Model Answers

Higher National Diploma in Information Technology

Second Year, First Semester Examination – 2017

HNDIT2302 IT Project Management

Instructions for Candidates: No. of Questions: 05

Answer only **04 Questions** No. of Pages : 04

Time: Two (02) hours

Q 1			
	i.	Define term Project and name 3 projects attributes. Define term Project **A project is "a temporary endeavor undertaken to accomplish a unique product service or result**" **03 marks** 3 projects attributes. – **temporary** – **unique purpose** – **require resources, often from various areas** – **should have a primary sponsor and/or customer** – **involve uncertainty** **(01 attribute 01 markx3= 03 marks)**	(06 Marks)
	ii.	Project management framework includes the project stakeholders, PM knowledge areas, PM tools and techniques Name four core knowledge areas: – **Project Scope Management** – **Project Time Management** – **Project Cost Management** – **Project quality Management** **(01 mark for each management knowledge area: 01x4= 04 marks)**	(04 Marks)
	iii.	Briefly explain the term project Stakeholders – **Stakeholders are the people involved in or affected by project activities** **(03 marks)**	(03 Marks)
	iv.	A TeamSoft is a small company, which developed web based applications and sold computer parts. Ali is the hardware technician in sales department and he work under Dilmi, the hardware Engineer in the same	(06 Marks)

		section. Suranga is the software manager in Development Section. Mahesh is a software engineer works under Suranga. A TeamSoft has been awarded the contract to develop the Stock Control software for Hill Top hotel in Kandy, and Suranga has been assigned to manage the project. Raj works as the hotel manager at Hill Top Hotel. According to given case study, prepare a list of stakeholders in the Stock Control software project. **Raj, Mahesh, Suranga**	
	v.	Flexibility is a special characteristic of an IT Project. Briefly explain other two special characteristics of an IT project • **Invisibility: when physical artifacts such as bridge or road is being constructed the progress being made can actually be seen. With software progress is not immediately visible** • **Complexity: more complex than other engineering works** • **Conformity: software developers have to conform to the requirement of human clients.** **(Name a characteristic = 01 mark and briefly explain each= 02 marks 03x2= 06 marks)**	(06 Marks)
Q 2			
	i.	Name three process in project integration management • **Develop the project charter** • **Develop the preliminary project scope statement** • **Develop the project management plan** • **Direct and manage project execution** • **Monitor and control the project work**: • **Perform integrated change control** • **Close the project**: **(any 03: 01 mark x3= 03 marks)**	(03 Marks)
	ii.	Name three Project Scope Management Processes Scope planning. Scope definition Creating the WBS. Scope verification: Scope control: **(Any 3, 01 mark for each x 3= 03marks)**	(03 Marks)
	iii.	Briefly explain what is **Scope Management Plan**.	(03 Marks)

scope management plan is a document that includes descriptions of how the team will prepare the project scope statement, create the WBS, verify completion of the project deliverables, and control requests for changes to the project scope

iv. For each row on the following chart, enter the letter of the project you would select if the following information was provided. Give reasons for your each selection. (08 Marks)

	Project P	Project Q	Which project would you select?	Reason
NPV	Rs.45,000	Rs.89,000	Q	Because it has the highest positive NPV
Payback period	3 Years	2 Years	Q	We decide in favor of the project with the shorter payback period,

02 marks for selecting a project and 02 marks for reason.
02 +02= 01 x 2 =08 marks

v. Briefly explain the difference of Project life cycle and product life cycle (related to IT Projects). Your answer should include: explain of each life cycle, name each with stages of their generic life cycle and the difference of two life cycles. (08 Marks)

project life cycle

- **A project life cycle is a collection of project phases**
  …….(01 mark)
- **Project phases vary by project or industry, but some general phases include**
  - **concept**
  - **development**
  - **implementation**
  - **support ……..(02 Marks)**
- **The Systems Development Life Cycle (SDLC) is a framework for describing the phases involved in developing and maintaining information systems**

…….(01 Marks)

- **Common name for these general phases are in information systems.**
- **Planning**
- **Analyzing**
- **Designing**
- **Implementation**
- **Support**

……..(02 Marks)

- **Project life cycle and Product life cycle are 2 things.**
- **Project life cycle appears to all projects, regardless of the products being produced.**
- **Product life cycle vary considerably based on the nature of the product.**
- **Large system development products are developed as a series of projects.**

……....(02 Marks)

Q 3

i. Name five Project Scope Management Processes. (05 Marks)

- **Scope planning**:
- **Scope definition**:
- **Creating the WBS**:
- **Scope verification**:
- **Scope control**:

(01 mark for each =01x 5 =05 marks)

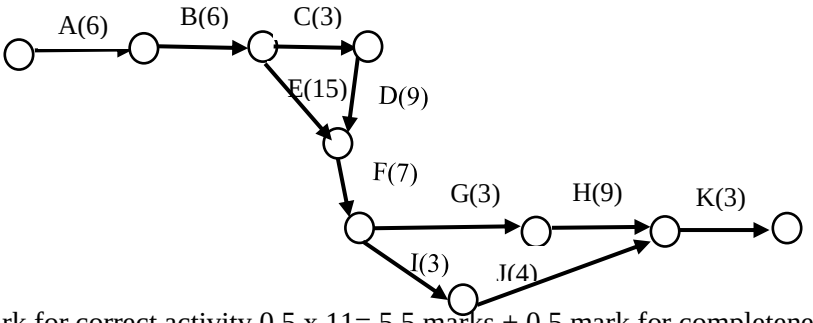
ii. You are working as a project manager of your development company. You and your team going to develop a Pont of Sale system. You have drawn up an outline project plan to include following main tasks

