



**COLLEGE OF ENGINEERING, SCIENCE AND TECHNOLOGY  
SCHOOL OF ELECTRICAL AND ELECTRONICS ENGINEERING  
BACHELOR OF ENGINEERING PROGRAMME, YEAR 2 (BENG  
EEE 601 ENGINEERING PLANNING**

**FINAL EXAMINATION (SEMESTER 1, 2016)**

DATE/TIME/ROOM – Refer to Timetable

**INSTRUCTIONS TO CANDIDATES**

1. You are allowed 10 minutes extra reading time during which you are NOT to write.
2. Begin each answer on a fresh new page and use both sides of the sheets.
3. Write your candidate number on the top of each attached sheet.
4. The paper contains three sections, Sec A, Sec B & Sec C.
5. For all sheets of paper in which rough work has been done, cross it through and you must attach to your answer script.
6. Write clearly the number(s) of the question(s) attempted on the top of each sheet.
7. Good handwriting and way of representation of answers has weight with respect to marks.
8. **Draw diagrams if any with pencil only and label it and show all working where necessary.**
9. Always check your work before you leave the exam room.
10. **The paper is of 100 marks.**

**Section A: Multiple choice (Each question carry 1 mark; 20 x 1 = 20 marks)**

1. Who is ultimately responsible for quality management on the project?
  - a. Project engineer
  - b. Quality manager
  - c. Project manager
  - d. Team member
2. Risk tolerances are determined in order to help:
  - a. The team ranks the project risks.
  - b. The project manager estimates the project.
  - c. The team schedules the project.
  - d. Management knows how other managers will act on the project.
3. Which organization is closest to Functional organization?
  - a. Weak Matrix Organization
  - b. Balanced Matrix Organization
  - c. Strong Matrix
  - d. Projectized Organization
4. Which document is developed along the risk management processes from identify risks through perform qualitative risk analysis to control risks?
  - a. List of risk triggers
  - b. Risk mitigation
  - c. Risk register
  - d. Decision tree
5. At which stage, does a typical project has maximum cost?
  - a. Initial stage
  - b. Final stage
  - c. Middle stage
  - d. Cost is same at all stages
6. The project manager is making sure that the product of the project has been completed according to the project management plan. What part of the project management process is he in?
  - a. Planning
  - b. Monitoring and Controlling
  - c. Executing
  - d. Closing
7. The project charter:
  - a. Is only used for large projects
  - b. Is the project mission statement
  - c. Is a detailed project plan for the project
  - d. Does not contain the stakeholders responsibilities
8. The project schedule:
  - a. Is used to calculate how long the project will take
  - b. Can only be done using a software program
  - c. Contains the list of tasks, their duration and resources allocated
  - d. Is the same as the Gantt chart
9. Which is not a point used for three- point estimation?
  - a. Optimistic estimate
  - b. Most likely estimate
  - c. Budget estimate
  - d. Pessimistic estimate

10. Which of the following is not correct about initial phase of a project?
  - a. The cost associated at the beginning of the project is highest
  - b. Stakeholders have maximum influence during this phase
  - c. The highest uncertainty is at this stage of the project
  - d. All of the above statements are correct
11. A person who is involved in or may be affected by the activities or anyone who has something to gain or lose by the activity of the project is called a:
  - a. Team member
  - b. Stakeholder
  - c. Customer
  - d. Supporter
12. A manager that manages a group of related project is called a:
  - a. Project manager
  - b. Program coordinator
  - c. Project expediter
  - d. Program manager
13. Which would typically be outside the scope of business as usual activities?
  - a. Risk management
  - b. New product development
  - c. Business continuity management
  - d. Safety management
14. Project frequently do not meet customer expectations for which of the following reasons?
  - a. Poor risk management by the contractor running the project
  - b. Poor technical ability of the contractor running the project for the customer
  - c. Technical inability and poor risk management by the contractor
  - d. Unclear scope definition by the customer for whom the project is performed
15. How should change management be planned for?
  - a. Changes are not predictable, therefore planning for change management cannot be reasonable.
  - b. Planning for change management should be done while the various change control processes are being applied.
  - c. Change management can be planned in a set of management plans or a specific change management plan.
  - d. Changes are a sign of bad planning. One should avoid changes during a project, thus eliminating the need to manage them.
16. The foundation for project quality management may be described as the:
  - a. Confidence provided to stakeholders that requirements will be achieved
  - b. Requirements expressed in measurable terms as acceptance criteria
  - c. Audits to be performed during the project
  - d. Definition of quality roles and responsibilities
17. Which is the correct statement?
  - a. Corporate governance and project governance are more or less the same thing
  - b. Governance of the project management is the function of the quality department
  - c. Governance of the project management ensures projects are aligned to the organization's strategic objectives
  - d. Project management governance is the sole responsibility of corporate management.

18. Which activity is least likely during quality planning?
  - a. The trade-off between scope, time, cost quality and requirements
  - b. Identification of appropriate standards and methods
  - c. The timing of audits, reviews, tests and trials
  - d. Verification to ensure project deliverables conform to specification
19. What is earned value analysis?
  - a. A component of value management
  - b. A calculation of potential profits
  - c. A method of predicting the eventual time and cost at completion of a project
  - d. An analysis of the cost of the project to date against each cost category
20. Project handovers involves:
  - a. Disposal of materials no longer required
  - b. A review of lessons learned
  - c. Transfer of project deliverables to the sponsor and users
  - d. Review of the business benefits.

