End Term @ SE & PM(EX)

Total points 30/40 ❓

Here, all questions are of MCQ type. You will get marks only when the correct option, for a given question, is ticked.

Roll no. *

M20AIE252

Systems engineering does seek the best possible system, which, however, is often not the one that provides the best performance **1/1**

- 🔘 Ture
- ⭕ False

Telephone is an innovation, but smart phone is an invention **1/1**

- ⭕ True
- 🔘 False

Technology Road mapping is **1/1**

- ⭕ The depiction of the present technology that has come to the market
- ⭕ The depiction of mission statement of the present technology
- ⭕ The way the marketing of the present technology to be carried out
- 🔘 The depiction of strategy for future development of present technology

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Sir C V Raman received Nobel Prize for developing spectrometer which is now available as Laser Raman. Thus, the equipment 'Laser Raman' is an innovation **1/1**

- 🔘 True
- ⭕ False

The systems engineer working on a project will plan, monitor, confront risk, and deliver the technical aspects of the project, while the project manager is concerned with all activities, including technical activities, to be integrated and controlled during the life of the project. **1/1**

- 🔘 True
- ⭕ False

Basic research where commercialization is not possible can not be considered as technology with TRL-2 **1/1**

- 🔘 True
- ⭕ False

The Technologies that can't be commercialized even after qualifying for TRL-4 are fall under **1/1**

- ⭕ Valley of heaven
- 🔘 Valley of death
- ⭕ Valley of flower

○ Valley of corporate world

The four project constraints are   1/1

○ a) Scope, People, Cost, Schedule

○ b) Scope, Location, Quality, Cost

○ c) Scope, Planning, Schedule, Quality

◉ d) Scope, Cost, Schedule, Quality

The working domain of Systems Engineer and Project Manager may   1/1

○ a) fully overlap

○ b) partially overlap

○ c) two disjoined set

◉ d) all of the above

IIT jodhpur has an incubation Centre named Technology Innovation and Start-up 2/2
Centre (TISC). It provides the incubate

○ (a) Space for carrying out activities

○ (b) Legal advice

○ (c) Space for meeting and conferences

◉ (d) All of the above

The Technology Road mapping was first used by the company   1/1

○ a) Samsung

◉ b) Motorola

○ c) Voltas

○ d) Apple

The major funding agency for the development of a technology to its TRL-7 and 1/1
above are from

○ (a) Government sector

◉ (b) Private sector

○ (c) Public sector undertaking

○ (d) None of the above

Systems Engineer is more an Engineer with adequate knowledge of   0/1

○ a) historian and curiosity of a scientist

○ b) a doctor and curiosity of a scientist

◉ d) a mathematician and curiosity of an Engineer

○ d) Mathematician and curiosity of a scientist

A Computer Systems Engineer   1/1

○ a) Understands the underlying concepts of computers,

○ b) Creates improvements on current processes and equipment,

c) Integrates hardware and software programs and concepts

● d) all the above

The full form of IRL in the contest of technology development is   1/1

○ a) Indian Railway Line

○ b) Income Related Ledger

○ c) Institute Readiness Level

● d) Industry Readiness Level

The success of a system engineer is   1/1

○ a) the success of individual

○ b) the success of project manager

● c) the success of the system

○ d) the success of the CEO

"Adding manpower to a late software project makes it later" is known as   ⋯/1

● a) Brooks' law

○ b) Snell's law

○ c) Kepler's law

○ d) None of the above

In all productive processes, adding more of one factor of production (attribute), ⋯/1 while holding all others constant, will at some point yield lower incremental per-unit returns. This law is known as

○ a) Law of incremental returns

● b) Law of diminishing returns

○ c) Law of no returns

○ d) None of the above

Mark the wrong statement: 2/2

○ A project is a set of activities that can be performed in a certain logical sequence.

○ A network is a graphic portrayal of the independency relationship among the activities of a project.

○ An arrow representing an activity can have any length and shape.

● An activity cannot be represented by more than one arrow, but an arrow can represent one or more activities.

All technologies that qualifies for Proof of Concept in the laboratory scale, are 1/1 going to be commercialized

○ True

● False

Mark the wrong statement.   0/1

○ Forward pass calculations yield the earliest and the latest start and finish times of various activities.

○ The difference between the latest and the earliest finish times is the total slack.

◉ Backward pass determines the latest start and the latest finish.

○ Determination of the earliest and the latest start time of various activities of a project is useful for proper planning of their execution.

Mark the wrong statement.   0/1

○ All activities on a critical path are critical activities.

○ A project network may have none, one, or more critical paths.

○ A delay in critical activity surely delays the completion of the project.

◉ Each critical activity has identical earliest and the latest start times.

Which of the following is not correct in respect of PERT calculations?   0/1

○ The expected time of an activity is a weighted average of three times estimates, a, m, and b, with respective weights of 1, 4, and 1.

○ The completion of the project using the PERT method follows a normal distribution.

○ The target time minus the expected time divided by standard deviation is the z value

◉ The sum total of variances of critical activity times gives the variance of the overall project completion time.

Given, expected duration of the project = 47 days, variance = 9 days. What is the   3/3
probability of not completing the project in 50 days? if Z = 0.33, area=0.1293
and for z=1, area=0.3413.

○ 0.6293

○ 0.8413

◉ 0.1587

○ 0.576

The function of systems engineering is to   1/1

○ a) Guide the engineering of simple system

◉ b) Guide the engineering of complex systems

○ c) Guide the engineering to address risk related problems only

○ d) Guide the engineering to solve financial problem

CPM is   1/1

○ Critical Project Management

◉ Critical Path Method

○ Critical Path Management

○ Crash Project Method

Which of the following statements is not correct?   1/1

○ PERT is probabilistic in nature

◉ CPM is probabilistic in nature

○ CPM and PERT use similar terminology but were developed independently

○ All of these statements are correct

1/1

Project schedules grow out of the basic documents that initiate a project.
a) True
b) False

◉ a)

○ B)

2/2

Which is the amount of time an activity can be delayed from its early start without delaying the planned project finish date?

a) Total Slack
b) Free Float
c) Total Time
d) Free Slack

◉ a

○ B

○ C

○ D

0/2

Project managers often illustrate progress with a(n) _____ showing key deliverables and activities
a) Tracking Gantt Chart
b) Gantt Chart
c) Network Diagram
d) Pert Chart

○ a)

○ B)

◉ C)

○ D)

0/2

---- dependencies involve relationships between project and non-project activities.
a) Mandatory
b) Discretionary
c) External
d) Internal

○ a)

○ B)

◉ C)

○ D)

2/2

Which is a network diagramming technique used to predict total project duration?
a) Critical Path Analysis
b) Critical Chain Scheduling
c) Gantt Chart

◉ a)

○ B)

○ C)

○ D)

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