TRIBHUVAN UNIVERSITY
INSTITUTE OF ENGINEERING
Examination Control Division
2079 Chaitra

Exam.		Regular	
Level	BE	Full Marks	80
Programme	BEI	Pass Marks	32
Year / Part	III / II	Time	3 hrs.

Subject: - Project Management (CT 658)

✓ Candidates are required to give their answers in their own words as far as practicable.
✓ Attempt **All** questions.
✓ The figures in the margin indicate **Full Marks**.
✓ Assume suitable data if necessary.

1. Define project. Differentiate between project and operation. [2+2]

2. Define PMBOK. How the external environmental influences on ICT project? [2+3]

3. What is system view of project management? Explain about three sphere Model of system management. [2+3]

4. Describe about functional organization structure. What are the disadvantages of projectized organizational structure? [3+2]

5. Construct a network diagram for this project and find the critical path using data below. Calculate the Late Start, Late Finish and find the total float. [3+1+1+2]

Activities	Predecessor	Duration (days)
A	-	5
B	A	4
C	A	3
D	A	2
E	B	8
F	C	7
G	D	6
H	E, F, G	4

6. Describe about project process groups. [6]

7. Define EVM. Suppose you are the project manager on an IOT project. The project is set to be completed in 10 months with an estimated cost of Rs 500,000. The project has been running for 5 months now, the team has spent Rs 220,000 and completed an amount of work worth Rs 255,000. Calculate CPI and SPI and Share your conclusion. [1+2+2+1]

8. What is Project Integration Management? What type of information should include while making the project charter? [2+3]

9. Why communication management is important in IT project? As a project manager how do you conduct meeting effectively? [3+3]

10. Quality is one of the most important factors to be controlled for effective delivery of project objectives. How quality assurance and quality control are implemented in order to deliver a successful project? [5]

11. Explain about risk management plan. What are the different sources of risk in IT project? [2+3]

12. Explain about procurement management process flow. [2+3]

13. What is balanced scorecard (BSC)? How is it used in Business Organization? [4]

14. Write short notes on: (Any Three) [3×4]

    a) Need custom processes for IT project
    b) Project tripple constraints.
    c) Different quantitative technique of risk analysis
    d) Future trend of IT projects

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1. a) How can you relate the characteristics of project with your minor project? [4]

   b) Define PMBOK. Explain, how project environment influences on IT project? [1+4]

   c) Define project portfolio management. What are the reasons for failure of the ICT projects? [2+5]

2. a) Explain role and responsibilities of key project members. [6]

   b) What is system view of project management? Explain, how organizational structures influence the IT projects? [2+3]

   c) Explain overlaps of project process groups with clear diagram. [5]

3. a) Define the Project Integration Management. What are the essential information required to create Project Charter? [3+3]

   b) Consider the following table of activities.

Activities	Predecessor	Duration (Days)
A	Start	2
B	A	2
C	A	4
D	B, C	2
E	D	4
F	C	4
G	F	3
H	E, G	1
End	H	None

   (i) Draw the network diagram. [2]
   (ii) Complete the forward and backward passes. [4]
   (iii) What activities are on the critical path? Mark critical path in bold Line. [2]
   (iv) Which activities have Total Slack and Free Slack? [2]

4. a) What is EVM? Calculate the schedule and cost variance for a project whose estimated budget is $100,000 and estimated time is 50 man months. 5 people were involved in the project. After 7 months, 60% of work was completed and $80,000 was expended. Also estimate the new cost and time for the project. [2+5]

   b) Quality is one of the most important factors to be controlled for effective delivery of project objectives. How quality assurance and quality control are implemented in order to deliver a successful project? [2+3]

   c) Why communication management is important in IT project? As project manager, how do you write effective email? [2+2]

5. a) What is project risk? Explain about risk management plan. [1+4]

   b) Explain step by step procedure for procurement management process in government/public entity. [7]

   c) Write short notes on: [2×2]

