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	**:**	**B**

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. In computer operating system and utility programs are examples of
   a. System software
   b. Device drivers
   c. Application software
   d. Customized software
2. What is the main aim of software engineering?
   a. Reliable software
   b. Cost effective software
   c. Reliable and cost effective software
   d. None of the above
3. What is the first step in the software development life cycle?
   a. System Design
   b. Coding
   c. System Testing
   d. Preliminary Investigation and Analysis
4. Which of the following is not project management goal?
   a. Keeping overall costs within budget
   b. Avoiding customer complaints
   c. Delivering the software to the customer at the agreed time
   d. Maintaining a happy and well-functioning development team
5. A stakeholder is anyone who will purchase the completed software system under development.
   a. True
   b. False
6. 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
7. Selection of a model is based on
   a. Requirements
   b. Development team & Users
   c. Project type and associated risk
   d. All of the mentioned
8. Project risk factor is considered in which model?
   a. Spiral model
   b. Waterfall model
   c. Prototyping model
   d. None of the above
9. Which of the following models is not suitable for accommodating any changes?
   a. Prototyping Model
   b. RAD model
   c. Waterfall Model
   d. Spiral Model
10. Pair programming is used in
    a. Extreme Model
    b. Object Oriented Model
    c. Agile Model
    d. Spiral Model

11. Agile Software Development is based on
    a. Incremental Development
    b. Iterative Development
    c. Linear Development
    d. Both Incremental and Iterative Development
12. In risk management process what makes a note of all possible risks that may occur in the project?
    a. Manage
    b. Monitor
    c. Identification
    d. Categorize
13. Which one of the following is not a step of requirement engineering?
    a. Elicitation
    b. Design
    c. Analysis
    d. Documentation
14. The process to gather the software requirements from client, analyze and document them is known as _____.
    a. Feasibility Study
    b. Requirement Gathering
    c. Requirement Engineering
    d. System Requirements Specification
15. Which one of the following is a functional requirement?
    a. Maintainability
    b. Portability
    c. Robustness
    d. None of the mentioned
16. Mean Time To Repair (MTTR) is the time needed to repair a failed hardware module.
    a. True
    b. False
17. What are the signs that a software project is in trouble?
    a. The product scope is poorly defined.
    b. Deadlines are unrealistic.
    c. Total cost is unknown
    d. All of above
18. Find out which phase is not available in SDLC?
    a. Coding
    b. Testing
    c. Maintenance
    d. Abstraction
19. Which of them is functional requirement?
    a. Work flow
    b. Interoperability
    c. Flexibility
    d. Disaster recovery
20. Four types of change are encountered during the support phase. Which one of the following is not one that falls into such category?
    a. Translation
    b. Correction
    c. Adaptation
    d. Prevention
21. How is reliability and failure intensity related to each other?
    a. direct relation
    b. inverse relation
    c. no relation
    d. none of the mentioned
22. Actual programming of software code is done during _____ step in SDLC.

a. Development
b. Maintenance and Evaluation
c. Design
d. Analysis

23. Which of the following is not a project manager's activity?
a. project control
b. project design
c. project management
d. project planning

24. Changes are made to the system to reduce the future system failure chances is called _____.
a. Preventive Maintenance
b. Adaptive Maintenance
c. Corrective Maintenance
d. Perfective Maintenance

25. Which phase is considered as software architecture phase?
a. Design
b. Implementation
c. Development
d. Requirement gathering

26. 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

27. The aim of software engineering is to produce software that is
a. Fault-free
b. Delivered on time
c. Delivered within budget
d. All of these are the aims of software engineering.

28. 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

29. In Design phase, which is the primary area of concern?
a. Architecture
b. Data
c. Interface
d. All of the mentioned

30. 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

SECTION B

Short Answer Questions

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

1. Explain the software and it's characteristics in detail. [unit 1]

2. Discuss the main features of spiral model with example. [unit 2]
3. What is prototype model? Describe the activities of prototype model and also mention its drawbacks.[unit 3]
4. Explain pair programming. Enlist its advantage and disadvantages. [unit 3]
5. What is requirement engineering? Explain user and system requirement in details. [unit 4]
6. What is feasibility study? Discuss the importance of schedule feasibility. [unit 5]
7. Define software reliability with example. [unit 6]
8. Why is user interface 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. Explain requirement engineering process with example. [unit 5]
   b. Differentiate between functional and non-functional requirements of software engineering requirements. [unit 4]
2.
   a. Compare the main features of waterfall and incremental model with example. [unit 2]
   b. Explain the metrics of software reliability. [unit 6]
3. Write short notes on:
   a. Software Design
   b. User requirement
   c. Project Management tools
   d. Software reuse