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B.E / B.Tech. (Full Time) DEGREE END SEMESTER EXAMINATIONS, NOV / DEC 2012

COMPUTER SCIENCE AND ENGINEERING BRANCH

SEVENTH SEMESTER

33

CS9042 – SOFTWARE PROJECT MANAGEMENT

(REGULATIONS 2008)

Time: 3 hrs

Max. Marks: 100

Answer ALL Questions

Part – A (10 x 2 = 20 Marks)

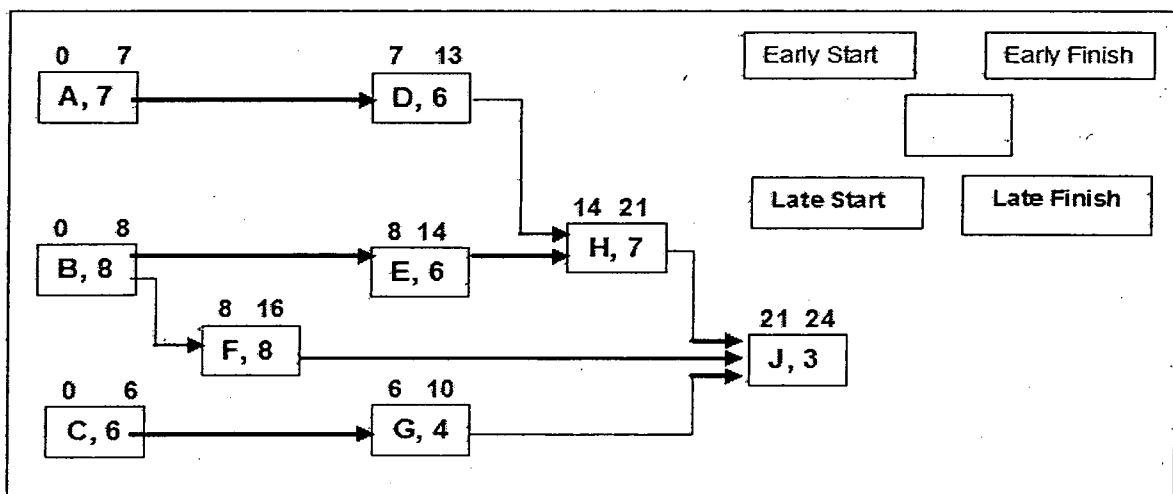
- 1 Differentiate between Strategic Assessment and Technical Assessment?
- 2 End user demands are the primary source of software projects. Justify.
- 3 Map the following:

Project Uncertainty	Process Model
a) User requirements are not clearly defined	1) Incremental
b) Requirements are certain but more complexities	2) Evolutionary or Incremental
c) Deadlines are tight	3) Evolutionary

- 4 What is 'slack' in Project Management? How is this useful for the Project Managers?
- 5 What is the significance of the 0/100 rule and the 50/50 rule and why would each be used?
- 6 How is S-Curve useful for Project Manager?
- 7 What is Delphi Technique?
- 8 What is WBS and how is it useful in managing projects?
- 9 What are the factors to be considered in the Oldham-hackman job characteristic model?
- 10 List down some of the problems in using LOC as an estimation technique.

Part – B (5 x 16 = 80 Marks)

11. Refer the network diagram given below and the legend used. *Legend:* Letter inside the box = Task Name and Number = Task Duration in weeks.



- (i) Find out the critical path. (2)
- (ii) For your reference, ES and EF have been already calculated. Calculate LS and LF for the tasks. What is the float of activity D, E and F. (6)
- (iii) Due to some changes in the scope, a new task 'I' has been introduced between 'F' and 'J' and its duration is 15 weeks. What is the implication now? (4)
- (iv) Due to the new activity 'I', the management says the project would be delayed by 15 weeks, where as, the PM says that it will be less. Who is correct and justify. (4)

12.

- (a)
 - (i) Project Management is the best method of implementing a change. Justify. (6)
 - (ii) For a new flight simulator product, unfortunately the project requirements were defined poorly. As a result, there is the risk that the final product will not pass the customer acceptance test. However, the project team is of the view that a prototype also would substantially reduce the cost of rework for failures at customer acceptance test. The details of the proposed prototypes are as follows: (10)

Cost to build prototype	\$98,000
Probability of passing customer acceptance test	
With prototype	90%
Without prototype	20%
Cost of rework after customer acceptance test	
With prototype	\$20,000
Without prototype	\$250,000

Using the expected monetary value analysis, as a team leader what would be your appropriate decision – with prototype or without prototype?

(OR)

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- (b)
 - (i) Briefly outline the major steps in risk management process? (6)
 - (ii) A company has to make a choice between two projects, since the available resources in money and kind are not sufficient to run both at the same time. Each project would take 9 months and would cost \$250,000. (10)

Project A: is a process optimization which would result in a cost reduction of \$120,000 per year. This benefit would be achieved immediately after the end of the project.

Project B: is a development of a new product which could produce the following net profits after the end of the project:

1 year: \$ 15,000
 2 year: \$ 125,000
 3 year: \$ 220,000

Assuming a discount rate of 5 % per year and looking at the present values of revenues of these projects in the first 3 years, which project would be selected?

13 (a) Explain in detail, Function Point Estimation with a suitable example. (16)

(OR)

13 (b) (i) One of the jobs of Project Manager is to manage the stakeholders effectively for the success-of the project. Briefly discuss. (5)

(ii) List down the steps in activity scheduling and resource allocation (5)

(iii) Write short notes on the following:

(a) accuracy and precision (3)

(b) effectiveness and efficiency (3)

14 (a) (i) Write short notes on Earned Value Analysis and how is it used for project review. (4)

(ii) As project manager you perform Earned Value Analysis as part of the project review and find the following values: (8)

EV: 100,000; PV: 125,000; AC: 100,000.

What is your interpretation in terms of schedule and cost? What are the options available to rectify the situation and the implications?

(iii) Write short notes on cash flow forecasting life cycle? (4)

(OR)

14 (b) (i) What are the stages in group development and what project management behaviors are exhibited in each stage? (5)

(ii) What is intrinsic and extrinsic motivation? (5)

(iii) Write short notes on Herzberg's motivation-hygiene theory. (6)

15 (a) (i) What is prototype and briefly discuss about it's classifications? (6)

(ii) What is Risk Reduction Leverage (RRL)? (4)

(iii) Find out the PERT estimate for the following tasks for the entire critical path of the project network. (6)

P- Pessimistic, M-Most Likely, O-Optimistic

Task	P	M	O
A	47	27	14
B	89	60	41
C	48	44	39

(OR)

15 (b) (i) What is the difference between mitigation and contingency planning as strategies for risk response planning? (4)

(ii) James has joined an Auto Component Manufacturing company as a Software (12)

The company is manufacturing various auto parts and supplying to leading companies like Ford, Hyundai, etc. They have good IT infrastructure facilities with connectivity to the parent office in Japan for information sharing periodically. As part of his role, he has been assigned the task of managing Material Management project. His team has gathered the requirements and moving to the design phase. Identify possible risks associated with this proposed project and possible ways to minimize the risks.