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Seat No.: _____

No. Of Printed Pages: 02

SARDAR PATEL UNIVERSITY

M.Sc. Geoinformatics

SEM – I, October 2016

Principles & Application of GPS (PS01CGIN03)

DATE: 24TH Oct. 2016

TIME: 10:00 AM TO 1:00 PM

DAY: Monday

TOTAL MARKS: 70

Q. 1 Choose the correct answer.

[08]

- (1) GPS space segment constellations contain total _____ satellites.
(A) 24 (C) 42
(B) 7 (D) 3
- (2) IRNSS is _____ position system of India.
(A) Global (C) Universal
(B) Regional (D) None of above
- (3) In GPS satellite has on board _____ of clocks.
(A) Ordinary clock (C) Atomic clock
(B) Quartz clock (D) None of above
- (4) _____ is source of error in GPS Signal.
(A) Multipath (C) Signal to noise ratio
(B) PDOP (D) All of above
- (5) Mobile GPS is considering as _____ define Radio.
(A) Hardware (C) Both (A) & (B)
(B) Software (D) None of above
- (6) GNSS stand for _____
(A) Global Navigation Satellite System (C) Globe National Survey System
(B) Geo National Super System (D) None of above
- (7) In _____ we are unable to use GPS system.
(A) Deep Underground Tunnels (C) Boats
(B) Airplane (D) None of above
- (8) For Fleet monitoring _____ system required in fleet.
(A) GPS receiver (C) Atomic clock
(B) Arc GIs (D) None of above

Q.2 Answer the following.(attempt any seven, each two marks)

[14]

- (1) List 3 segments of GPS and explain any one.
- (2) What is selective availability in GPS satellite?
- (3) What is Almanac & ephemeris data?
- (4) A SVN 64's signal required 60 micro seconds to reach at one boat, but boat's receiver record 70 micro seconds, so what is error in this reading in form of meter?
- (5) Explain working principle of DGPS.
- (6) What is GCP? Explain geodetic control Survey.
- (7) What is clock error?
- (8) List different types of error in GPS signal.
- (9) List different Ten real applications of GPS.

- Q.3 (A) How GPS system to determine position on earth surface? What is the no. of minimum satellites required for position determination? [06]
(B) Explain C/A code and P codes. [06]
OR
(B) With neat diagram explain Navigation message system of GPS. [06]
- Q.4 (A) Explain classification of GPS receivers. [06]
(B) Illustrate Multipath and Ionospheric error with block diagram. [06]
OR
(B) Show how GPS perform Position and Height transformation. [06]
- Q.5 (A) What is software define GPS? What is use of ADC and DAC in Mobile GPS? [06]
(B) Explain block diagram of super heterodyne receiver. [06]
OR
(B) Show GIS –GPS unification system. [06]
- Q. 6 (A) List different time transfer system, and explain in detail. [06]
(B) Explain in detail fleet monitoring system. [06]
OR
(B) Show how crustal deformation study carried out by GPS system. [06]

-: All The Best:-

(2)