**SPM Quiz**

**Name: \_\_\_\_\_\_SOLUTION\_\_\_\_\_\_\_\_\_\_\_**

**Question 1: For the following project:**

|  |  |  |  |
| --- | --- | --- | --- |
| Activity ID | Activity | Duration | Precedents |
| A | Hardware Selection | 6 | - |
| B | Software Design | 4 | - |
| C | Install hardware | 3 | A |
| D | Code and test software | 4 | B |
| E | File take-on | 3 | B |
| F | Write user manuals | 10 | - |
| G | User Training | 3 | E,F |
| H | Install and Test System | 2 | C,D |

1. **create Network Diagram**

C = 3 Days

H = 2Days

D= 4 Days

A = 6 Days

G = 3 Days

E = 3 Days

B = 4 Days

F = 10 Days

1. **calculate CPM**

**FG = 10+3 = 13 days**

1. **Complete the following activity table after forward pass and backward pass.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Activity ID | Duration | Earliest Start date | Latest start date | Earliest Finish date | Latest finish date | Total float |
| A | 6 | 0 | 2 | 6 | 8 | 2 |
| B | 4 | 0 | 3 | 4 | 7 | 3 |
| C | 3 | 6 | 8 | 9 | 11 | 2 |
| D | 4 | 4 | 7 | 8 | 11 | 3 |
| E | 3 | 4 | 7 | 7 | 10 | 3 |
| F | 10 | 0 | 0 | 10 | 10 | 0 |
| G | 3 | 10 | 10 | 13 | 13 | 0 |
| H | 2 | 9 | 11 | 11 | 13 | 2 |

**Question 1: For the following project:**

|  |  |  |  |
| --- | --- | --- | --- |
| Activity ID | Activity | Duration | Precedents |
| A | Hardware Selection | 3 | - |
| B | Software Design | 5 | - |
| C | Install hardware | 7 | - |
| D | Code and test software | 8 | A |
| E | Acceptance testing | 5 | B |
| F | Endurance testing | 15 | C |
| G | File take-on | 4 | E |
| H | Write user manuals | 5 | F |
| I | User Training | 6 | D |
| J | Install and Test System | 4 | G,H |

1. **create Network Diagram**
2. **calculate CPM**

**CFHJ = 7+15+5+4 = 31 days**

1. **Complete the following activity table after forward pass and backward pass.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Activity ID | Duration | Earliest Start date | Latest start date | Earliest Finish date | Latest finish date | Total float |
| A | 3 | 0 | 14 | 3 | 17 | 14 |
| B | 5 | 0 | 13 | 5 | 18 | 13 |
| C | 7 | 0 | 0 | 7 | 7 | 0 |
| D | 8 | 3 | 17 | 11 | 25 | 14 |
| E | 5 | 5 | 18 | 10 | 23 | 13 |
| F | 15 | 7 | 7 | 22 | 22 | 0 |
| G | 4 | 10 | 23 | 14 | 27 | 13 |
| H | 5 | 22 | 22 | 27 | 27 | 0 |
| I | 6 | 11 | 25 | 17 | 31 | 14 |
| J | 4 | 27 | 27 | 31 | 31 | 0 |

**Question 2:**

1. **There are three types of organizational structures, describe matrix organizational structure in detail and name other two structures.**
2. **What are function points? Where they are used and what are their advantages and disadvantages?**