented Model
    c. Agile Model
    d. Spiral Model
18. _____ is the Disadvantage of XP.
    a. Location
    b. Cost
    c. Teamwork
    d. None of them
19. How is reliability and failure intensity related to each other?
    a. direct relation
    b. inverse relation
    c. no relation
    d. none of the above
20. Which of the following is not a project manager's activity?
    a. project control
    b. project management
    c. project planning
    d. project design
21. Which one of the following is a functional requirement?
    a. Maintainability
    b. Portability

c. Robustness
d. None of the mentioned

22. . Which one of the following is a requirement that fits in a developer's module?
    a. Availability
    b. Testability
    c. Usability
    d. Flexibility
23. What is the meaning of requirement elicitation in software engineering?
    a. Gathering of requirement
    b. Understanding of requirement
    c. Getting the requirements from client
    d. All of the above
24. User requirements are expressed as _____ in Extreme Programming.
    a. implementation tasks
    b. functionalities
    c. stories
    d. none of the mentioned
25. Functional requirements capture the intended behavior of the system.
    a. True
    b. False
26. Which of them is functional requirement?
    a. Work flow
    b. Interoperability
    c. Flexibility
    d. Disaster recovery

27. Non functionality should include
    a. usability
    b. technical details
    c. Data processing
    d. None of above
28. Which of these steps is includes in the Requirement engineering process
    a. Requirement Gathering
    b. Feasibility study
    c. Validation
    d. Both A & B
29. _____ is a requirement Elicitation process technique.
    a. Requirement gathering
    b. Discussion
    c. Questionnaires
    d. Documentation
30. User requirement includes
    a. quick in response
    b. Data flow
    c. Both of them
    d. None of them

SECTION B

Short Answer Questions

Answer any five (5) questions out of eight (8) questions. (5*6=30)

1. Define Software Engineering. Explain its objectives. [unit 1]
2. Explain project risk management in detail. [unit 2]
3. Discuss about CMM model in detail. [unit 2]

4. Explain waterfall model with example. [unit 3]
5. What are functional and non-functional requirements? Explain with example. [unit 4]
6. Explain requirement elicitation and analysis with example. [unit 5]
7. Define software reuse. Explain its advantage and disadvantage? [unit 6]
8. Why is architecture design important in software engineering? [unit 7]

SECTION C
Long Answer Questions

Attempt any two (2) questions out of three (3) questions. (2*20=40)

1.
    a. What are the different phases in software development life cycle? Explain with example. [unit 2]
    b. Clarify the aims of feasibility study and also explain its type with suitable example. [unit 5]
2.
    a. Describe the methodologies of software reliability. [unit 6]
    b. Compare spiral and agile model in detail with example. [unit 3]
3. Write short notes on:
    a. Data Design
    b. System requirement
    c. Project Estimation
    d. Requirement validation