International Institute of Health Management Research (IIHMR)
New Delhi

Batch: 2020 - 2022 **Total marks: 70**

HIT Project Management (HIT – 702) **Time: 2:00 HR**

Note: All questions need to be uploaded

All Compulsory

1. A project has the following activities, precedence relationships, and time estimates in weeks:

Activity	Immediate Predecessors	Optimistic Time	Most Likely Time	Pessimistic Time
A	-	15	20	25
B	-	8	10	12
C	A	25	30	40
D	B	15	15	15
E	B	22	25	27
F	E	15	20	22
G	D	20	20	22

a) Calculate the expected time or duration for each activity. (10 marks)
b) Construct the network diagram (5 marks)
c) Identify the critical path, and the project duration.(5 marks)

2. The following table defines the various activities in a small project:

Activity	Immediate Predecessors	Completion Time (days)
A	C	5
B	-	4
C	-	7
D	J	9
E	C	4
F	H	7
G	B, A	8
H		3
I	H	6
J	B, H	7

In addition there must be a time lag of at least 3 days between the end of activity F and the start of activity D.

a. Draw the network diagram. (5 marks)
b. Calculate the critical path, the overall project completion time (5 marks)
c. Calculate float for all activities (10 marks)
d. Suppose now that activity H could be split into two separate activities say H1 and H2, with H1 taking one day and H2 taking 4 days. The precedence relationship relating to H in this case would change to H1 must be finished before H2, J and F can start; F has no precedence and J will have to wait only for B to finish; and H2 must be finished before I can start.

F		7
H1		1
H2	H1	4
I	H2	6
J	B	7

Do you think that this split would be worthwhile or not. Justify. (15 marks)

3. You are the project manager of a project to build software for Telemedicine. The project is based on waterfall model as SDLC. The budgeted cost & duration of each phase is given below:
Requirement Gathering and documentation: Rs 95000/- 4 weeks
Initial design phase with documents : 45000/- 3 weeks
Development is budgeted for Rs 3.2 lakhs and comprises UI development, database development and code for software to function. UI screen will cost Rs 3000/- per screen. Total 28 screens. UI should be completed maximum within 2 weeks Database 2 weeks
Database design & development is 1.6 lakhs. Total development time is 6 weeks
For testing another 40,000/- is budgeted, followed by training of end users at client side and integration& implementation (Rs 60,000/-). It is expected that though testing of individual components may be done during development , the final testing of software which will be done using testers (2 people) for 1 week and the charge is mentioned for this. The training and integration, implementation can take maximum 2 weeks . Entire project is for 16 weeks
CPI of the project is 0.9091
Now answer the following questions: 3x5 = 15
a. Now you are in the 11th week of the project. So far 18 UI screens have been completed. How is the project performing?

A. Over budget and ahead of schedule
B. Under budget and ahead of schedule
C. Over budget and behind schedule
D. Under budget and behind schedule.

b. What is the actual cost of the project now?

c. Assuming that the COST variance experienced so far in the project will continue, how much more money will it take to complete the project?