C.U. SHAH UNIVERSITY

Summer Examination-2017

Subject Name: Dock Harbor and Airport Engineering

Subject Code: 4TE08DHA1 Branch: B.Tech (Civil)

Semester: 8 Date: 15/04/2017 Time: 02:30 To 05:30 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.

Q-1		Attempt the following questions:	(14)
	a)	Define pier-head.	1
	b)	What is the full form of ICAO?	1
	c)	Define airport capacity.	1
	d)	What do you mean by dredging?	1
	e)	Define ferry.	1
	f)	What are dolphins?	1
	g)	Draw a sketch of normal landing of an aircraft.	1
	h)	What is airport grading?	1
	i)	Define Wharves.	1
	.j)	The length of runway is increased per 300 m rise above MSL	1
	k)	FAA stands for	1
	1)	Beaufort scale is used to determine	1
	m)	Define a harbor.	1
	n)	Define clapotis.	1
Atten	,	Four questions from Q-2 to Q-8	•
Q-2		Attempt all questions	(14)
	(a)	Why fenders are provided on docking platform? Draw the sketch of wooden and rubber fenders.	(7)
	(b)	What do you understand by terminal building? What are the facilities provided in terminal building?	(7)
Q-3		Attempt all questions	(14)
	(a)	Find the design length of runway required if the length under standard atmospheric	(7)
	. ,	condition is 2000 m. The actual elevation of the site is 1000 m above MSL and the	` ′
		airport reference temperature is 16°C. Max. effective gradient is 0.5%	
	(b)	Make a neat sketch of a dipper dredge and describe its use. What are the special	(7)
		advantages of this type dredge?	
Q-4		Attempt all questions	(14)
	(a)	What are the different types of lock gates? Explain with sketch the mitre type gate.	(7)
	(b)	Describe the moment of an aircraft in three principal axes with the help of neat sketch	(7)



Q-5		Attempt all questions	(14)
	(a)	Sketch a typical cross-section of a warehouse and point out the essential features.	(7)
	(b)	Discuss functions of airport drainage. Describe surface and subsurface drainage systems.	(7)
Q-6		Attempt all questions	(14)
	(a)	What are the important wind characteristics? Explain the Beaufort scale and its use.	(7)
	(b)	What are the objectives of regional planning? What are the advantages of regional planning? What are to be collected from regional planning?	(7)
Q-7		Attempt all questions	(14)
	(a)	What is harbor planning? List the factors to be studied during harbor planning. Give guiding principles of harbor planning.	(7)
	(b)	What is the function of taxiway in airports? Draw cross section of taxiway showing all components	(7)
Q-8		Attempt all questions	(14)
-	(a)	What are Mooring buoys? What are the component parts of a buoy unit? Explain with sketch	(7)
	(b)	(i) Give requirements of signals in navigation.	(03)
		(ii) Write short note on Light house (04)	1)

