

b. A project has the following characteristics

Activity	$T_0$	$T_p$	$T_m$
1-2	1	5	1.5
2-3	1	3	2
2-4	1	5	3
3-5	3	5	4
4-5	2	5	3
4-6	3	4	5
5-7	4	7	5
6-7	6	6	7
7-8	2	8	4
7-9	5	6	6
8-10	1	3	2
9-10	3	7	5

- (i) Construct the network and find the critical path  
(ii) Find the duration or expected time for each activity  
(iii) Find the variance of each activity

30. a. Elaborate on the different principles involved in managing risks in IT projects. 12 2 3

(OR)

b. Bring out the different testing phases that are executed in a software development project. 12 2 3

31. a. Explain the various principles of agile methodology and briefly discuss its application in it projects. 12 1 4

(OR)

b. Explain the regular and hybrid life cycle methods applied in software application management. 12 2 4

32. a. Define SCRUM. Discuss its methodologies employed in it projects. 12 2 5

(OR)

b. Illustrate the life cycle approach of DEV OPS and discuss its advantages and disadvantages. 12 2 5

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12 2 2

Reg. No.

**B.Tech. DEGREE EXAMINATION, JUNE 2023**  
Seventh Semester

18MBH464J – IT PROJECT MANAGEMENT

(For the candidates admitted from the academic year 2018-2019 to 2021-2022)

Note:

- (i) **Part - A** should be answered in OMR sheet within first 40 minutes and OMR sheet should be handed over to hall invigilator at the end of 40<sup>th</sup> minute.  
(ii) **Part - B & Part - C** should be answered in answer booklet.

Time: 3 hours

Max. Marks: 100

**PART – A (20 × 1 = 20 Marks)**

Answer ALL Questions

- |   |   |   |   |
|---|---|---|---|
| 1. What is software engineering?  | 1 | 1 | 1 |
| (A) Designing a software (B) Testing a software   |   |   |   |
| (C) Application of engineering principles to the design software (D) Data analytics   |   |   |   |
| 2. What are the feature of software code?   | 1 | 1 | 1 |
| (A) Simplicity (B) Accessibility  |   |   |   |
| (C) Modularity (D) Reliability  |   |   |   |
| 3. CASE stands for _____  | 1 | 1 | 1 |
| (A) Computer-aided software engineering (B) Control aided science and engineering   |   |   |   |
| (C) Cost aided system experiments (D) Cost appreciation standard engineering  |   |   |   |
| 4. The activity that distributed estimates effort across the planned project duration by allocating the effort to specific software developing tasks is _____ | 1 | 1 | 1 |
| (A) Project scheduling (B) Detailed schedule  |   |   |   |
| (C) Macroscopic schedule (D) Project planning   |   |   |   |
| 5. Which of the options is not a notable challenge while scheduling a project?  | 1 | 1 | 2 |
| (A) Deadlines (B) Independent activities  |   |   |   |
| (C) Too many workers may be required (D) Costly delay   |   |   |   |
| 6. What is the earliest start time rule?  | 1 | 1 | 2 |
| (A) It compares the activity's starting time for an activity successor (B) It compares the activity's end time for an activity predecessor                    |   |   |   |
| (C) It directs when a project can start (D) It regulates when a project must begin  |   |   |   |

7. What is critical path? 1 1 2  
 (A) It is a path that operates from the starting node to the end node  
 (B) It is a mixture of all the paths  
 (C) It is the longest path (D) It is the shortest path
8. Activity in a network diagram is represented by 1 2 2  
 (A) Rectangles (B) Arrows  
 (C) Squares (D) Circles
9. Risk management is one of the most important jobs for a 1 2 3  
 (A) Client (B) Investor  
 (C) Production team (D) Project manager
10. What assesses the risk and your plans for risk mitigation and revises these when you learn more about the risk? 1 2 3  
 (A) Risk monitoring (B) Risk planning  
 (C) Risk analysis (D) Risk identification
11. One of the following factors affect the probable consequences 1 3 3  
 (A) Risk timing (B) Contingency planning  
 (C) Risk avoidance (D) Risk monitoring
12. \_\_\_\_\_ model is used to project risk factor. 1 3 3  
 (A) Prototyping model (B) Waterfall model  
 (C) Spiral model (D) Icon model
13. Agile software development is based on 1 3 4  
 (A) Incremental development (B) Interactive development  
 (C) Linear development (D) Both incremental and iterative development
14. Amongst which of the following is/are the type of agile methodologies 1 3 4  
 (A) SCRUM (B) FDD  
 (C) DSDM (D) SCRUM, FDD and DSDM
15. There are \_\_\_\_\_ phases in scrum. 1 3 4  
 (A) Five (B) Four  
 (C) Three (D) Six
16. Which of the following does not apply to agility to a software process? 1 1 4  
 (A) Uses incremental product delivery strategy (B) Only essential work products are produced  
 (C) Eliminate the use of project planning and testing (D) Project scheduling
17. Which of the following is delivered at the end of the sprint? 1 4 5  
 (A) A document containing test case for the current solution  
 (B) An architectural design of the solution  
 (C) An increment of Done software (D) Wireframes designs for user interface

18. When is a sprint retrospective ceremony performed? 1 1 4  
 (A) Whenever the team suggests (B) At the end of each sprint  
 (C) Whenever needed (D) Whenever the product owner suggests
19. When can a sprint be canceled? 1 2 4  
 (A) When ever the product owner says (B) Sprint can never be cancelled  
 (C) When development is unable to complete work (D) The sprint items are no longer needed
20. In scrum when is a sprint over? 1 1 4  
 (A) When the final test is completed (B) When the product owner suggests  
 (C) When the time box expires (D) When the final testing is completed

**PART – B (5 × 4 = 20 Marks)**

Answer ANY FIVE Questions

- |  | Marks | BL | CO |
|--|-------|----|----|
| 21. Discuss the significance of project cost estimation. | 4     | 2  | 1  |
| 22. Explain the need for float calculation.              | 4     | 2  | 2  |
| 23. Briefly discuss the need for risk management.        | 4     | 3  | 3  |
| 24. State the advantages of agile process.               | 4     | 2  | 4  |
| 25. Discuss the fundamentals of Devops.                  | 4     | 3  | 5  |
| 26. Explain the challenges in project management.        | 4     | 2  | 1  |
| 27. Illustrate the concept of requirement analysis.      | 4     | 3  | 2  |

**PART – C (5 × 12 = 60 Marks)**

Answer ALL Questions

- |  | Marks | BL | CO |
|--|-------|----|----|
| 28. a. With neat sketch discuss the water fall model of software model development.                                    | 12    | 2  | 1  |
| (OR)   |       |    |    |
| b. Discuss the salient features of V-model and RAD model of software development.                                      | 12    | 2  | 1  |
| 29. a. For the following data determine the critical path and also find total float, free float and independence float | 12    | 2  | 2  |

Activity	Duration
1-2	4
2-3	5
2-4	7
2-5	6
4-5	0
5-6	9
3-6	10
6-7	3

(OR)