

Spring Midterm Exam Date: 03 / 05 / 2015 Project Management – ENG509 Duration : 45 minutes

30 Marks

Name:

No. of Questions: 30 questions

Grade:

• Total Mark:

- Answer all the following questions
- The exam. consists of six page
 - 1. You have contracted a project coordinator for a short-term project. Her rate is \$50 per hour; it would take her 5 hours to finish her portion of the project. What is the total value of the contract?
 - 1) \$25000
 - 2) \$20000
 - 3) \$27500
 - 4) \$425.00
 - 2. Calculate the PERT estimate for the following: Pessimistic=20, Optimistic=12, Realistic=15.
 - 1) 1.33
 - 2) 15.33
 - 3) 15.67
 - 4) 1.78
 - 3. The company is implementing a quality improvement standard on its new projects, trying to improve the culture to make it conform to quality standards better. The company views the need to shift company mentality to a proactive approach to quality. Which of the following results would a company with a proactive quality approach NOT experience?
 - a) Greater quality standard
 - b) Increased warranty support
 - c) Decreased warranty support
 - d) Less inventory needed
 - 4. A Project Manager was assigned to manage a project to upgrade a bill payment system for their company's website. The project will cost the company \$20,000. It is projected that revenue and commission from transactions from the website will earn the company \$50,000. What is the benefit cost ratio of the project?
 - a) 2.50:1
 - b) 2.13:1
 - c) 3.13:1
 - d) 2.25 : 1
 - 5. You are the Project Manager on a project that will improve the manufacturing process at your company. Quality has been a big issue because there has been an excessive amount spent on inventory with a lot of waste in the building process and return of product after it has been sold. Presently, the company has a 1 Sigma quality standard with its manufacturing process. There is talk of utilizing quality tools at the company to help minimize these problems. Which of the following options looks like the best example of a quality tool for problem isolation?
 - a) Increasing the quality to a Sigma level greater than 1.
 - b) Making a greater use of checklists.
 - c) Utilizing a Fishbone diagram.
 - d) Watching for violations of the Seven Run Rule.

- 6. Retailer Company is putting a policy in place to use Just-in-time (JIT) inventory because its inventory costs are greater than the industry average. The company feels this policy helps minimize excess inventory costs and increase efficiency. What is the amount of inventory needed for this type of process?
 - a) 25%
 - b) Warehouse capacity
 - c) Minimal
 - d) Zero
- 7. Crosswind Homes Construction is building a customer's dream house. However, the city inspector for building permits has been in training for the last two weeks, and he has no backup. His absence causes a delay in the completion of the house. This is an example of what?
 - a) Mandatory dependencies
 - b) Crashing
 - c) Lag
 - d) External dependencies
- 8. You and a fellow Project Manager are having a discussion about his project. He says the network diagram for it has two paths that have the maximum duration of 32 units on the diagram. He says he doesn't have a critical path because they are both the same length, and you can only have one critical path. Which of the following is a true statement?
 - a) The critical path is the shortest path on the project.
 - b) You can have more than one critical path, but they are the longest paths on the project, and having more than one critical path increases your project risk.
 - c) You can have more than one critical path, but they are the shortest paths not the longest.
 - d) You can have more than one critical path, but they are the longest paths on the project, and having more than one critical path decreases your project risk.
- 9. The development team is building a new product for their company. This is a new product type at their company, and the market for the product is extremely unstable. According to the product manager, a key to success is the flexibility to adapt the product to the market changes that will occur during development. Which scheduling type best fits this need?
 - a) Crashing
 - b) Rolling wave planning
 - c) Precedence diagramming
 - d) Fast tracking
- 10. Float on a network diagram is also known as what?
 - a) GERT
 - b) Slack
 - c) PERT
 - d) Lag

- 11. You are the owner of a landscaping company. As you begin work on a medium-sized project, you need to rent a lawn tractor. This is the first time you have needed the tractor, and you want to know if you should buy or rent it. A new lawn tractor sells for \$2,000 and costs \$40 a day to maintain. You can rent one for \$135 a day with the maintenance included. How many days would you need to use this tool <u>before</u> it would make sense to buy instead of rent?
 - a) 23 days
 - b) 20 days
 - c) 21 days
 - d) 22 days
- 12. The company is in the testing phase of its project, tracking defects that come in from beta customers who are testing the project. Given the nature of a new project, a variety of defects is being discovered over time. Which chart or diagram helps display these?
 - a) Flowchart
 - b) Pareto chart
 - c) Fishbone diagram
 - d) Run chart
- 13. A Project Manager was assigned to manage a project to upgrade a bill payment system for their company's website. The project will cost the company \$93,800 over the next 16 months. It is projected that revenue and commission from transactions from the website will earn the company \$5,600 per month. How much time will it take to recover the cost for this project?
 - a) 17 months
 - b) 8 months
 - c) 25 months
 - d) 42 months
- 14. The project is going through Perform Quality Assurance process. Which of the following is a key tool that will be utilized in this process?
 - a) Quality audits
 - b) Quality improvement
 - c) Quality management plan
 - d) Quality testing
- 15. A new printer that costs \$3,600 has just been purchased for your company's graphics department. The department head is told that she needs to set up a depreciation schedule for the printer over a three-year period with a value of \$0 at the end of this period. She will use standard depreciation in the calculation. What is the amount per year the printer will depreciate?
 - a) \$10,800.00
 - b) \$1,800.00
 - c) \$3,600.00
 - d) \$1,200.00
- 16. However, rain has delayed the finish by two weeks. The Project Manager evaluates the schedule and determines that the electrical and plumbing work could occur at the same time instead of right after each other, as laid out in the schedule. This is an example of what?
 - a) Crashing
 - b) Mandatory dependencies
 - c) Fast tracking
 - d) Lag

