

Registration No.:

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Total Number of Pages: 02

Course: IDD (B.Tech and M.Tech)

Sub\_Code: 23ES1005

2<sup>nd</sup> Semester Regular/Back Examination: 2024-25

SUBJECT: Basic Civil Engineering

BRANCH(S): AE, AEIE, AERO, AUTO, BIOMED, BIOTECH, CHEM, CIVIL, CSE, CSEAI, CSEAIML, CSEDS, CSEIOT, CST, ECE, EEE, EEVDT, ELECTRICAL, ELECTRICAL & CE, ETC, IT, EE, MANUTECH, MECH, METTA, MINERAL, MINING, MME, PLASTIC

Time: 3 Hours

Max Marks: 100

Q.Code: S533

Answer Question No.1 (Part-I) which is compulsory, any eight from Part-II and any two from Part-III.

The figures in the right hand margin indicate marks.

**Part-I**

**Q1 Answer the following questions: (2 x 10)**

- Distinguish between coarse aggregates and fine aggregates.
- Name two important disciplines of Civil engineering.
- Write the basic Components of a Road.
- List out the various applications of mortar.
- Provide two examples of adhesives.
- List out the various constituent materials of plane cement concrete.
- Name two advances of conveyor system.
- Define the term "Per capita demand".
- Explain the term "disinfection".
- Mention the importance of Irrigation in our country.

**Part-II**

**Q2 Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve) (6 x 8)**

- State in detail about the Importance of civil engineering in infrastructure development of the country.
- Draw the neat sketches of basic components of a building.
- Name the different Physical, mechanical and durability properties of construction materials.
- Describe in detail about various applications of stones as construction material.
- State in detail about different types of tiles used for building construction.
- Write short note on urban road classification.
- Distinguish between rigid pavement and flexible pavement with examples.
- Write short note on the sedimentation aided with coagulation process in water treatment.
- Provide a detailed classification bricks as per Bureau of Indian Standards (BIS).

- j) State the various purposes of construction of dam.
- k) Discuss the layout of canal Irrigation system with neat sketches.
- l) List out the various non-ferrous metals used as construction material. Write two advantages of non-ferrous metals over ferrous metals.

**Part-III**

**Only Long Answer Type Questions (Answer Any Two out of Four)**

**(16 x 2)**

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|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| <b>Q3</b> | Provide a detailed classification of cement used in construction.                                                                                         | <b>(16)</b> |
| <b>Q4</b> | Summarize in detail about basic characteristics, advantages, and disadvantages of various transportation modes i.e. air, rail, road, and water transport. | <b>(16)</b> |
| <b>Q5</b> | Describe in detail about the various sources of water. State the importance of water treatment in cities.                                                 | <b>(16)</b> |
| <b>Q6</b> | Elaborate in detail about NBC Classification of buildings.                                                                                                | <b>(16)</b> |