

# C. U. SHAH UNIVERSITY

## Summer Examination-2022

Subject Name: Dock Harbour and Airport Engineering

Subject Code: 4TE08DHA1

Branch: B.Tech (Civil)

Semester: 8

Date: 04/05/2022

Time: 11:00 To 02:00

Marks: 70

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
  - (2) Instructions written on main answer book are strictly to be obeyed.
  - (3) Draw neat diagrams and figures (if necessary) at right places.
  - (4) Assume suitable data if needed.
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- Q-1 Attempt the following questions: (14)**
- a) Differentiate between Turbo jet and turbo prop engine (1)
  - b) What is Rudder ? (1)
  - c) What are the objectives of regional planning? (1)
  - d) What is the runway orientation? (1)
  - e) What is the function of hangar? (1)
  - f) What do you understand by terminal building? (1)
  - g) What is airport grading? (1)
  - h) What do you mean by the term visual aid at airport? (1)
  - i) What are slipways? (1)
  - j) What is harbor planning? (1)
  - k) What are the important wind characteristics? (1)
  - l) Define Tidal range . (1)
  - m) Why fenders are provided on docking platform? (1)
  - n) What is floating dock? (1)

**Attempt any four questions from Q-2 to Q-8**

- Q-2 Attempt all questions (14)**
- (a) What is the significance of water transportation compare to other modes of transportation? Explain in detail. (7)
  - (b) Explain the following with neat sketches. (7)
    - i) Natural harbor ii) Semi-natural harbor
- Q-3 Attempt all questions (14)**
- (a) Explain the Beaufort scale and its use. (7)
  - (b) What is need of breakwater? Describe wall types breakwater. (7)
- Q-4 Attempt all questions (14)**
- (a) What are the different types of lock gates? Explain with sketch the mitre type gate. (7)



- (b) List various cargo handling equipment's and explain any two (7)
- Q-5 Attempt all questions (14)**
- (a) Write a note on different types of buoys (7)
- (b) What is dredging? Classify different types of dredging works. (7)
- Q-6 Attempt all questions (14)**
- (a) Describe aero plane component parts drawing sketch. (7)
- (b) Explain what is meant by stop way and clear way. (7)
- Q-7 Attempt all questions (14)**
- (a) Mention different types of wind rose diagram and their utility. (7)
- (b) What are the requirements of good hangar site? (7)
- Q-8 Attempt all questions (14)**
- a) Write short note on : (7)
- i) Airport access system.
- ii) Decentralized concept of planning terminal building
- b) What do you understand by mass-haul curve? what information can be obtained from it? Explain the procedure of working with this curve. (7)