- 17. Float is calculated by which of the following?
 - a) Late start-early start (LS-ES)
 - b) Late finish-early finish (LF-EF)
 - C) Late finish-late start (LF-LS)
 - d) A and B
- 18. The project Planning is progressing on schedule. The Project Manager and the team meet regularly and are ready to estimate cost. The customer needs an estimate as soon as possible. What estimating method should the team use?
 - a) Parametric estimating
 - b) Estimate Costs
 - c) Analogous estimating
 - d) Bottom-up estimating
- 19. The new initiative project is on schedule and under budget. The customer is pleased but wants a scope change. As a result, a new team is brought in to help the existing team implement this scope change. Before the team arrives, senior management wants to see where the project stands. Which of the following do you show them?
 - a) Work breakdown structure
 - b) Network diagram
 - c) Milestone chart
 - d) Gantt chart
- 20. Calculate the variance for the following: Pessimistic=25, Optimistic=13, Realistic=15.
 - a) 16.33
 - b) 2.00
 - c) 4.00
 - d) 17.67
- 21. Given the following figures on a project, calculate the planned value: earned value=\$750.00; current progress efficiency=1.1.
 - a) \$631.82
 - b) \$681.82
 - c) \$756.82
 - d) \$731.82
- 22. The project to develop a more effective measurement device for fracture management has ten team members and is three weeks ahead of schedule. Four of the team members are working on critical-path related items. In discussing project with a key sponsor, the Project Manager credits those four team members with the excellent progress and verifies the slack of the critical path. What is the slack?
 - a) Negative three weeks
 - b) 0 (Zero)
 - c) There is insufficient information to determine the slack
 - d) Plus three weeks

- 23. The project to concentrate advertising efforts on e-mail campaigns is in the planning stage. Before the project team begins the Estimate Activity Resources process, they create a project schedule network diagram. What is the purpose of this diagram?
 - a) To show the sequencing of the project activities
 - b) To show the decomposition of the work of the project
 - c) To show the schedule
 - d) To show the duration estimate of the project

24. Of the following, which is the most comprehensive description of a summary schedule?

- a) A schedule that shows an aggregate view of activities at a summary level and is typically used in daily briefings with the project team
- b) A schedule that shows an aggregate view of activities at a summary level and typically accompanies schedule variance reports
- c) A schedule that shows an aggregate view of activities at a summary level and provides a picture of the duration and sequence of those activities
- d) A schedule that shows an aggregate view of activities at a summary level and is a high level schedule typically used to determine the critical path
- 25. Of the following, which best describes the typical usage of resource leveling and schedule compression techniques?
 - a) The techniques are used together
 - b) Resource leveling is applied first, then the schedule compression techniques
 - c) The techniques are used together in several iterations
 - d) Schedule compression techniques are applied first, then resource leveling
- 26. Activity A is worth \$200, is 100% complete, and actually cost \$200. Activity B is worth \$75, is 90% complete, and actually cost \$120 so far. Activity C is worth \$200, is 75% complete, and has cost \$175 so far. The total budget is \$1,000. What is the cost performance index for the project?
 - a) 0.88
 - b) 0.84
 - c) 1.12
 - d) 1.16
- 27. Project A has an NPV of \$275K over 2.5 years. Project B has an IRR of 3.2%. Project C has a BCR of 0.89:1. Project D has four people on it and is encountering scope creep. Which of the following projects stand the greatest chance of getting <u>cancelled</u>?
 - a) Project A
 - b) Project B
 - c) Project C
 - d) Project D
- 28. The project planning process group is progressing. The team has involved the accounting department to set up a system of codes that the accounting department will use to track work on the project. This is known as what?
 - a) Accounting codes
 - b) WBS numbering
 - c) Determine Budget
 - d) Chart of accounts

- 29. Company-wide software licensing fees are an example of what type of project cost?
 - a) Variable indirect
 - b) Variable
 - c) Fixed
 - d) Fixed direct
- 30. A new tape backup server has just been purchased for backing up the company's development and release software. The tape backup server costs \$85,000, and it was necessary to upgrade the local area network with an Ethernet switch at a cost of \$15,000. The Project Manager is told that she needs to set up a depreciation schedule for the tape backup server over a five-year period with a value of \$0 at the end of this period. She will use standard depreciation in the calculation. What is the amount per year the server will depreciate?
 - a) Not enough information
 - b) \$17,000
 - c) \$20,000
 - d) \$14,000