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No. of Printed Pages:2

SARDAR PATEL UNIVERSITY
THIRD YEAR B.Sc.(FIFTH SEMESTER) EXAMINATION

2013

WEDNESDAY, 20th NOVEMBER

10:30 am TO 1:30 pm

USO5CENV 04 (EARTH SYSTEM SCIENCES)

Marks: 70

Note: 1. Answers of all the questions (including multiple choice questions) should be written in the provided answer book only

2. Draw neat and labelled diagrams wherever necessary

Q.1. Select the correct answer and write it in the answer sheet. [10]

1. $\text{CaCO}_3 + \text{H}_2\text{O} + \text{CO}_2 \longrightarrow$ _____
(a) $\text{Ca}(\text{HCO}_3)_2$ (b) $\text{Ca}(\text{HCO}_3)_2$ (c) $\text{Ca}_2(\text{HCO}_3)_2$ (d) $\text{Ca}(\text{H}_2\text{CO}_3)$
2. _____ is the erosional feature due to fluvial process.
(a) Sand dunes (b) Delta (c) Crag and Tail (d) River valley
3. Quartz is composed of _____ elements.
(a) Mg & silicon (b) Calcium & silicon (c) silicon & oxygen (d) silicon & magma
4. The higher peaks and mountains by ice from all sites are known as _____.
(a) Tarn (b) Inselberg (c) Moutonnees (d) Nunatak
5. The lava upon cooling form _____ type of rocks.
(a) Sedimentary (b) Igneous (c) sandstone (d) metamorphic
6. Super cyclones attain the speed of _____ km/hr.
(a) 400-500 (b) 100-300 (c) 300-400 (d) 80-300
7. According to Moh's scale _____ is the hardest mineral.
(a) Gypsum (b) Talc (c) Diamond (d) Corundum
8. The specific gravity of gold is _____.
(a) 2.65 (b) 3.18 (c) 14.2 (d) 19.3
9. _____ is the depositional feature of sand due to Aeolian process.
(a) Ripple marks (b) River terraces (c) Roches Montonnees (d) None of these
10. The killer Bhuj earthquake occurred on _____.
(a) Dec 26, 2001 (b) Jan. 26, 2002 (c) Jan. 26, 2001 (d) Jan. 26, 1998

Q.2. Answer the following. (Any ten)

[20]

1. What is Geomorphology?
2. Define (i) Weathering (ii) Erosion.
3. Write a note on mineral from magma.
4. Enlist impacts of droughts.
5. Write down classification of volcano.
6. Define (i) epicentre (ii) hypocentre.
7. Write short note on Tropical cyclone.
8. Describe Fluvial erosion mechanism.
9. Differentiate between P-waves and S-waves.
10. Define (i) mineral (ii) minerology.
11. Write short note on ox-bow lakes and meanders.
12. Classify the volcanic lava based on their % Silicon oxide content.

Cont...

Q.3.(a) Enumerate and explain various erosional land forms formed by Aeolian processes. [05]

(b) Enlist and explain the types of drainage pattern. [05]

OR

Q.3.(a) Define weathering and discuss the various types of physical weathering. [05]

(b) Describe the transportational and depositional work of stream. [05]

Q.4.(a) Discuss the physical properties of Minerals. [05]

(b) Write the phosphorus cycle with the help of diagram. [05]

OR

Q.4.(a) Write a note on silicate group of mineral. [05]

(b) Explain the oxygen cycle. [05]

Q.5. Define volcano. Write down its classification and distribution and elaborate its adverse environmental impacts. [10]

OR

Q.5. Discuss in detail Disaster management. [10]

Q.6.

(a) Define Landslide and explain its various types. [05]

(b) Enumerate the characteristic features of Tsunami. [05]

OR

Q.6.

(a) Define flood and explain its various types. [05]

(b) Discuss lightening and its effects. [05]

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