

Appendix 12

PBL based Internship Program - Delayed Post -Test

Please answer all questions:

Time: 2 hours

Short questions should be answered in 2-3 lines.

Total Marks -100

Pretest - Site Survey and Ground investigation

Marks - 17

- | | |
|--|---|
| 1. Draw an example format of site plan showing different features for proposed site? | 2 |
| 2. List down five adjacent site/property features you may find to depict on site plan? | 3 |
| 3. What role does Bench Mark Elevation play in the drainage pattern of proposed site? | 2 |
| 4. Which factors to be considered while identifying the physical properties of soil? | 3 |
| 5. Why it is important to explore the underground utilities of the site before proposing construction project? | 3 |
| 6. The correction for sag in chain is always | 1 |
| a) additives | |
| b) always subtractive | |
| c) always zero | |
| d) sometimes additive and sometimes subtractive | |
| 7. The number of horizontal cross wires in a stadia diaphragm is | 1 |
| a) one | |
| b) two | |
| c) three | |
| d) four | |
| 8. Mistakes which may produce a very serious effect upon the final results arise due to | 1 |
| a) In attention | |
| b) Inexperience | |
| c) Carelessness | |
| d) All of these | |
| 9. While surveying a plot of land by plane tabling, the field observations | 1 |
| a) And plotting proceed simultaneously | |
| b) And plotting do not proceed simultaneously | |
| c) And recorded in field books to be plotted later | |
| d) All the above | |

Construction Site Excavation Activities.

Marks - 10

- | | |
|---|---|
| 1. List down the steps you observed were followed by site supervisor while starting site excavation activities? | 2 |
| 2. List down four safety measures needed as per your experience for onsite excavation activities? | 3 |
| 3. Describe which way Earth work estimates calculated during excavation activity? | 2 |
| 4. Name two types of excavation equipments which you observed that has been used on site during excavation activities.? | 1 |

5. Which factors decide the type of excavation equipment required for onsite excavation activities? 2

Soil Testing Reports, Foundation design and Coordination of Design plans **Marks - 16**

1. Which different soil tests did you find in soils testing report for a proposed project? 2
2. How you can analyse the quality of soil as per soil properties mentioned on soil report? 3
3. What is the importance or need of soil testing in foundation design of proposed building? 2
4. Illustrate if any differences you found in the project foundation design as compared to classroom learned format of foundation design? 2
5. Which other types of building plans does supervisor need to coordinate during building construction activities? 3
6. Allowable bearing pressure for a foundation depends upon 1
 - a) allowable settlement only
 - b) ultimate bearing capacity of soil only
 - c) both allowable settlement and ultimate bearing capacity
 - d) none of above.
7. The bearing capacity of a water logged soil can be improved by 1
 - a) Compacting the soil
 - b) Draining the soil
 - c) Increasing the depth of foundation
 - d) Grouting
8. The maximum bearing capacity of soil is that of 1
 - a) Black cotton soil
 - b) Loose fine sandy soil
 - c) Dry coarse sandy soil
 - d) Hard rocks
9. For the construction of flyovers in sandy soils, the type of foundation provided, is 1
 - a) Strap footing
 - b) Raft footing
 - c) Combined footing
 - d) Pier footing

RCC Foundation Construction activities: **Marks - 16**

1. What is the importance of material procurement in construction project timelines and budget? 2
2. What challenges you identified during onsite BBS -Bar Bending Schedule procedure? 2
3. Which type of concrete mixer was used at construction site? 2
4. How to calculate the form work quantity required for construction site project? 2
5. List down any three challenges you observed at RCC foundation construction site faced by site supervisor? 3
6. List down which different parameters you identified were depicted on RCC foundation construction plans as compared to classroom RCC drawing format? 2

7. Workability of concrete is inversely proportional to 1
 a) time of transit
 b) water-cement ratio
 c) the air in the mix
 d) size of aggregate
8. Increase in the moisture content in concrete 1
 a) reduces the strength
 b) increases the strength
 c) does not change the strength
 d) all of the above
9. For a given aggregate content, increasing the water- cement ratio in concrete 1
 a) increases shrinkage
 b) decreases shrinkage
 c) does not change shrinkage
 d) none of the above

Building Construction Activities

Marks - 16

1. List down any three regulations were implemented per NBC code during your field experience at building construction site? 3
2. List down procedure of concrete pouring you observed at building construction practices? 2
3. How grade wise concrete mix quantity ratios are monitored and supervised per your field /onsite observation ? 2
4. According to your field experience with which field test or methods does the construction site supervisor performs to test the concrete mix ratio quantities? 2
5. According to your field experience list down any four challenges that construction engineer or site supervisor face during onsite building construction activities? 3
6. During your field experience list down any safety violations you observed on construction site ? 2
7. The diameter of longitudinal bars should be minimum of. 1
 a) 25 mm
 b) 20 mm
 c) 12 mm
 d) 8 mm.
8. A foundation is called deep if its depth, is 1
 a) One-fourth of its width
 b) Half of its width
 c) More than its width
 d) Equal to its width

Precast Structures**Marks - 13**

1. What two differences you identified in Precast & onsite construction after having Precast plant visit? 2
2. After your visit to Precast manufacturing plant list down any two specifications were implemented as required by NBC for constructing Precast units? 2
3. Did you identify any benefits of using Precast construction components in construction activities which help in managing the budget and timeline of project? 2
4. After visit the Precast manufacturing plant what are the challenges you identified they face during manufacturing and transporting Precast construction components? 3
5. After your Precast plant visit which two precast products you think are being useful in construction industry? 3
6. After pre-stressing process is completed, a loss of stress is due to 1
 - a) Shrinkage of concrete
 - b) Elastic shortening of concrete
 - c) Creep of concrete
 - d) All the above

Construction Management and Administrative practices**Marks - 12**

1. What are the advantages of using Primavera software? 2
2. List three document which are needed for preparation and filing of tender documents? 2
3. How construction management is different from construction engineering? 2
4. What are the skills and management practices required for managing construction site activities 2
5. What are the administrative responsibilities which are managed by construction manager? 2
6. According to ISI method of measurement, the order of the sequence is 1
 - a) Length, breadth, height
 - b) Breadth, length, height
 - c) Height, breadth, length
 - d) None of these
7. The main factor to be considered while preparing a detailed estimate, is 1
 - a) Quantity of the materials
 - b) Availability of materials
 - c) Transportation of materials
 - d) All the above