

**EXAMINATION PAPER**

**FACULTY: COMPUTER SCIENCE & MULTIMEDIA**

**COURSE: MASTER OF COMPUTER SCIENCE**

**YEAR/SEMESTER: 3**

**MODULE TITLE & CODE: Software Project Management**

**DATE: 2024**

**TIME ALLOWED: 3 HOURS START: 1:00 PM FINISH: 4:00 PM**

**Instruction to candidates**

1. This question paper has THREE (3) Sections.
2. Answer all **7** questions in Section A, VSAQ
3. Answer **7** questions out of 9 in Section B, SAQ.
4. Answer **2** questions out of 3 in Section C, LAQ.
5. No scripts or answer sheets are to be taken out of the Examination Hall.
6. Lengthy answers do not win more marks. Students are advised to write clear and concise answer with valid relevant examples

***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**

**Very Short Answer Questions**

**Attempt all seven (7) questions [2 × 7 = 14]**

1. What is the significance of retrospect meeting?
2. What is the full form of PMBOK ?
3. What are the triple constraints of project management?
4. Explain Learning Curve Theory.
5. What is Kanban ?
6. What are three types of cost estimates?
7. What is benchmarking ?

**SECTION B**

**Short Answer Questions**

**Attempt only seven (7) questions out of eight (9) questions [7 × 8 = 56]**

Q. 1 Short Answer Question (Chapter 1 Introduction to Project Management)

List out and explain briefly any four advantages of formal project management.

Q. 2 Short Answer Question (Chapter 2 Project Management Frameworks)

Explain in detail with a venn diagram the 'three sphere model' for Systems Management

Q. 3 Short Answer Question (Chapter 3 Project Management Process Groups)

Discuss the signifcance of WBS for preparing a Gantt Chart. Also list out the advantages of plotting a Gantt chart over simply preparing a WBS.

Q. 4 Short Answer Question (Chapter 4 Project Integration Management)

A marketing agency hosted an ad campaign and generated 123 sales earning them a revenue of $4500. During the campaign preparation they initially spent $1100 on designs and also incurred logistics expenditure of $1400. Based on this, calculate the Return on Investment (ROI) for this campagin and derive if it was a good or bad investment for the agency.

Q. 5 Short Answer Question (Chapter 5 Project Scope Management)

Prepare a sample RTM (Requirements Traceability Matrix) and explain its importance in formal project management.

Q.6 Short Answer Question (Chapter 6 Project Time Management)

Discuss in detail the three major types of activity dependencies - mandatory, discretionary and external with elaborate/contextual examples for each.

Q. 7 Short Answer Question (Chapter 7 Project Cost Management)

If the AC for a WBS item is $5500 and its EV is $4500, what is its CV ? Is it under or over budget ? If the SPI of the same item is 110% when it is halfway completed, is it ahead or behind schedule ?

Q. 8 Short Answer Question (Chapter 8 Project Quality Management)

What is the purpose of a scatter diagram ? Present an arbitrary statistical example of a scatter diagram that demonstrates a high degree negative correlation.

Q. 9 Short Answer Question (Chapter 9 Project HR Management)

Explain Maslow's Hierarchy of Needs with a diagram.

**Group C**

**Long Analytical or Case Question**

**Attempt any two (2) questions out of three (3) questions [2 × 15 = 30]**

Q. 1 Consider Project A has a probability of 35% to net a profit of $220,000 while having an 65% probability to cause a loss of $35,000. On the other hand, Project B has a 70% probability to generate a profit of $115,000. But it has 10% probability to incur a loss of $50,000 and 10% probability to incur a further loss of $20,000.

Based on the given case, draw a decision tree and calculate the EMV (Estimated Monetary

Value) for both projects. Also decide which project you consider better based on the EMVs

calculated. (Chapter 9 Project HR Management)

Q. 2Identify the critical path for the activities in given table and the expected duration of the project. Also identify the slack times for each activity (10 + 5) (Chapter 6 Project Time Management)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Activity** | **Predecessor** | **Duration (days)** | **Activity** | **Predecessor** | **Duration(days)** |
| A | - | 4 | E | C | 2 |
| B | A | 5 | F | C | 3 |
| C | A | 3 | G | D, E | 5 |
| D | B | 6 | H | F, G | 4 |

Q. 3. Draw a detailed diagram of the SCRUM methodology in software development. Also discuss the key elements of SCRUM roles, events and artifacts. (5 + 5 + 5 + 5)

(Chapter 3 Project Management Process Groups)

All the best!