A	Collecting requirements by using interviews	6 weeks
B	Develop an architectural design & identify components	6 weeks
C	Specify and order new hardware	3 weeks
D	Test and install hardware	9 weeks
E	Develop and reuse software components and test it	15 weeks
F	Install application in client environment and entre data	7 weeks
G	Draw up a training plan	3 weeks
H	Train the users	9 weeks
I	Draw up an acceptance test plan	3 weeks
J	Acceptance Testing	4 weeks
K	Loading data and implement the new system	3 weeks

b). Dependencies between the tasks are listed as bellow

B depend on A
C & E depend on B
D depend on C
F depend on D & E
G depend on F
H depend on G
I depend on F
J depend on I
K depend on H & J

Draw the activity on arrow network diagram.



0.5 mark for correct activity 0.5 x 11= 5.5 marks + 0.5 mark for completeness

(10 Marks)

.Find the critical path

path	Duration	Total Duration
A ➔ B ➔ C ➔D ➔F ➔G ➔H ➔K	6+6+3+9+7+3+9+3	46 weeks
A ➔ B ➔ E ➔F ➔G ➔H ➔K	6+6+15+7+3+9+3	**49 weeks**
A ➔ B ➔ C ➔D ➔F ➔I ➔J ➔K	6+6+3+9+7+3+4+3	41 weeks
A ➔ B ➔ E ➔F ➔I ➔J ➔K	6+6+15+7+3+4+3	44 weeks

04 marks➔ 01 mark for correct one row in above

Highest duration 49 weeks.
Critical path
A ➔ B ➔ E ➔F ➔G ➔H ➔K

01 mark for correct critical path

(05 Marks)

.Find Critical Activities

activities in critical path
A, B,E, F, G, H, K

Correct all activates in critical path 02 marks otherwise no marks

(02 Marks)

.Find Project duration

49 weeks

(02 Marks)

		f). What is minimum duration need to complete project 49 weeks	(01 Marks)
Q 4			
	i.	Following statements with respect to IT Project Quality Management. Indicate True and False of those statements. a. It is the customer who ultimately decides if quality is acceptable. b. Quality assurance includes identifying which quality standards are relevant to the project and how to satisfy those standards. c. The main outputs of quality planning include quality metrics, quality checklists, a quality baseline, and updates to the project management plan. **A: True** **B: False** **C: True**	(05 Marks)
	ii	Briefly explain Project Cost Management Processes. **Cost estimating**: Developing an approximation or estimate of the costs of the resources needed to complete a project. **Cost budgeting**: Allocating the overall cost estimate to individual work items to establish a baseline for measuring performance. **Cost control**: Controlling changes to the project budget. **01 mark for name the process and one marks for explain it briefly.** **01 + 01= 02 Marks x3 =06 Marks**	(04 Marks)
	iv	You work as a member of software development team. Part of your project has 1000 Line of Codes. Find the value for average staff and productivity using basic COCOMO model. (hint: E= 2.4 x (size) 1.05 TDEV= 2.5 x (E) 0.38) Size= 1000/1000 kloc E= 2.4 x (size) 1.05 = 2.4 (1) 1.05 TDEV= 2.5 x (E) 0.38 = 2.5 [2.4 (1) 1.05] .38 Average Staff= Effort / TDEV = (2.4 (1) 1.05)/(2.5 [2.4 (1) 1.05] .38) Productivity = Size / Effort = 1/ (2.4 (1) 1.05)	(08 Marks)
	v	Briefly explain followings: a) Organizational planning	(08 Mraks)

		b) Resource loading **Organizational planning** involves identifying, documenting, and assigning project roles, responsibilities, and reporting relationships …. (04 Marks) **Resource loading** refers to the amount of individual resources an existing project schedule requires during specific time periods ……. (04 Marks)	
Q 5			
	i.	Name three Project Procurement Management Processes • **Planning purchases and acquisitions** • **Planning contracting**: • **Requesting seller responses**: • **Selecting sellers**: • **Administering the contract**: • **Closing the contract**: **(name any three 01x 03= 03 marks)**	(03 Marks)
	ii.	What is mean by communications management plan? **a document that guides project communications.**	(03 marks)
	iii.	Name four risk identification tools and techniques. **Brainstorming** **The Delphi technique** **Interviewing** **SWOT analysis**	(04 Marks)
	iv.	Briefly explain following Quantitative Risk Analysis techniques. a. Decision Trees b. Expected Monetary Value (EMV) a. A **decision tree** is a diagramming method used to help you select the best course of action in situations in which future outcomes are uncertain b. **EMV** is a type of decision tree where you calculate the expected monetary value of a decision based on its risk event probability and monetary value (02 marks for each= 02 x 2 =04)	(04 Marks)
	v.	Brief explain four skills needs for Project Manager. • **Communication skills: listening, persuading** • **Organizational skills: planning, goal-setting, analyzing**	(08 Marks)

		• **Team Building skills: empathy, motivation, esprit de corps** • **Leadership skills: set examples, be energetic, have vision (big picture), delegate, be positive** • **Coping skills: flexibility, creativity, patience, persistence** • **Technological skills: experience, project knowledge** **Any four skills explains.** **01 marks for mention each skill and one mark for briefly explain it.**	