   (i) Custom processes for IT project
   (ii) Balanced Score card

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1. What are the phases in project life cycle? How does a project life cycle differ from product life cycle? [2+3]

2. What are the essential interpersonal skill and managerial skill to be a successful Project Manger? [2+3]

3. Define project management Office. What are the reasons for success of the ICT projects? [2+3]

4. Describe different type of organizational structure. [6]

5. Consider the following activity detail table having all the duration in day answer the followings:

Activity	Predecessor	Duration
A	-	3
B	A	5
C	A	7
D	B	10
E	C	5
F	D, E	4

   a) Prepare the network diagram. [3]
   b) Identify the critical path and activity. [3]
   c) Find the project duration. [2]

6. Describe briefly about nine knowledge area under PMI. [6]

7. What is EVM? If your project is scheduled for 2 years. There are six different teams working on five major functional areas. Some teams are ahead of schedule while others are falling behind. There are cost overruns in some areas but you have also saved costs in others. Due to all this, it is difficult to understand whether you are over or under budget. Nine months into the project, while the total project budget is Rs 4200000/- you have already spent 1650000/- CPI is 0.875/-. Can you perform EV analysis and Budget Forecast? And Find the value of Earn Value (EV) and Variance at Completion (VAC). Does the project is over budget or under budget? [1+2+1+2+1]

8. Define project charter. Describe about project scope mangement process. [1+4]

9. Why communication management is important in ICT project? How to run the effective meeting in project? [3+2]

10. Define project quality. Explain 80/20 rule of the Pareto principle with example. [2+3]

11. Why risk management is an essential part of project management? Describe the risk identification techniques in ICT project? [2+3]

12. What do you mean by Project Procurement Management? What are the different processes adopted for procurement in ICT project? [2+3]

13. Why do you need custom processes for IT Projects? [4]

14. Write short notes on: (Any Three) [3×3]
    a) Balanced score card (BSC)
    b) Problem in ICT project
    c) SWOT analysis
    d) Characteristics of project

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1. a) What is project? List out different bases of project classification. [1+5]
   b) What do you mean by Internal, External and Task/operation environment in project? [2+2+2]
   c) Differentiate between Portfolio, Program and Project with suitable examples. [4]

2. a) What are the phases in Project Life Cycle? How does a Project Life Cycle differ from Product Life Cycle? [2+4]
   b) Explain about Matrix organization and its type. [6]
   c) What is PMI framework? [4]

3. a) Define project scope with example. As a project manager, what type of information you should include while making the project charter? [2+3]
   b) Consider the following activity detail table having all the duration in day answer the followings:

Activity	Predecessor	Duration
A	-	3
B	A	4
C	A	2
D	B	5
E	C	1
F	C	2
G	D, E	4
H	F, G	3

   (i) Prepare the network diagram. [4]
   (ii) Identify the critical activity. [2]
   (iii) Find the project duration. [2]
   (iv) Find EST, EFT, LST, LFT, TF, FF, IF and Independent float. [3]

4. a) Suppose you have a project that is scheduled to be completed in 10 days at a budgeted cost of 100000/- at the end of day 6 you do an analysis and you determine the job is 70% complete and you have spent 65000/-

   (i) What is the project's earned value at Day 6th? [1]
   (ii) What is the project's budget at completion? [1]
   (iii) Is the project ahead, behind schedule or on time? [2]
   (iv) Is the project expected to complete on budget, under or over budget? [2]
   (v) What is project's SPI and CPI at Day 6th? [2]

   b) How is quality assured in software industry? Differentiate between quality assurance and quality control. [4]

   c) Why reporting system is required in a project? Explain the hazards of communication error in a project. [2+2]

5. a) Describe different methods of qualitative and quantitative analysis of risk. [4+4]
   b) Discuss the process of procurement in any project. [5]
   c) Small IT companies can't follow all the suggestions as per PMI, so they can develop their own custom processes for managing project. Do you agree? Discuss. [3]

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