DATE: 25/7/2022 QP CODE: 96004

University of Mumbai

Examination Second Half 2021 under cluster __ (Lead College: _____)

Examinations Commencing from 28th March 2022 to 5th April 2022

Program: Master of Computer Applications

Curriculum Scheme: MCA (2year – 2020 Course)

Examination: M.C.A Semester I

Course Code: MCA14 and Course Name: Software Project Management

Time: 3 Hour Max. Marks: 80

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Q1.	**Choose the correct option for following questions. All the Questions are compulsory and carry equal marks**
1.	Which of the following is not generally considered a stakeholder in the software process?
Option A:	End users
Option B:	Project team
Option C:	Sales team
Option D:	Customer
2.	Scheduling can best be defined as the process used to determine
Option A:	Overall project duration
Option B:	Project cost estimating
Option C:	The project management plan
Option D:	Sub-contractor's responsibilities
3.	Which of the following is the most correct definition of a use case 'ACTOR'?
Option A:	An actor represents particular humans who interact with the system
Option B:	An actor represents anything that interacts with the system
Option C:	An actor represents machines and other systems interacting with the system
Option D:	An actor represents roles humans take when interacting with the system
4.	Risk tables are sorted by
Option A:	Probability and cost
Option B:	Probability and impact
Option C:	Probability and consequences
Option D:	Probability and exposure
5.	The seven run rule states that if seven data points in a row on a control chart are all below the mean, above the means, or all increasing or decreasing, then the process needs to be examined for _____ problems
Option A:	random
Option B:	non-random
Option C:	Six Sigma
Option D:	quality
6.	Predecessors, successors, logical relationships, leads and lags, resource requirements, constraints, imposed dates, and assumptions are all examples of
Option A:	items in an activity list
Option B:	items on a Gantt chart

Option C:	milestone attributes
Option D:	activity attributes
7.	Three categories of risks are
Option A:	Business risks, personnel risk, budget risk
Option B:	Project risk, technical risk, business risk
Option C:	Planning risk, technical risk, personnel risk
Option D:	Management risk, technical risk, design risk
8.	Which of the following provide useful measures of Software quality?
Option A:	Correctness, performance, integrity, usability
Option B:	Reliability, maintainability, integrity, sales
Option C:	Correctness, maintainability, size, satisfaction
Option D:	Correctness, maintainability, integrity, usability
9.	The objective of software project planning is to
Option A:	Convince the customer that project is feasible
Option B:	Make use of project historic data
Option C:	Enable a manger to make reasonable estimates of cost and schedule
Option D:	Determine the probable profit margin prior to bidding on a project
10.	You cannot start editing a technical report until someone else completes the first draft. What type of dependency does this represent?
Option A:	finish-to-start
Option B:	start-to-start
Option C:	finish-to-finish
Option D:	start-to-finish

Q2 (Total 20 Marks)	
A	**Solve any Two** **5 Marks Each**
i	Explain the Triple Constraint of Project Management.
ii	Explain Scrum concepts.
iii	Consider the size of organic software has been estimated to be 32 KLOC determined the effort required to develop a software and development time for the same. Also, compare the effort and development time for semidetached mode. Assume the following constant:

Mode	a	b	c	D
Organic	2.4	1.05	2.5	0.38
Semidetached	3	1.12	2.4	0.35

B	**Solve any One** **10 Marks Each**
i	Explain Critical path and how it is calculated with example?
ii	What ae Software Reviews? Explain the process of FTR.

Q3 (Total 20 Marks)	

A	**Solve any Two**	**5 marks each**
i	Explain the role and responsibilities of project manager.	
ii	Explain Capability Maturity Model.	
iii	Discuss Spiral Model with its advantages and Disadvantages.	
B	**Solve any One**	**10 Marks Each**
i	Discuss Change Management.	
ii	Explain various UML diagrams.	

Q4 (Total 20 Marks)		
A	**Solve any Two**	**5 marks each**
i	Discuss the principles of Risk Management.	
ii	Explain WBS.	
iii	Write a short note on Data Dictionary.	
B	**Solve any One**	**10 Marks Each**
i	Discuss various Leadership styles.	

ii

Consider a project with the following parameters.

(*i*) External Inputs:
- (a) 1 with low complexity
- (b) 5 with average complexity

(*ii*) External Outputs:
- (a) 5 with low complexity

(*iii*) External Inquiries:
- (a) 2 with average complexity

(*iv*) Internal logical files:
- (a) 4 with average complexity

(v) External Interface files:
- (a) 2 with high complexity

In addition to above, system requires

Number	Complexity Weighting Factor	Value
1	Backup and recovery	1
2	Data communications	2
3	Distributed processing	2
4	Performance critical	5
5	Existing operating environment	3
6	On-line data entry	3
7	Input transaction over multiple screens	1
8	Master files updated online	3
9	Information domain values complex	5
10	Internal processing complex	4
11	Code designed for reuse	5
12	Conversion/installation in design	4
13	Multiple installations	4
14	Application designed for change	4

Compute the function points for the project.