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Name.....

Reg. No.....

## FOURTH SEMESTER B.A./B.Sc. DEGREE EXAMINATION, APRIL/MAY 2015

(UG—CCSS)

Common Course

## A 06 HISTORY AND PHILOSOPHY OF SCIENCE

(2009—2011 Admissions)

Time : Three Hours

Maximum : 30 Weightage

## I. Answer the following bunches of questions :—

(A) 1 Sexagesimal system of counting was introduced by :

- (a) The Egyptians. (b) Babylonians.  
(c) Indians. (d) The Chinese.

2 Who of the following were measuring earthquake using seismograph 2000 years ago ?

- (a) The Chinese. (b) Arabs.  
(c) Sumerians. (d) The Japanese.

3 Who added fire as a fourth element ?

- (a) Empedocles. (b) Pythagoras.  
(c) Anaximander. (d) Hippasos.

4 Who explained 'dim illumination' ?

- (a) Leonardo da Vinci. (b) Hippasos.  
(c) Jabir. (d) Newton.

(B) Fill in the blanks :

5 \_\_\_\_\_ setup the Lyceum, in opposition to the Academy.

- (a) Plato. (b) Aristotle.  
(c) Socrates. (d) Thales.

6 *Rasaratnakara* is attributed to \_\_\_\_\_.

- (a) Patanjali. (b) Aryabhata.  
(c) Varahamihira. (d) Nagarjuna.

7 \_\_\_\_\_ is called the father of modern chemistry.

- (a) Robert Boyle. (b) Gassendi.  
(c) Joachim Jung. (d) Lavoisier.

8 *Principia* was written by \_\_\_\_\_.

- (a) Joachim Jung. (b) Robert Boyle.  
(c) Newton. (d) None of the above.

Turn over



(C) Answer in a word :

- 9 Who was the first modern to suggest blood circulated from the right to the left chamber of the heart through lungs ?  
(a) Michael servitus. (b) Andrea Vesalius.  
(c) Renaldus Columbus. (d) William Harvey.
- 10 What is the "processing of, separation, consolidation, and deformation of materials by atom or by one molecule" ?  
(a) Biotechnology. (b) Nanotechnology.  
(c) Information Technology. (d) None of the above.
- 11 Which is the name associated with 'Special theory of Relativity' ?  
(a) Albert Einstein. (b) Newton.  
(c) Archimedes. (d) Chadwick.
- 12 "All humans are mortal. Socrates is human. Therefore, Socrates is mortal," is an example of ?  
(a) Induction. (b) Deduction.  
(c) Axiom. (d) Natural truth.

(3 × 1 = 3 weights)

II. Answer each of the following questions in two or three sentences :—

- 13 Which were the two great centres of learning in India during the period from 4<sup>th</sup> to 7<sup>th</sup> C.A.D. ?
- 14 What were the innovations during the Bronze age ?
- 15 What are Aryabatta's contributions ?
- 16 What are the basic precepts of Chinese medicine ?
- 17 Define Science.
- 18 Name two early opponents of geocentric world view.
- 19 What was the pertinent role played by Arabs in the history of science ?
- 20 What is pseudoscience ?
- 21 What is replicability in experiment ?

(9 × 1 = 9 weights)

III. Answer five of the following questions in a paragraph of 100 words :—

- 22 Indus Valley Civilization.
- 23 Galileo Galilei's contributions to new cosmology.
- 24 Julian calendar.
- 25 Pythagorean school.
- 26 What are the features that characterize a good experiment ?



- 27 Scientific thoughts in the Vedas.
- 28 Explain the notion of people's science.

(5 × 2 = 10 weightage)

IV. Answer any *two* of the following questions in 300 words :

- 29 Attempt a comparison of Paleolithic, Neolithic, and bronze age.
- 30 What are the scientific contributions of the early civilizations ?
- 31 Discuss the basic questions in the philosophy of science.

(2 × 4 = 8 weightage)