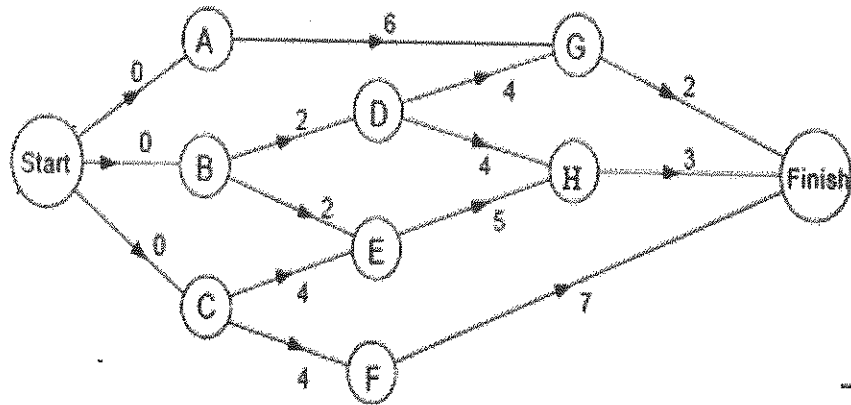
**Section B: Short Answer Questions (Each question carry 5 marks; 5 x 8 = 40 marks)**

1. In how many stages project life cycle can be divided? Explain with the help of chart showing the basic steps under each project life cycle.
2. What are the most common reasons for project termination?
3. What is project management Triangle? Explain its three constraints.
4. What do you mean by risk mitigation?
5. Write short notes on below concepts
  - a) Project Management
  - b) Work Breakdown structure
  - c) Project Risk
6. What is critical path?
7. Who is responsible for the project?
8. Describe the various steps involved in monitoring and controlling the project.

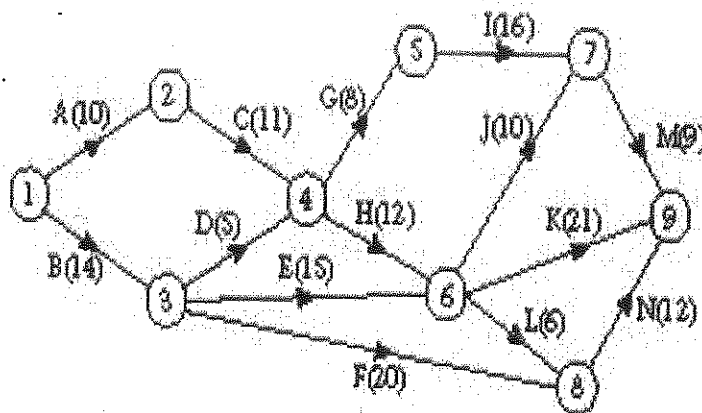
**Section C: Long Answer Questions (Each question carry 10 marks; 4 x 10 = 40 marks)**

1. Consider the following activity network, in which the vertices represent activities and the numbers next to the arcs represent time in weeks:
  - (a) Write down the minimum completion time of the project and the corresponding critical path.
  - (b) Find the float times of activities D and B.

**Note: You must show your working.**



2. An engineering project is modelled by the activity network shown below. The activities are represented by the arcs. The number in brackets on each arc gives the time, in days, to complete the activity. The project is to be completed in the shortest time.
  - (a) Calculate the ES and LS for each event.
  - (b) State the critical activities.
  - (c) Find the total float on activities D and F. You must show your working.



3. With respect to Earned value management:
- Explain three basic elements of EVM.
  - Variance
  - Performance Indices.
4. For the table given below which contains the list of activities, Optimistic time (o), Most probable time (m) and Pessimistic time (p); calculate
- The critical path
  - Find the probability that all critical activities will be completed in 35 days or less.

ACTIVITY	IMMEDIATE PREDECESSOR	OTIMISTIC TIME (o)	MOST PROBABLE TIME (m)	PESSIMISTIC TIME (p)
A	-	4	5	6
B	-	6	8	10
C	A	6	6	6
D	B	3	4	5
E	B	2	3	4
F	C,D	8	10	12
G	E	6	7	8
H	C,D	12	13	20
I	F,G	10	12	14

Note: You must show your working.

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**EQP RECEIPT CHECKLIST FORM**

Particulars		Details/Comments (To be filled by Unit Lecturer)	Tick if present on EQP (To be filled by exams staff)
<b>Cover Page</b>			
Fiji National University with Logo		✓	
College		✓	
School		✓	
Program		✓	
Unit Code		✓	
Unit Name		✓	
Examination Period		✓	
Duration of Examination		✓	
Instructions		✓	
Total Number of Pages		✓	
<b>Other Pages</b>			
Footer	Page Number	✓	
	Unit Code	✓	
	Examination Period	✓	
<b>Last Page</b>			
The End		✓	
<b>Overall</b>			
Proper Print		✓	
Examination Requirements (FNU/E-1)		✓	
Moderator's Report (FNU/E-3)		✓	
ERRS (Class List)		✓	
Unit Coordinator/Principal Lecturer's Name		Shekhar Upadhyay	

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