UNIT-I

SURVEYING AND CIVIL ENGINEERING MATERIALS

PART-A (16 Marks)

PART-B (16 Marks)

1. Explain with neat sketch prismatic compass and principles of compass surveying.

(16)

2. Explain with neat sketch 20m chain and principles of chain surveying. (16)

3. The following staff readings were observed successively with level, the instrument

4. What are the requirements of good building stone & state important varieties of Building stones (16)

5 The following perpendicular offset were taken at 10 meter intervals from an Survey line to an irregular boundary line

3.145m, 4.30m, 8.20m, 5.60m,7.60m, 4.2m, 5.6m, 4.3m.

Calculate the area enclosed between the survey line, the irregular boundary line, and first and last offsets by the application of

a) Average ordinate method b) Trapezoidal rule and c) Simpson's rule

(16)

6. What are the different types of cement? Explain the properties and uses?

(16)

7. What are the different types of steel? Explain the properties and uses?

(16)

UNIT-II

BUILDING COMPONENTS AND STRUCTURES

PART-B (16 Marks)

1. a. List the six important points to be considered while selecting a site for construction of Dam.

b. Explain differential leveling with a neat sketch.

2. Explain with neat sketch the different types of piles.

3. List out the different types of bond in brick wall and explain any three in detail.

4. Draw a neat sketch of a reinforced cement concrete column and explain.

5. Explain the types of floor suitable for residential and commercial building.

6. Explain briefly the different types of pitched roof coverings.

UNIT- III

POWER PLANT ENGINEERING

PART-B (16 Marks)

1. Explain working principle of thermal Power plant With Neat sketch. (16)

2. Explain working principle of Nuclear Power plant With Neat sketch. (16)

3. a) Explain working principle of Hydro Electric Power plant With Neat sketch.

(12)

b) Write its advantages and Disadvantages (4)

4. a) Explain working principle of Disel Engine Power plant With Neat sketch.

(12)

b) Write its advantages and Disadvantages (4)

5. a) Explain working principle of Gas turbine Power plant With Neat sketch. (12)

b) Write its advantages and Disadvantages (4) .

6. a) With the help of a neat sketch explain the working of Reciprocating Pump (8)

b) With the help of a neat sketch explain the working of Impulse Turbine (8)

7. a) With the help of a neat sketch explain the working of Centrifugal Pump (8)

b) With the help of a neat sketch explain the working of Impulse Turbine (8)

UNIT IV

INTERNAL COMBUSTION ENGINES

PART-A (16 Marks)

1. Describe the principal parts and functions of a Four Stroke Disel engine With Neat Sketch (16)

2. Describe the principal parts and functions of a Four Stroke Petrol engine With Neat Sketch (16)

3. Describe the principal parts and functions of a Two Stroke Disel engine With Neat Sketch (16)

4. Describe the principal parts and functions of a Two Stroke Petrol engine With Neat Sketch (16)

5. Describe the principal parts and functions of any one high pressure boiler With Neat Sketch (16)

6. Describe the principal parts and functions of Babcock Wilcox boiler With Neat Sketch (16)

UNIT V

REFRIGERATION & AIR CONDITIONING

PART-B (16 Marks)

1. Explain the principle and working of vapour compression refrigeration system
2. Explain the principle and working of the vapour absorption refrigeration system
3. Give the comparison of vapour absorption with vapour compression refrigeration system
4. Explain the summer air-conditioning system for hot and dry weather
5. With the neat sketch explain the layout of a window room air conditioning
6. Explain the layout of the split type air conditioning system
7. Mention and explain the different types of refrigerant used
8. Explain the advantages and disadvantages of the window air conditioning unit